



# MAINSTREAMING CLIMATE RISK MANAGEMENT IN DEVELOPMENT

Progress and Lessons Learned from  
ADB Experience in the Pilot Program  
for Climate Resilience



# MAINSTREAMING CLIMATE RISK MANAGEMENT IN DEVELOPMENT

PROGRESS AND LESSONS LEARNED FROM  
ADB EXPERIENCE IN THE PILOT PROGRAM  
FOR CLIMATE RESILIENCE



Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO)

© 2017 Asian Development Bank  
6 ADB Avenue, Mandaluyong City, 1550 Metro Manila, Philippines  
Tel +63 2 632 4444; Fax +63 2 636 2444  
[www.adb.org](http://www.adb.org)

Some rights reserved. Published in 2017.

ISBN 978-92-9257-955-5 (Print), 978-92-9257-956-2 (e-ISBN)  
Publication Stock No. TCS179040-2  
<http://dx.doi.org/10.22617/TCS179040-2>

The views expressed in this publication are those of the authors and do not necessarily reflect the views and policies of the Asian Development Bank (ADB) or its Board of Governors or the governments they represent.

ADB does not guarantee the accuracy of the data included in this publication and accepts no responsibility for any consequence of their use. The mention of specific companies or products of manufacturers does not imply that they are endorsed or recommended by ADB in preference to others of a similar nature that are not mentioned.

By making any designation of or reference to a particular territory or geographic area, or by using the term “country” in this document, ADB does not intend to make any judgments as to the legal or other status of any territory or area.

This work is available under the Creative Commons Attribution 3.0 IGO license (CC BY 3.0 IGO)  
<https://creativecommons.org/licenses/by/3.0/igo/>. By using the content of this publication, you agree to be bound by the terms of this license. For attribution, translations, adaptations, and permissions, please read the provisions and terms of use at <https://www.adb.org/terms-use#openaccess>

This CC license does not apply to non-ADB copyright materials in this publication. If the material is attributed to another source, please contact the copyright owner or publisher of that source for permission to reproduce it. ADB cannot be held liable for any claims that arise as a result of your use of the material.

Please contact [pubsmarketing@adb.org](mailto:pubsmarketing@adb.org) if you have questions or comments with respect to content, or if you wish to obtain copyright permission for your intended use that does not fall within these terms, or for permission to use the ADB logo.

Notes:

1. In this publication, “\$” refers to US dollars.
  2. ADB recognizes “Kyrgyzstan” as the Kyrgyz Republic.
- Corrigenda to ADB publications may be found at <http://www.adb.org/publications/corrigenda>

All photos are ADB.



Printed on recycled paper

# CONTENTS

<b>Tables, Figures, and Boxes</b>	<b>v</b>
<b>Foreword</b>	<b>vii</b>
<b>Preface</b>	<b>ix</b>
<b>Acknowledgments</b>	<b>xi</b>
<b>Executive Summary</b>	<b>xiii</b>
<b>Abbreviations</b>	<b>xvii</b>
<b>I Introduction</b>	<b>1</b>
1 Pilot Program for Climate Resilience	1
2 Background of the Study	2
3 Methodology	3
4 Case Studies	4
<b>II Findings</b>	<b>7</b>
1 Cambodia	7
1.1 Development of the Cambodia Strategic Program for Climate Resilience	7
1.1.1 Introduction: Climate Change Risks and Vulnerability in Cambodia	7
1.1.2 Preparation of the Cambodia Strategic Program for Climate Resilience	8
1.1.3 Challenges Faced in the Development of the Cambodia Strategic Program for Climate Resilience	12
1.1.4 Lessons Learned from the Development of the Cambodia Strategic Program for Climate Resilience	13
1.2 Progress in National Adaptation Planning and Climate Finance in Cambodia	14
1.2.1 Climate Change Awareness, Information, and Data	14
1.2.2 International and National Engagement in Climate Change	17
1.2.3 Integration of Climate Change into Development Planning in Cambodia	19
1.2.4 Readiness for Climate Finance	23
1.3 Discussion and Conclusions: Cambodia	25
2 Nepal	27
2.1 Development of the Nepal Strategic Program for Climate Resilience	27
2.1.1 Introduction: Climate Change Risks and Vulnerability in Nepal	27
2.1.2 Preparation of the Nepal Strategic Program for Climate Resilience	28

2.1.3 Challenges Faced in the Development of the Nepal Strategic Program for Climate Resilience	31
2.1.4 Lessons Learned from the Development of the Nepal Strategic Program for Climate Resilience	32
2.2 Progress in National Adaptation Planning and Climate Finance in Nepal	33
2.2.1 Climate Change Awareness, Information, and Data	33
2.2.2 Lessons Learned regarding Climate Change Awareness, Information, and Data	36
2.2.3 International and National Engagement in Climate Change	36
2.2.4 Integration of Climate Change into Development Planning in Nepal	38
2.2.5 Readiness for Climate Finance	45
2.3 Discussion and Conclusions: Nepal	47
<b>3 Tajikistan</b>	<b>49</b>
3.1 Development of the Tajikistan Strategic Program for Climate Resilience	49
3.1.1 Introduction: Climate Change Risks and Vulnerability in Tajikistan	49
3.1.2 Preparation of the Tajikistan Strategic Program for Climate Resilience	50
3.1.3 Challenges in the Development of the Tajikistan Strategic Program for Climate Resilience	53
3.1.4 Lessons Learned from the Development of the Tajikistan Strategic Program for Climate Resilience	54
3.2 Progress in National Adaptation Planning and Climate Finance in Tajikistan	56
3.2.1 Climate Change Awareness, Information, and Data	56
3.2.2 International and National Engagement in Climate Change	59
3.2.3 Integration of Climate Change into Development Planning in Tajikistan	61
3.2.4 Readiness for Climate Finance	65
3.3 Discussion and Conclusions: Tajikistan	67
<b>III Summary and Conclusions</b>	<b>69</b>
<b>Appendix: Persons Consulted during the Study</b>	<b>74</b>
<b>References</b>	<b>78</b>

# TABLES, FIGURES, AND BOXES

## Tables

1	ADB Pilot Program for Climate Resilience Portfolio in Asia and the Pacific	2
2	Framework for the Integration of Climate Change Adaptation into Development Planning	4
3	Components of the Phase 1 Technical Assistance for the Cambodia Strategic Program for Climate Change	9
4	Cambodia Strategic Program for Climate Change: Project Portfolio and Progress Update	11
5	Components of the Nepal Strategic Program for Climate Resilience	28
6	Nepal Strategic Program for Climate Resilience: Project Portfolio and Progress Update	30
7	Phase 1 Technical Assistance Studies in Tajikistan	52
8	Tajikistan Strategic Program for Climate Resilience: Project Portfolio and Progress Update	53
9	Main Lessons Learned and Related Country Issues	69

## Figures

1	Funding Windows of the Climate Investment Funds	1
2	Key Milestones in the Development of the Cambodia Strategic Program for Climate Change	9
3	Cambodia Milestones in Climate Finance	23
4	Key Milestones in the Development of the Nepal Strategic Program for Climate Resilience	29
5	Nepal Milestones in Climate Finance	45
6	Key Milestones in the Development of the Tajikistan Strategic Program for Climate Resilience	51
7	Tajikistan Strategic Program for Climate Resilience Technical Assistance Building Capacity for Climate Resilience: Project Output and Outcome	58
8	Pilot Program for Climate Resilience: Coordination Framework in Tajikistan	64
9	Tajikistan Milestones in Climate Finance	66

## Boxes

1	Mainstreaming Resources Prepared in Phase 1	10
2	Project Preparation Experience in Awareness Raising	16
3	Comments on Capacity Building under the Pilot Program for Climate Resilience	20
4	Main Achievements of Mainstreaming Climate Change Risk Management in Development (February 2015)	31
5	Updating University Curricula in Climate Science and Resilience in Nepal	35
6	District Training for Adaptation Planning	41
7	The Pilot Program for Climate Resilience Secretariat	58



# FOREWORD

Asia and the Pacific is among the regions that are most vulnerable to climate change. The Fifth Assessment Report of the Intergovernmental Panel on Climate Change brought out key climate-related risks, including potential threats to agricultural productivity and food security, uncertain supply of freshwater in the face of rapidly increasing demand, rising sea levels and their impact on the region's urban and small island populations, and various threats to health such as morbidity and mortality resulting from heat waves and accelerated spread of infectious diseases. The region's economic growth is therefore also at risk: recent Asian Development Bank (ADB) studies on the economics of climate change have underscored the dramatic losses that could result if greenhouse gas emissions, now on the way to reaching 10% or more of annual gross domestic product by 2100 in many countries, are undiminished. The recently published report by ADB and the Potsdam Institute for Climate Impact Research (PIK) concludes that, even under the Paris consensus scenario in which global warming is limited to 1.5°C to 2°C above preindustrial levels, some of the land area, ecosystems, and socioeconomic sectors will be significantly affected by climate change impacts, to which policy makers and the investment community need to adapt to. As understanding of the regional impact of climate change improves, governments in the region are focusing more and more on adaptation priorities and strategies, along with the funds needed to implement them.

In response, ADB has been expanding its delivery of adaptation finance while building the necessary knowledge base. Finance for adaptation reached a cumulative total of \$3,234 million in 2011–2015 and continues to grow. Since acknowledging the considerable costs of adaptation in its Strategy 2020, ADB has done pioneering work in climate-proofing investments, provided extensive technical assistance to mainstream climate change adaptation within ADB and in its developing member countries (DMCs), and facilitated key financing initiatives such as the Asia-Pacific Climate Technology Network and Finance Center, the Urban Climate Change Resilience Trust Fund, and the Integrated Disaster Risk Management Fund. After the 2014 midterm review of Strategy 2020, ADB committed itself to boosting its support for adaptation and to bringing adaptation and climate resilience further into the development planning mainstream. Climate risk screening has been mandatory for all ADB-financed projects since 2014, and the creation of the Climate Change and Disaster Risk Management thematic group in ADB has integrated climate resilience and disaster risk management agendas into institutional reorganization. The recent approval of its Climate Change Operational Framework will provide broad direction and guidance for enhancing resilience and strengthening climate actions in ADB's operations and business processes.

In 2008, ADB, with other multilateral development banks and donor organizations, established the Climate Investment Funds (CIF) to jump-start climate finance and deploy it at scale in support of transformational change in developing countries. CIF pledges have so far reached \$8.3 billion, of which \$1.2 billion is intended to support adaptation through the Pilot Program for Climate Resilience (PPCR). CIF resource mobilization represents a



significant milestone in the growth of targeted climate finance, particularly for adaptation. In Asia and the Pacific, ADB administers \$281 million in PPCR funds for 19 PPCR investment projects in six countries and a regional program in the Pacific. A major impetus for the further expansion and deepening of ADB's adaptation portfolio has come from the development, preparation, and timely implementation of the national Strategic Programs for Climate Resilience developed through the PPCR process. In September 2015, ADB announced its intent to double its climate finance to \$6 billion by 2020, \$2 billion of this for adaptation.

This study looks at ADB's early experience in developing and implementing national adaptation programs and projects under the PPCR. The experience sheds light on the many challenges involved in scaling up adaptation finance, including human resource, institutional, and methodological constraints. The study also draws valuable lessons from a wide range of stakeholders to inform future endeavors to build more climate-resilient communities and economies in the region.



Amy S.P. Leung  
Director General  
Sustainable Development and Climate Change Department

# PREFACE

Economic growth in the Asia and Pacific region has been impressive in recent decades. Per capita gross domestic product grew at an average annual rate of 6% from 1999 to 2006 and stayed well above 5% even during the recent global financial crisis. The region's reserves are now the largest in the world, and its savings rates are unsurpassed. Millions have moved out of poverty, as a result. Yet an estimated 450 million people in the region still live on \$1.90 a day or less, and poverty reduction remains an elusive goal. Moreover, the impressive achievements in growth and the development momentum, which must be sustained to end poverty in Asia and the Pacific, are under rising threat from climate change and more frequent and intense disasters. In 2013, typhoon Yolanda killed more than 6,000 people in the Philippines, displaced or otherwise affected more than 12 million, and left behind more than \$3 billion in damage and losses. The region must build communities and economies that can withstand the effects of climate change.

Achieving climate resilience has become both a major political concern and a development priority in Asia and the Pacific, where the effects of changing weather patterns, rising sea levels, and more frequent extreme weather events are already widely felt. In setting a global goal of “enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change” and requiring all parties to plan and implement appropriate adaptation efforts, the landmark Paris Agreement of 2015 reflects this growing concern. The agreement also emphasizes greater adaptation support for developing countries and proposes that the progress and effectiveness of such actions be regularly reviewed. Most countries in Asia and the Pacific have made strides toward identifying adaptation priorities and planning appropriate actions, and including these in their national adaptation plans (NAPs) or nationally determined contributions (NDCs), or both. The Paris Agreement also provides for future adaptation actions and progress toward achieving the adaptation goals to be tracked, reported on, and assessed periodically. Addressing climate change and disaster risk management (DRM) are closely linked, as extreme weather events become more frequent and intense. The integration of DRM and climate change adaptation provides focus on action to reduce current and future risks, including planning for changes in the intensity and frequency of extreme weather events. Existing DRM methods and tools can also provide powerful templates for adaptation activities and increase resilience to anticipated climate change. Recognizing this, ADB through its recently approved Climate Change Operational Framework will further align its DRM and climate change adaptation efforts, in the design and implementation of its investment projects, programs, capacity building-related assistance, and knowledge products.

Most recent estimates prepared by the United Nations Environment Programme (UNEP) place annual adaptation costs at \$140 billion–\$300 billion by 2030 and rising steeply thereafter, but only \$22.5 billion in international public finance for climate change adaptation was available in 2014. This large gap in financing is likely to become substantially larger in the future, making it even more important to define and act on adaptation needs,

develop mitigation goals and actions, and mainstream climate resilience into development cooperation as early as possible. Adaptation finance from both the public and private sectors must increase as envisaged in the Paris Agreement. Dedicated climate funds like the Pilot Program for Climate Resilience (PPCR) have played an important role, particularly in catalyzing and pilot-testing a range of adaptation investments and driving action by institutions as well as investors.

The PPCR is the adaptation program of the Climate Investment Funds, and its launch in 2008 marked the first significant increase in adaptation finance for developing countries, giving them the needed resources for identifying adaptation priorities and developing a Strategic Program for Climate Resilience (SPCR). The SPCR is a substantive investment program for building capacity to adapt to climate change and pilot-testing a wide range of adaptation approaches such as climate proofing, watershed and ecosystem management for resilience, and climate-resilient livelihood approaches. By virtue of their development and early implementation, these SPCRs have already contributed significantly to mainstreaming climate change into development planning, building awareness of climate change and its effects as well as capacity to tackle its challenges at all levels, establishing structures and spaces for adaptation planning, and promoting and supporting intra-government cooperation toward a whole-of-government approach to climate change adaptation. This study examines in detail the early experience of Cambodia, Nepal, and Tajikistan with adaptation funding for SPCR preparation, and the lessons learned.

The many positive contributions of SPCR preparation to national climate change action and important lessons learned in three quite different country contexts are brought out here. In Cambodia, SPCR and investment project preparation improved government awareness of climate change and its effects, enhanced policy dialogue, and strengthened coordination. It also contributed to national and sector strategy development, better monitoring and evaluation, and wider civil society participation, and led to a number of important studies on climate change action in the country. However, low stakeholder capacity and a weak enabling environment slowed progress toward implementation. In Nepal, SPCR preparation raised awareness among a broad range of stakeholders, established an effective results management framework, and contributed pioneering work in vulnerability assessment and subnational capacity building. Challenges included debates about loan finance for adaptation, gaps in communication, and occasional difficulties in stakeholder coordination. Weak institutions and rapid turnover of government staff also hampered implementation progress. In Tajikistan, funding from the PPCR represented a significant turning point by sharpening the government's focus on the issue of climate change and bringing a wide range of stakeholders together to work on climate change adaptation through an innovative coordination structure. Greater efforts are needed to engage civil society groups more effectively and the capacity constraints within government demand more innovative approaches, including broader participation of other stakeholder groups at the national, subnational, and community levels.



**Preeti Bhandari**

Director

Climate Change and Disaster Risk Management

Sustainable Development and Climate Change Department

# ACKNOWLEDGMENTS

The author, Paul Wooster, would like to thank Preety Bhandari, director, Climate Change and Disaster Risk Management Division, and consultant Cristina Santiago, for their very helpful guidance in this study.

The following provided much-appreciated information and insight into the Pilot Program for Climate Resilience (PPCR) pilot countries and the development of PPCR-funded programs: Cinzia Losseno, senior climate change specialist, Climate Change and Disaster Risk Management Division; Nathan Rive, climate change specialist, Central and West Asia Department; Vidhisha Samarasekara, senior climate change specialist, South Asia Department; Ancha Srinivasan, principal climate change specialist, South East Asia Department; and Manami Suga, natural resources economist, Central and West Asia Department.

The study could not have been completed without the support of resident mission staff of the Asian Development Bank (ADB) in Cambodia, Nepal, and Tajikistan, particularly Math Kob, former PPCR consultant in Cambodia; Roman Bhattarai, operations assistant, Nepal Resident Mission; and Gulsun Farosatshoeva, senior project assistant, Tajikistan Resident Mission.

Thanks also go to the PPCR Focal Team at ADB and the staff and consultants of the technical assistance project in Nepal (Mainstreaming Climate Change Risk Management in Development) for their valuable comments on earlier drafts of this document.



# EXECUTIVE SUMMARY

The Pilot Program for Climate Resilience (PPCR) is a funding window of the \$8.1 billion Climate Investment Funds (CIF), which were established in 2008 and are administered by multilateral development banks (MDBs), including the Asian Development Bank (ADB). The PPCR is the largest adaptation fund in the world. It provides around \$1.2 billion to help developing countries integrate climate resilience into development planning and to support innovative public and private sector solutions to climate-related risks.

Worldwide, the PPCR is active in nine countries and two regional programs. ADB is a major partner in Asia and the Pacific, delivering \$286 million in PPCR investments through six country programs (for Bangladesh, Cambodia, Nepal, Papua New Guinea, Tajikistan, and Tonga) and one regional program (for the Pacific). This study looks back at the development of the PPCR funding from an ADB perspective, documents the contributions of the PPCR to country readiness for adaptation planning and climate finance, and identifies some early lessons.

Three case studies on the development and early implementation of strategic programs for climate resilience (SPCRs) in Cambodia, Nepal, and Tajikistan are presented. Information taken from a review of the literature and discussions with government officials, MDB staff, and other stakeholders was analyzed within a framework reflecting critical aspects of readiness for climate change adaptation planning and climate finance. While dealing mainly with ADB contributions, the report also acknowledges and refers to the combined efforts of the MDBs (ADB, the European Bank for Reconstruction and Development, the International Finance Corporation, and the World Bank) in program preparation and implementation.

## Cambodia

Cambodia has achieved major progress in its response to climate change since the start of SPCR planning in 2009. A national strategic plan for addressing climate change is in place and the country has taken significant steps to integrate climate change concerns into national and sector policies and strategies. Capacity to address climate change, particularly within the Ministry of Environment, is being strengthened, and Cambodia has become more active and vocal on the international stage. The government exerts strong ownership of the two main programs—the SPCR and the Cambodia Climate Change Alliance (CCCA). At the same time, the growth in institutional capacity and domestic resources dedicated to climate change has not matched the rapid increase in external climate finance.

The implementation of the PPCR-funded phase 1 technical assistance (TA) and the development of projects in the SPCR portfolio took longer than expected and faced many challenges, yet they have contributed significantly to Cambodia's progress. The preparation

of the SPCR and the investment projects has produced notable outcomes and impact with respect to government coordination, awareness of climate change, policy dialogue on climate change, national and sector strategy development, vulnerability and capacity assessment, and monitoring and evaluation (M&E). The process has also led to a number of important studies that support climate change action in Cambodia.

Stakeholder capacity, the enabling environment, and program clarity have determined progress toward implementation. The multi-stakeholder approach to program development has raised awareness and provided space for generating ideas and building consensus. On the other hand, with a well-planned communications strategy, stakeholder engagement could have been sustained and transparency improved. Stronger collaboration between the SPCR and the CCCA could also have reduced duplication of effort and intensified synergy. As climate finance expands, much greater cooperation among development partners and between development partners and government will be needed.

## Nepal

The government has remained committed to acting on climate change, moving the issue forward nationally, and participating more fully in international negotiations. Institutional and policy structures have been established and the Ministry of Science, Technology and Environment is steadily gaining in capacity. An all-embracing strategic approach still has to be devised, yet government ownership of the core programs under its National Adaptation Plan of Action, including the SPCR and the Nepal Climate Change Support Programme, is strong and planning for climate change at the sector and subnational levels has had an auspicious start.

The SPCR has bolstered Nepal's climate change response. The multi-stakeholder approach has raised awareness, sustained the engagement of a broad range of stakeholders, and supported the development of a highly regarded results management framework and stronger coordination structures. SPCR preparation activities included pioneering work on vulnerability assessment methods and capacity building at community, district, and sector levels. Another important achievement has been the successful integration of climate change into school and university curricula in a challenging institutional environment.

Under an SPCR TA project, eight key line agencies have undertaken in-depth institutional assessments, received capacity-building training in climate change adaptation, and developed an innovative planning approach based on sector adaptation plans of action. The impact on operational approaches in these agencies is starting to be felt. Local government officials and other stakeholders have received training in integrating adaptation into district planning, and knowledge management has greatly improved, thanks to the development of websites, databases, and management information systems for storing and disseminating climate data.

Valuable lessons were learned during the preparation and early stages of implementation of the Nepal SPCR. The debate over loans, miscommunication, and occasional difficulties in stakeholder coordination drew attention to the need for a strategic communications approach. Institutional constraints and the rapid turnover of government staff presented challenges to implementation progress, but innovative capacity-building approaches reduced this problem. Stronger links between central institution building and local planning could unify local and national planning and policy making. More harmonized support from development partners could also help Nepal's institutional capacity and rapid the rising levels of climate finance.

## Tajikistan

Participation in the PPCR marked a significant turning point for Tajikistan. Climate change gained increased attention from the government and a wide range of stakeholders started working together on the issue. The first major investment program for climate change (the SPCR) is now being implemented, an effective coordination mechanism with the PPCR Secretariat at its core is operating, and work on a national adaptation strategy is well advanced. The government has provided strong climate change leadership, without the matching budgetary commitments or significant institutional responses required under a whole-of-government approach.

The technical studies in phase 1 increased awareness of national and local stakeholders, provided technical information for direct use in the design of SPCR projects, carried out assessments to guide future capacity-building efforts, and helped build the capacity of scientists and other stakeholders involved. The national–international climate modeling partnership was particularly effective in capacity building. Vulnerability assessment methods, including downscaled modeling, a river basin approach, and climate resilience evaluation of hydropower infrastructure, were introduced.

The multi-stakeholder approach offered major learning experiences for all concerned, and should prepare government to forge stronger relationships with civil society groups and make better use of their capacity and their access to communities. Innovative approaches to building sustainable capacity, such as a more inclusive effort that encompasses other stakeholder groups as well as those at the subnational and community levels, will improve climate change awareness, knowledge, and skills. The coordination mechanism set up with adequate technical support at the start was an important factor in smooth and transparent program development, and will strengthen as government exercises ownership and further develops the institutional framework. Harmonized and complementary capacity building by government and development partners will be beneficial.

## Conclusions

This study underscores the value generally attached by stakeholders in the countries studied to the inclusive multi-stakeholder approach to program development. Delivering this approach in least developed countries—the main target of PPCR funding—requires firm engagement and technical backstopping from the MDBs and other development partners.

Problems and challenges arising from inadequate communications were often reported in this study. Communications strategies were not a priority in SPCR preparation, but where they were applied, they proved effective and showed the importance of taking a process approach to strategy implementation, providing enough resources to implement the strategy, and reaching out to all concerned stakeholders.

Technical and institutional capacity limitations and high staff turnover in government were common constraints in Cambodia, Nepal, and Tajikistan. Stakeholders highlighted the advantages to be gained from building capacity within subnational governments and civil society. To effectively mainstream climate resilience, any capacity-building strategy will have to be long term and coordinated, and involve the whole of government as well as development partners.

Coordination lessons highlighted in this study indicate the need for coordination mechanisms that are fit for purpose and adequately resourced. The coordination activities should start as early as possible, and be clearly linked to an effective communications approach.



---

Governments at all levels will benefit from coordination mechanisms that allow them to monitor and learn from one another's adaptation initiatives. Development partners, working together, can minimize duplication in delivering effective and efficient climate change assistance where it is most needed.

The fairly slow buildup of SPCR implementation reflects some of the capacity and readiness issues reported here. Projects can take long to process, but the time-consuming MDB due diligence procedures and CIF endorsement are critical in ensuring project quality and the leveraging of substantial cofinancing.

The rollout of PPCR funding has also helped move forward ADB strategies for assisting developing member countries in building climate resilience. The pilot countries are now better placed to plan further initiatives with development partners and to gain access to climate finance. PPCR funding has likewise presented ADB with a valuable opportunity to demonstrate the importance of comprehensive risk screening and assessment, learn more about risk-screening methodologies, and clarify the demand for additional finance to address adaptation.

# ABBREVIATIONS

ADB	Asian Development Bank
CCC	Climate Change Council (Nepal)
CCCA	Cambodia Climate Change Alliance
CCD	Climate Change Department (Cambodia); Climate Change Division (Nepal)
CCP	Climate Change Program
CCPCC	Climate Change Program Coordination Committee
CDM	Clean Development Mechanism
CIF	Climate Investment Funds
COEP	Committee on Environment Protection (Tajikistan)
COP	Conference of the Parties (UNFCCC)
DFID	Department for International Development of the United Kingdom
DRR	disaster risk reduction
EBRD	European Bank for Reconstruction and Development
EU	European Union
GCF	Green Climate Fund
GEF	Global Environment Facility
GMS	Greater Mekong Subregion
IFC	International Finance Corporation
INGO	international nongovernment organization
LAPA	local adaptation plan of action
M&E	monitoring and evaluation
MCCICC	Multi-stakeholder Climate Change Initiatives Coordination Committee
MDB	multilateral development bank
MEF	Ministry of Economy and Finance (Cambodia)
MOE	Ministry of Environment (Cambodia)
MOF	Ministry of Finance (Nepal, Tajikistan)
MOP	Ministry of Planning (Cambodia)
MOSTE	Ministry of Science, Technology and Environment (Nepal)

---

NAPA	national adaptation plan of action
NCCC	National Climate Change Committee (Cambodia)
NGO	nongovernment organization
PPCR	Pilot Program for Climate Resilience
Sida	Swedish International Development Corporation
SLM	sustainable land management
SPCR	Strategic Program for Climate Resilience
TA	technical assistance
TWG	technical working group
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank
WHO	World Health Organization





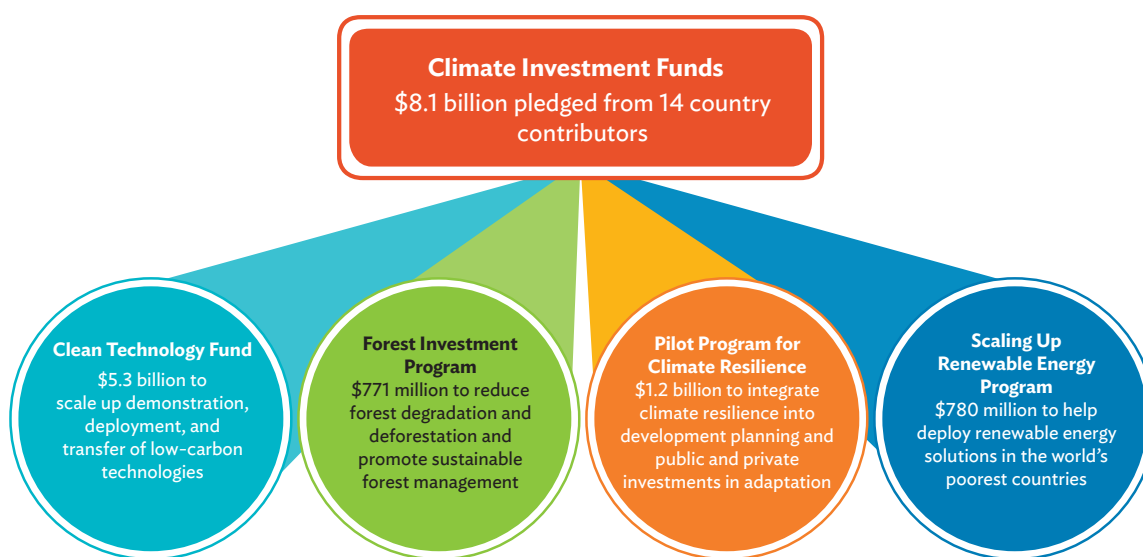
The Pilot Program for Climate Resilience represents a major step forward in international funding for adaptation. It is currently the largest adaptation fund in the world, providing around \$1.2 billion to help developing countries integrate climate resilience into development planning. The fund also supports innovative public and private sector solutions to critical climate-related risks.



## 1 Pilot Program for Climate Resilience

The Pilot Program for Climate Resilience (PPCR) is a funding window of the Climate Investment Funds (currently \$8.1 billion pledged), which were established in 2008 by development partners and multilateral development banks (MDBs) with the aim of gaining understanding of how public finance could be best deployed at scale to help developing countries initiate transformational change toward low-carbon and climate-resilient development (Figure 1). The design of the Climate Investment Funds (CIF) recognizes climate change as a crosscutting issue that affects all aspects of development, and the development approach adopted is programmatic and country driven with broad stakeholder engagement (including the private sector) supporting transformation in policies, institutions, technologies, and behavior.

Figure 1: Funding Windows of the Climate Investment Funds



Source: Climate Investment Funds.

The PPCR represents a major step forward in international funding for adaptation. It is currently the largest adaptation fund in the world, providing around \$1.2 billion to help developing countries integrate climate resilience into development planning. The fund also supports innovative public and private sector solutions to critical climate-related risks. Worldwide, the PPCR operates through 18 country programs and two regional programs. The Asian Development Bank (ADB) is a major partner in Asia and the Pacific, delivering \$280 million in PPCR investments through six country programs (for Bangladesh, Cambodia, Nepal, Papua New Guinea, Tajikistan, and Tonga) and one regional program (for the Pacific) and leveraging more than \$450 million in additional funding. There are 13 investment projects, five technical assistance (TA) projects, and one private sector project in the ADB-administered portfolio (Table 1).

**Table 1: ADB Pilot Program for Climate Resilience Portfolio in Asia and the Pacific**

Country PPCR Program	PPCR Funding	Expected Cofinancing
<b>Bangladesh (ADB, IBRD, IFC)</b> 4 investment projects (2 ADB, IBRD, IFC) 2 TA projects (ADB, IFC)	Total: \$109 million ADB administered: \$72 million	All projects: \$571 million ADB projects: \$197 million
<b>Cambodia (ADB)</b> 8 investment projects (ADB) 1 TA project (ADB) 1 private sector set-aside project (ADB)	Total: \$96 million ADB administered: \$96 million	All projects: \$465 million ADB projects: \$465 million
<b>Nepal (ADB, IBRD, IFC)</b> 3 investment projects (ADB, IBRD, IFC) 1 TA project (ADB)	Total: \$91 million ADB administered: \$31 million	All projects: \$25 million ADB projects: \$5 million
<b>Papua New Guinea (ADB)</b> 1 grant project (ADB)	Total: \$30 million ADB administered: \$30 million	All projects: \$2 million ADB projects: \$2 million
<b>Tajikistan (ADB, EBRD, IBRD)</b> 3 investment projects (ADB, EBRD, IBRD) 1 TA project (ADB) 2 private sector set-aside projects (EBRD)	Total: \$70.8 million ADB administered: \$28 million	All projects: \$85 million ADB projects: \$1 million
<b>Tonga (ADB)</b> 1 TA project (ADB)	Total: \$20 million ADB administered: \$20 million	All projects: \$4 million ADB projects: \$4 million
<b>Pacific Regional Projects (ADB, IBRD)</b> 2 TA projects (ADB, WB)	Total: \$10 million ADB administered: \$4 million	All projects: \$4 million ADB projects: \$0 million

ADB = Asian Development Bank, EBRD = European Bank for Reconstruction and Development, IBRD = International Bank for Reconstruction and Development, IFC = International Finance Corporation, PPCR = Pilot Program for Climate Resilience, TA = technical assistance, WB = World Bank.

Source: Climate Investment Fund and ADB.

## 2 Background of the Study

In each pilot country, PPCR funding is delivered in two phases. Phase 1 supports countries in developing a strategic program for climate resilience (SPCR), including an underlying investment program, and preparing for its implementation. Phase 1 assistance is delivered in most cases through a TA project. Phase 2 comprises SPCR implementation. The preparation of the SPCR in each country is a collaborative multi-stakeholder process led by the government with support from MDBs.<sup>1</sup> In all countries with ADB-administered projects, phase 1 implementation has ended and the preparation of ADB investment projects and TA projects identified under the country SPCRs is complete. Five TA projects are active and at

<sup>1</sup> In Asia and the Pacific, these are ADB, the European Bank for Reconstruction and Development (EBRD), the International Bank for Reconstruction and Development (IBRD), and the International Finance Corporation (IFC).

various stages of implementation, and six of the 13 investment projects are already in effect and have begun implementation.

Preparation for PPCR funding began in 2009 in most countries, and the implementation of phase 1 and the development of country SPCRs have already contributed significantly to understanding and action aimed at integrating climate change adaptation into development processes. The preparation and early implementation of investment projects and TA projects envisaged in the SPCRs has provided further experiences and lessons at both the national and subnational levels. As the implementation of these projects picks up momentum and countries prepare for national adaptation planning and anticipate greater flows of climate finance, it is an opportune time to look back at the early development phase, document key achievements, and identify early lessons. The Climate Change and Disaster Risk Management Division of ADB has therefore undertaken a knowledge initiative to gather information about experiences with the PPCR in selected countries and disseminate the findings to interested stakeholders. This study is specifically aimed at

- documenting the evolution of PPCR funding in countries where ADB is engaged and determining the extent to which SPCR development and the preparation and early implementation of ADB projects have contributed to readiness for national adaptation planning and future climate finance;
- identifying lessons learned in the preparation for PPCR funding, the development and design of the SPCR, and the preparation and early implementation of ADB investment and TA projects, especially with regard to the integration of climate change adaptation concerns into development planning; and
- disseminating the findings regarding progress, readiness, and lessons learned to ADB and CIF stakeholders and a wider audience, including ADB developing member countries (DMCs) without PPCR funding, the CIF, development partners, and others.

### 3 Methodology

The multi-stakeholder and multi-process development of country SPCRs called for a case study approach to capture the main issues from the perspective of a range of primary participants. Data were obtained from secondary sources and from semi-structured interviews with relevant informants. Secondary data came from project and program documents and reports available on the CIF and ADB websites, as well as from published and unpublished documentation obtained through wider internet searches or directly provided by interviewees. ADB staff, government officials, staff of the other multilateral banks involved, representatives of key stakeholder groups for each of the investment plans studied, and consultants engaged in investment plan preparation or in project preparation and implementation were interviewed. A list of those consulted is provided in the appendix.

This study covered three of the six ADB DMCs receiving PPCR funding—Cambodia, Nepal, and Tajikistan. As their programs are larger and more advanced, these countries could be expected to yield useful lessons on the integration of climate change adaptation concerns into development processes.<sup>2</sup> The information and data collected were identified and analyzed within a simplified framework for assessing progress in the integration of climate change adaptation into development planning. This framework is based on a number of key guidance documents dealing with mainstreaming climate change adaptation and reflects the critical aspects of readiness for climate change adaptation planning and climate finance (Table 2).

<sup>2</sup> Bangladesh was also slated for inclusion, but the study in the country could not be completed because of restrictions on missions to the country at the time of the study.



**Table 2: Framework for the Integration of Climate Change Adaptation into Development Planning**

Awareness and Available Information on Climate Change	International and National Engagement	Integration into Development Planning	Management of Climate Finance
General awareness of climate change issues (among policy makers, development practitioners, the public)	Engagement in and progress of UNFCCC processes	Policies and legislation that integrate climate change considerations	Government capacity to understand and deliver climate finance
Availability and management of meteorologic, hydrologic, and other essential climate data	Other international engagement in climate change (including regional)	Development strategies that integrate climate change considerations	Major climate change donor partnerships
Systems or strategies for synthesizing and managing information and knowledge related to climate change	Specific policies or legislation pertaining to climate change	Institutional arrangements for stakeholder engagement and coordination mechanisms for action on climate change adaptation	Establishment of climate change trust funds or other funding facility
Use of climate data to analyze climate change risks, including climate and impact modeling	Government agencies or officials dedicated to action on climate change	Government understanding of functions and capacity requirements for addressing climate change adaptation	Consideration of climate change adaptation in budget allocation processes
Vulnerability assessments at national and subnational levels	Climate change strategies or action plans	Capacity assessments and capacity building in support of climate change adaptation	Government or nongovernment accreditation for direct access to climate finance
	Identification and prioritization of options for climate change adaptation	Monitoring and evaluation of action on climate change, particularly adaptation	Government capacity to deliver bankable projects and programs
Consideration of national, subnational, and sectoral perspectives			

UNFCCC = United Nations Framework Convention on Climate Change.

Sources: Drawn from OECD (2009), UNDP–UNEP (2011), and IIED (2013).

## 4 Case Studies

This document presents three case studies on the development and early implementation of SPCRs in Cambodia, Nepal, and Tajikistan, covering the period from the time of the first PPCR joint mission in each country up to January 2015. For each of the countries studied, SPCR planning and the implementation of phase 1 TA projects were supported by the combined efforts of a group of MDBs—ADB and the World Bank in Cambodia; ADB, the World Bank, and the International Finance Corporation (IFC) in Nepal; and the World Bank, ADB, and the European Bank for Reconstruction and Development (EBRD) in Tajikistan. As far as possible, the relevant contributions of each MDB are mentioned here, especially in regard to specific studies and TA output. But some of the more general contributions, such as overall improvements in stakeholder awareness or indirect capacity building, were more difficult to attribute to individual MDBs and were assumed to be the result of combined efforts. The lessons learned were attributed only if derived from a single source; most were consolidated from several stakeholder sources.

To put the relative importance of contributions from PPCR-funded activities to the national climate change response into perspective, each case study contains an overview of the situation at the start of SPCR planning, among its three main sections. Each case study first gives an overview of the country program, including past as well as changing climate conditions in the country, SPCR preparation and phase 1 implementation, the challenges faced and overcome, and the lessons learned in the process. Next, each case study discusses national adaptation planning and climate finance from the vantage point of the progress made and the lessons imparted. For each main component of the framework (Table 2), the general situation at the start of PPCR involvement is described, together with the difference made by PPCR-funded activities. Each country case study ends with a discussion and conclusions. Overall discussions and conclusions for the three case studies can be found in part 3 of this document.



Three case studies on the development and early implementation of strategic programs for climate resilience in Cambodia, Nepal, and Tajikistan are presented here. Information taken from a review of the literature and discussions with government officials, multilateral development bank (MDB) staff, and other stakeholders was analyzed within a framework reflecting critical aspects of readiness for climate change adaptation planning and climate finance. While dealing mainly with Asian Development Bank contributions, the report also acknowledges and refers to the combined efforts of the MDBs in program preparation and implementation.

# 2

## FINDINGS

### 1 Cambodia

#### 1.1 DEVELOPMENT OF THE CAMBODIA STRATEGIC PROGRAM FOR CLIMATE RESILIENCE

---

##### 1.1.1 Introduction: Climate Change Risks and Vulnerability in Cambodia

The Cambodian climate is dominated by the southwest monsoon, which gives rise to a rainy season from May to November and a dry season from November to May. The country is typically prone to periodic droughts and floods; extreme events frequently result in serious natural disasters. Between 1990 and 2010, eight major floods and three major droughts affected the lives of more than 20 million people. Climate change is expected to intensify such events. For Cambodia and much of the Lower Mekong Basin, the most important climate variables are related to changes in the complex hydrology of the river, its many tributaries and floodplains, and the Tonle Sap Lake.

Data suggest that the climate in Cambodia is already changing (Heng 2015). Annual mean temperature anomalies have increased by 0.81°C since 1950 and mean annual precipitation has been decreasing at the rate of 0.184%. In the dry season, both temperature and rainfall changes are more pronounced. Recent modeling suggests that across Cambodia the rate of temperature change will continue to rise, and the warming rates are likely to be greater in the high-altitude areas in the southwest than in low-altitude regions such as the central and northeast. The models also indicate increases in mean annual rainfall—wet-season rainfall will increase but dry-season precipitation will decrease—thus tending to accentuate and amplify the drought-and-flood cycles. Extreme weather events, including damaging cyclones, are also likely to become more frequent. These changes adversely affect agriculture, infrastructure, and biodiversity, and potentially reduce the fertile land area suitable for cultivation. In the longer term, rising sea levels could pose a significant threat to fertile coastal areas, which are already experiencing storm surges, high tides, beach erosion, and saltwater intrusion.

Cambodia's low adaptive capacity, encompassing socioeconomic, institutional, and technological issues, significantly heightens its vulnerability to the impact of climate change. The country has a narrow economic base: 80% of the population depends on small-scale, rain-fed agriculture concentrated mainly in vulnerable floodplains and low-lying coastal areas. While the government has made significant strides toward poverty reduction (the poverty rate fell sharply from 47.8% in 2007 to 18.9% in 2012), 41% of the population in 2011 still lived on less than \$2 per day. Weak governance of the natural resources management system remains a problem. Legal and regulatory frameworks are insufficient and relevant policies



needed to manage the impact of climate change are poorly enforced. There is a significant deficit in the technology and infrastructure for climate change adaptation, particularly with respect to roads, irrigation, and flood protection.

### 1.1.2 Preparation of the Cambodia Strategic Program for Climate Resilience

A preparatory phase 1 TA (\$1.5 million, administered by the World Bank), aimed at supporting the preparation of the SPCR and establishing an appropriate institutional, policy, and planning framework to facilitate its implementation, was approved in late 2010 and took effect in early 2011. Implementation was held back for more than a year, however, by the recruitment of suitable personnel and by technical and organizational capacity. As a result, SPCR preparation, originally envisaged among the tasks under the TA, was completed separately by the government, MDBs, and other stakeholders in a consultative process in April and May of 2011. The TA, with its five remaining components (Table 3), was implemented by two consulting companies and a group of independent national and international consultants from January 2012 to April 2013.

The Cambodia SPCR was endorsed by the CIF in June 2011 with a total financial envelope of \$404 million—a requested \$50 million in grants and \$36 million in concessional loans from the CIF, and anticipated leveraging of \$299 million in cofinancing, predominantly from ADB. The design and MDB processing of the SPCR investment projects had already begun at the time of SPCR approval and currently continues; six of the eight SPCR projects have been approved and are already being implemented. In February 2014, a revised version of the SPCR, accommodating changes in the project portfolio and allocating additional PPCR funding of \$5 million in grants, was endorsed. The final financial envelope of \$561 million comprised \$55 million in grants and \$41 million in concessional loans from the PPCR, and \$465 million in cofinancing. The PPCR contribution includes an allocation of \$5 million for a project under the CIF private sector set-aside program.<sup>3</sup> Figure 2 shows the main milestones in the development of the SPCR.



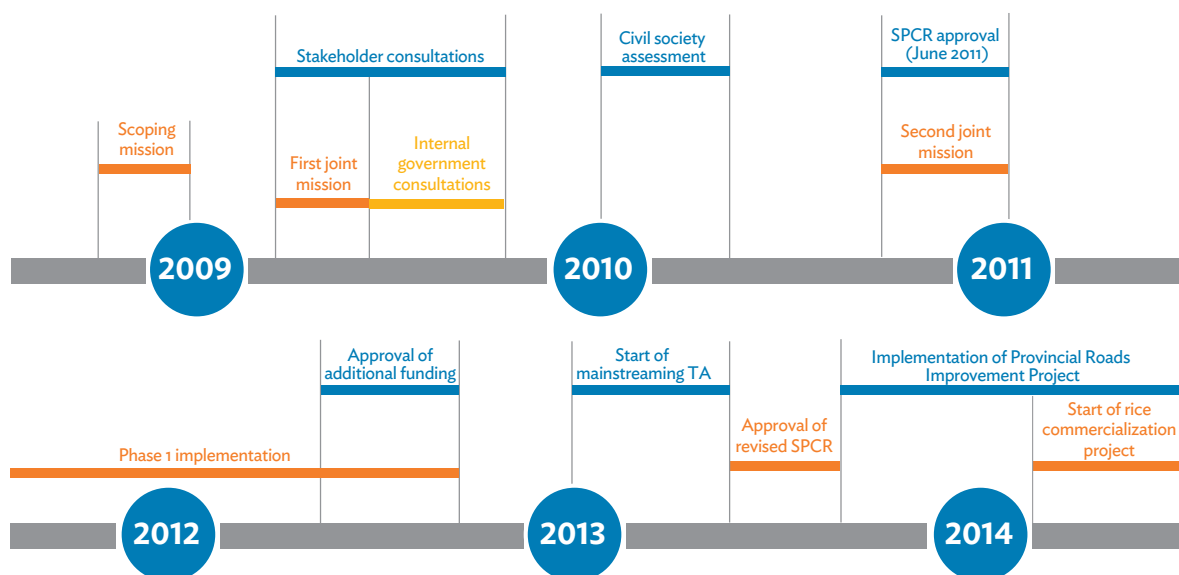
<sup>3</sup> The private sector set-aside is a CIF mechanism designed to increase private sector investment through the competitive allocation of concessional funding to projects within the PPCR.

**Table 3: Components of the Phase 1 Technical Assistance for the Cambodia Strategic Program for Climate Change**

Component	Immediate Outcome
<b>Component 1:</b> National-level mainstreaming	Improved consideration of climate resilience in the planning, budgeting, and investment appraisal processes of the finance, planning, environment, agriculture, forestry and fisheries, water resources and meteorology, rural development, and public works and transport ministries, and of the National Committee for Disaster Management
<b>Component 2:</b> Subnational mainstreaming	Improved consideration of climate resilience in the budgeting, planning, and financing mechanisms of subnational government and service delivery
<b>Component 3:</b> Strengthening of civil society and private sector engagement and gender considerations in climate change adaptation	Strengthened engagement of civil society and the private sector in the climate change adaptation agenda, and inclusion of gender considerations, thereby broadening awareness of climate risks and increasing the participation of a broad group of stakeholders
<b>Component 4:</b> Science-based adaptation planning	Improved integration and accuracy of climate and weather forecasting, with hydrologic features relevant to government, the private sector, and local communities
<b>Component 5:</b> Outreach and preparation of phase 2	Improved understanding of government (at all levels), civil society, and the private sector to address climate resilience through a program-based approach

Source: Government of Cambodia (2010).

**Figure 2: Key Milestones in the Development of the Cambodia Strategic Program for Climate Change**



SPCR = Strategic Program For Climate Resilience, TA = technical assistance.  
Source: ADB.

The project output for phase 1 was mostly satisfactory; but the achievement of project outcomes was only moderately satisfactory. In particular, the implementation of components related to mainstreaming did not fully meet expectations (ADB 2013b). Despite many challenges, phase 1 contributed significantly to climate change response in Cambodia. These contributions included valuable resources that have supported the development and implementation of phase 2 and other programs (Box 1), as well as lessons learned regarding readiness for climate change adaptation and climate finance (section 1.2).

### **Box 1: Mainstreaming Resources Prepared in Phase 1**

#### **Component 1**

- Guideline on Mainstreaming Climate Resilience and Disaster Risk Reduction into National Investment Planning
- Guideline on Mainstreaming Climate Resilience and Disaster Risk Reduction into National Development Planning

#### **Component 2**

- Guideline on Mainstreaming Climate Resilience and Disaster Risk Reduction into Subnational Development and Investment Planning
- Discussion paper on Climate Change Implications for National Planning
- Climate Screening Toolkit

#### **Component 3**

- Strengthening CSO Engagement in Mainstreaming Climate Resilience in SPCR
- Outline of Master Plan on Gender and Climate Change Adaptation
- Private Sector Scoping Study: Engaging Private Sector in Climate Change Adaptation Investments

#### **Component 4**

- Synthesis Report on the Cambodia Hydrometeorological Information System
- Succinct Analytical Report on the Value of Multi-Model Downscaled Climate Scenarios for Cambodia in Terms of Direct Application for Policy and Plan Making
- Synthesis Report on Vulnerability and Adaptation Assessment for the Key Sectors
- Concise Report on Suitability and Relevance of Currently Available Climate Resilience Decision Support Tools in Cambodia
- Conceptual Framework for Incorporating SESA into Climate Change Adaptation and Resilience Projects in Cambodia

#### **Component 5**

- Policy briefs on Climate Change Issues
- Concept note for preparation of M&E Framework for PPCR Phase II
- Consolidated Final Report

CSO = civil society organization, M&E = monitoring and evaluation, PPCR = Pilot Program for Climate Resilience, SESA = Social Entrepreneurship in Southeast Asia, SPCR = Strategic Program for Climate Resilience.

Source: ADB (2013b).

Both the World Bank and the IFC stopped participating in the Cambodia PPCR in 2011 because of matters related to the implementation of an ongoing World Bank project. ADB guided the final preparation of the SPCR, which includes only ADB-administered projects. The portfolio is quite ambitious. It comprises seven investment projects encompassing rural and urban infrastructure and agricultural development, as well as a major TA project supporting the mainstreaming of climate resilience into development planning (Table 4). The investment projects were identified from pipeline ADB investments that provided clear opportunities for enhancing climate-resilient output using PPCR funds. There are now five active loan projects, four of which were deployed in 2014. The mainstreaming TA began its

activities in October 2013, but issues with technical consultancy led to the termination of the consultants' contract in 2014 and to a rebidding process (now completed). In the revised SPCR (2013), a stalled water resources project was replaced with a rural roads project at the request of the government. Although implementation is at an early stage, the preparation of these projects has already yielded lessons and improved understanding of the design of adaptation projects, particularly the role of capacity building and vulnerability assessments (section 1.2).

**Table 4: Cambodia Strategic Program for Climate Change—Project Portfolio and Progress Update**

SPCR Project	Progress*
<b>Mainstreaming Climate Resilience into Development Planning</b> \$11 million technical assistance (including \$10 million PPCR grant and \$1 million grant from Nordic Development Fund) CIF approval: Aug 2012 ADB approval: Oct 2012	Consulting firm mobilized in Sep 2013 and inception completed in Feb 2014 Consulting firm terminated in Jun 2014 New consulting firm for TA and umbrella NGO for Civil Society Support Facility (Plan) confirmed and recruitment ongoing
<b>Climate resilience of rural infrastructure in Kampong Cham province as part of Rural Roads Improvement Project (RRIP-II)</b> (including \$16 million in PPCR funding) ADB approval (main project): Aug 2014 CIF approval for additional PPCR component: Sep 2015 ADB approval: Dec 2015	For main project, consultants deployed and inception completed Preparatory TA for climate resilience component funded by ADB carried out in Mar–Sep 2013; included vulnerability and impact assessments and development of Climate Change Adaptation Framework
<b>Greater Mekong Subregion Biodiversity Conservation Corridors Project, additional funding for Cambodia; Promoting Climate-Resilient Agriculture, Forestry, Water Supply, and Coastal Resources in Koh Kong and Mondulkiri Provinces</b> (including \$8 million in PPCR funding) CIF approval: Sep 2014 ADB approval: Mar 2015	Preparatory TA for all three GMS countries approved in Dec 2009 and closed in Dec 2014; PPCR funds (\$0.6 million) added to TA funds for climate resilience analysis and design of components for Cambodia
<b>Integrated Urban Environmental Management in the Tonle Sap Basin, additional funding for Cambodia; Flood-Resilient Infrastructure Development in Pursat and Kampong Cham</b> (including \$10 million in PPCR funding) CIF approval: Oct 2014 ADB approval: Nov 2015	ADB-funded preparatory TA (\$0.7 million) approved in Dec 2011 and still active Project preparation completed and project documents prepared
<b>GMS Flood and Drought Management Risk and Mitigation Project; Enhancement of Flood and Drought Management in Pursat Province</b> (including \$10 million in PPCR funding) CIF approval: Nov 2012 ADB approval: Dec 2012	Preparatory TA for all three countries completed in May 2011; PPCR-funded extension of preparatory TA for analyzing and designing climate resilience project components approved in Dec 2011 Recruitment of project implementation consultants ongoing
<b>Climate-Resilient Rice Commercialization Sector Development Program</b> (including \$9.5 million in PPCR funding) CIF approval: Mar 2013 ADB approval: Jun 2013	Preparatory TA approved in Nov 2011 included funding from ADB and PPCR; PPCR funding enabled expansion and deepening of climate resilience measures Consultants for main project deployed in Dec 2014 and inception completed in Jan 2015 Operational framework established for project and setting up of M&E system for program begun

*continued on next page*



Table 4 continued

SPCR Project	Progress*
<b>Provincial Roads Improvement Project; Climate-Proofing of Roads in Prey Veng, Svay Rieng, Kampong Chhnang, and Kampong Speu Provinces</b> (including \$17 million in PPCR funding) CIF approval: Nov 2011 ADB approval: Dec 2011	<ul style="list-style-type: none"> <li>• Preparatory TA funded by ADB approved in Nov 2010 and implemented in 2011; TA comprised comprehensive climate resilience study, vulnerability assessments, and design of climate resilience project components</li> <li>• Initial consultant deployment in Mar 2014; inception completed</li> </ul>
<b>GMS Southern Economic Corridor Towns Development Project; Climate-Proofing Infrastructure in the Southern Economic Corridor Towns</b> (including \$9.4 million in PPCR funding) CIF approval: Oct 2012 ADB approval: Dec 2012	<ul style="list-style-type: none"> <li>• Preparatory TA with total funding of \$3.4 million (for three countries) including \$0.6 million in PPCR funds for analysis and design relating to climate resilience component of the Cambodia project; TA implemented between Mar 2011 and Jun 2014</li> <li>• Project implementation support and capacity-building consultants mobilized on 18 Aug and inception completed in Sep 2014</li> </ul>

CIF = Climate Investment Funds, GMS = Greater Mekong Subregion, M&E = monitoring and evaluation, NGO = nongovernment organization, PPCR = Pilot Program for Climate Resilience, SPCR = Strategic Program for Climate Resilience, TA = technical assistance.

\* As of January 2015.

Source: ADB.

### 1.1.3 Challenges Faced in the Development of the Cambodia Strategic Program for Climate Resilience

The introduction, planning, and development of a \$531 million portfolio of climate change adaptation projects in a nascent environment for climate change action was a significant achievement. In addition to the anticipated capacity limitations of the government and other stakeholders at the outset, the development of the SPCR faced a number of challenges including effectively engaging stakeholders, establishing government ownership of the program, and fitting the design and approach of the SPCR to the rapidly evolving context for climate action in Cambodia as external assistance for climate change increased.

When PPCR funding for Cambodia was first discussed, the government had already begun to address climate change (section 1.2.2); however, the nature of climate change risk and the need to integrate it into government policies and processes could have been better understood, particularly outside the Ministry of Environment (MOE), the designated focal point for climate change. The MOE itself had barely enough human and financial resources to manage the development of a complex program, and it had limited influence or capacity to engage and coordinate with other agencies. Outside government, international nongovernment organizations (INGOs) were starting to take action on climate change mainstreaming, but for the most part, local civil society, the private sector, and the public did not know enough about the potential impact of climate change in Cambodia and of adaptation needs and approaches. Given the significant growth in finance for adaptation, represented by the PPCR, even the capacity of consultants and MDB staff to prepare major investments in adaptation was sometimes stretched. All these challenges delayed and disrupted decision making and processing against very ambitious deadlines, created external perceptions of PPCR funding as a process driven by donors and specifically MDBs, and limited the involvement of subnational entities in the preparation activities (ADB 2013b).

Stakeholder participation was an important aspect of the development of the SPCR, and the high expectations generated by news of the PPCR funding resulted in strong interest from national-level stakeholders, particularly civil society (ADB 2013c). However, the withdrawal of the World Bank Group from the SPCR in 2011 presented some challenges. Nongovernment organizations (NGOs) and development partners experienced a loss of momentum and transparency in the process at this time and engagement with the private sector slowed.

NGOs became concerned about the perceived move away from a consultative approach to SPCR development. The withdrawal also resulted in the separate administration of phases 1 and 2 (phase 1 by the World Bank and phase 2 by ADB), the subsequent change in design and approach making alignment of the two phases more difficult. Although the phase 1 TA was designed in anticipation of an SPCR comprising public and private sector projects administered by the World Bank, ADB, and the IFC, the final SPCR contained only ADB-administered public sector investments predominantly addressing infrastructure. Establishing ownership of the process in government was also a challenge, given its capacity and the preeminence of the MDBs in facilitating the process. However, government engagement was strong from the start and ownership strengthened as SPCR preparation progressed (ADB 2013b).

At the time of SPCR preparation, the context for action on climate change was changing rapidly. In particular, a major climate change initiative, the Cambodia Climate Change Alliance (CCCCA),<sup>4</sup> funded by the European Union (EU), was approved in late 2009 and began implementation in 2010. The CCCC and the SPCR shared many objectives and their action plans converged, especially regarding building the capacity of government and civil society and mainstreaming and raising awareness of climate change adaptation. Development partners tried their best to bring the two initiatives together. But limitations in enabling contributions to the CCCC Trust Fund from ADB-administered funds and management changes within the MOE made closer integration of the two initiatives difficult. The rising demands on the MOE also presented challenges. In an effort to spread the load (and benefits) of the growth in climate finance, SPCR preparation and implementation was placed under the Environment Conservation Department instead of the Climate Change Department (CCD). Because of this move, the credibility of the program became harder to establish as most government and external stakeholders regarded the CCD, which was already implementing the CCCC, as the focus of climate change knowledge and activities. This issue was later dealt with through the appointment of CCD representatives to manage the SPCR.

Although designed to address a complexity of outcomes encompassing social, technical, and policy issues, the implementation structure of the phase 1 TA was not sufficiently robust. In particular, implementation by a mix of firms and individual consultants under an overall team leader, while attractive in theory, did not work in practice. The firms did not respond well to management, and the structure was vulnerable to the loss of the team leader and provided no assurance of the required technical backstopping across sectors. The disruption caused by the withdrawal of the World Bank and the IFC also accentuated these problems. Moreover, using external procurement consultants in phase 1, rather than streamlining transactions, may have contributed to delays in consultant procurement (ADB 2013b). Another factor, particularly relevant to Cambodia, was the provision of limited roles and incentives to key government agencies, which ultimately reduced the effective participation and action of government.

#### 1.1.4 Lessons Learned from the Development of the Cambodia Strategic Program for Climate Resilience

The active involvement of a wide range of stakeholders was an important factor supporting the preparation of the SPCR and was achieved in the face of capacity constraints and changes in MDB and government management. The strong engagement of international civil society

<sup>4</sup> The CCCC is a multidonor climate change initiative funded by the European Union (EU), Swedish International Development Cooperation (Sida), Danish International Development Agency (Danida) of Denmark, and the United Nations Development Programme. It is anchored in the government's National Climate Change Committee and is aimed at ensuring that climate change activities in Cambodia are nationally owned and led, aligned with Cambodia's development priorities, and effectively coordinated and implemented.

organizations, despite their sometimes critical views, was constructive and significantly influenced the content of the SPCR.

However, a more strategic approach to communications—planned and consistent information sharing between MDBs, government, and stakeholders—could have avoided some of the problems that arose after the SPCR consultation process was completed, such as stakeholder concerns over transparency, difficulties in maintaining stakeholder outreach, and miscommunication between phase 1 consultants and government staff. Greater efforts could also have been exerted to include more subnational stakeholders by making more information available in the local language.

Training for the phase 1 team (consultants and government counterpart staff) in project management and professional skills development, as well as team building, could have improved their performance and reduced implementation delays. Regular training should have been included in the terms of reference for on-the-job training and an adequate budget provided (ADB 2013b).

In phase 1, delays in completion and complicated financial and procurement approvals drove up transaction costs. Phase 2 will require a much closer relationship between the project team and the ADB procurement team, and clearer terms of reference, product descriptions, and roles and responsibilities for all transactions (ADB 2013b).

Opportunities for closer cooperation and coordination with other climate change-related activities in Cambodia were not fully realized. A number of other ongoing climate-related initiatives could have benefited the SPCR as well. In particular, the failure to forge closer links with the EU-funded CCCA was a lost opportunity.

The impact and cost of recent flood disasters in Cambodia, which showed quite plainly the economic benefits from climate proofing and other adaptation measures, were major factors behind the government's decision to request PPCR funding. The recent disasters also highlighted the need to find greater congruence at a strategic level, within the SPCR and elsewhere, between disaster risk management and climate change adaptation.

Executing and implementing agencies continue to rely on tangible incentives from donor-funded projects to ensure commitment and participation. This approach risks distorting the management of critical climate change programs, and making the programs unsustainable and the mainstreaming of climate change adaptation difficult to achieve across government. Continuous dialogue between the government and development partners on the provision of incentives would be helpful.

## **1.2 PROGRESS IN NATIONAL ADAPTATION PLANNING AND CLIMATE FINANCE IN CAMBODIA**

---

### **1.2.1 Climate Change Awareness, Information, and Data**

#### *Situation at Pilot Program for Climate Resilience commencement*

There was insufficient appreciation of global climate change and its causes at the start of SPCR planning. In the public sector, while knowledge of policies and action on climate change was growing among government staff, line ministries could have paid more attention to addressing climate risk at operational levels (ADB 2013b). Across civil society, awareness and understanding ranged widely. Even as INGOs had begun to respond to the issue with programs and mainstreaming efforts, and national climate change NGO networks were

emerging, climate change was not a corporate priority and not a widely accepted part of risk planning. People were aware of recent climate changes and, to some extent, were already responding to those changes, but, especially at the subnational level, their low access to relevant information in readily understandable terms limited their grasp of the scientific principles (MOE 2011b).

Climate data were also a concern. The weather and climate monitoring network was abandoned during the Khmer Rouge period, and almost all equipment was destroyed. Despite subsequent aid to the meteorology sector, by 2009 Cambodia still trailed other countries in the region in data availability and management, particularly in regard to the adequacy of equipment, technology, and human resource capacity. The country's 20 functioning meteorology stations and around 200 rainfall stations, all of uncertain data quality and reliability (MOWRAM 2010), could not support national or subnational climate modeling (FAO 2011). Domestic exercises in climate modeling, using the General Climate Model (GCM), were mostly downscaled from regional scenarios. National assessments based on such modeling were carried out for the first and second national communications and for the preparation of the National Adaptation Program of Action (NAPA). Subnational assessments were rare, with a few notable exceptions, e.g., in Stung Treng Province in 2005 (UNDP et al. 2005).

#### *Pilot Program for Climate Resilience: Contributions to climate change awareness, information, and data*

The widely varied activities of phase 1 and SPCR preparation signaled a major shift in climate change adaptation efforts in Cambodia toward a comprehensive approach at all levels, from policy making down to the communities. These activities raised awareness and understanding of climate change and the associated risks across all stakeholder groups, and improved knowledge of climate change, vulnerability, and management.

The meetings, workshops, and consultations that took place as part of the multi-stakeholder consultative approach to PPCR funding (CIF 2009) also provided space for debate on issues such as gender and climate change, the role of civil society, and adaptation financing, and enabled stronger government coordination of climate change action (section 1.2.3).

Phase 1 brought dialogue on climate change adaptation to the attention of virtually all key line ministries (ADB 2013b) and the development of the SPCR, for many (according to interviews with MOE PPCR staff), was a genuine starting point for discussion and understanding of how government and others could build climate resilience. Understanding deepened as project preparation progressed and climate resilience issues received further consideration (see Box 2). Although subnational stakeholders were only weakly engaged in these issues at the start (ADB 2013b), implementation, and particularly the vulnerability assessments (e.g., in phase 1) and project-related consultations, reinforced their engagement and awareness, and paved the way for more concrete actions now under way to mainstream adaptation at the subnational level.<sup>5</sup>

The vulnerability assessment in phase 1 yielded detailed information about vulnerability to climate change in four target provinces and informed the preparation of a number of investment projects under the SPCR (MOE 2013d). The work facilitated the development of an effective vulnerability assessment tool for Cambodia, which has since been adopted by other projects and programs, and exposed national, provincial, and local stakeholders to the design and implementation of such context- and site-specific assessments. ADB has

---

<sup>5</sup> For example, Sida and the United Nations Capital Development Fund are working with the Ministry of Interior to integrate climate change adaptation into local investment plans.

## Box 2: Project Preparation Experience in Awareness Raising

### Rice Commercialization Sector Development Program

Executing and implementing agencies became more aware of climate resilience issues in the course of the development of the policy loan, especially the review of three critical documents—the Framework for Agricultural Land Zoning, the Law on Management and Use of Agricultural Land, and the National Action Plan to Combat Land Degradation—as well as the consultations on the inclusion of climate change and climate resilience issues in the Policy on the Promotion of Paddy Production and Rice Export.

Source: ADB staff.

### Flood and Drought Risk Management and Mitigation Project

This was the first project of the Ministry of Water Resources and Meteorology to comprehensively include climate resilience aspects in its design. All the climate issues raised in preparation were new to the team so the learning curve was steep. This project made the team think more about how these issues could be addressed in other projects in the department.

Source: Project team, Ministry of Water Resources and Meteorology (MPWT).

### Southern Economic Corridor Towns Development Project

This was the first time in the Ministry of Public Works and Transport that climate resilience aspects were included in project design and work on climate resilience was done at the regional level. The project made an impact on project team thinking about investments and the need to ensure that these are not lost to climate change impact.

Source: Project team, MPWT.

continued to build on this work in its projects. As a result of the multilevel (provincial, district, and community) assessments done under the Provincial Roads Improvement Project, for example, flood and drought vulnerability maps have been generated, and software is being developed to allow this approach to be used in other projects.

The phase 1 TA provided an extensive analysis of climate data and its management in Cambodia. The Synthesis Report on the Cambodia Hydro-Meteorological Information System (MOE 2013c) contained an evaluation of current hydrometeorological monitoring networks, identified key gaps in disaster and climate risk management, and proposed operational solutions. An analysis of the value of downscaled climate models (MOE 2013b) clarified the status of climate modeling in Cambodia and identified best practices and approaches to downscaled modeling. The availability of climate resilience decision support tools in Cambodia was reviewed (MOE 2013a) and recommendations were made regarding the most suitable tools for application in Cambodia, considering the country's needs and capacity.

### *Lessons learned regarding climate change awareness, information, and data*

Insufficient access to information and awareness and understanding of climate change risks at the outset led to unrealistic expectations among shareholders, slow establishment of government ownership of the process, and a protracted preparation phase. Phase 1 would have benefited from a more strategic approach to communications and a process approach to TA delivery, which would have allowed more flexibility to adjust implementation to suit an evolving context.

The multi-stakeholder approach was an important factor in raising awareness, identifying information gaps, and debating key issues such as gender and climate change and stakeholder roles in climate change response. More use could have been made of civil society stakeholders

as agents for awareness raising, particularly for reaching out to subnational stakeholders in the early stages.

SPCR preparation has demonstrated to stakeholders that building climate resilience must be considered part of the challenge of sustainable development. The added value of inter-sector and interagency dialogues on climate resilience, disaster risk reduction, and climate change mitigation and their synergies must be strengthened through the continuation of multi-stakeholder and multidisciplinary approaches.

Government awareness of climate change risks has improved dramatically since 2009. However, the expansion of donor-funded climate change activities has outpaced the government's capacity to monitor and coordinate effectively, especially at the subnational level, and this incongruence presents a risk for the effective use of climate finance. Modest progress has been made in monitoring expenditures on climate change.

Although phase 1 has initiated discussions and policy dialogues on the gender dimensions of climate change, there could be greater awareness and action on this issue. Further learning about this issue should be pursued in the development of the SPCR projects, particularly through the implementation of the mainstreaming TA.

## 1.2.2 International and National Engagement in Climate Change

### *Situation at PPCR commencement*

Cambodia ratified the United Nations Framework Convention on Climate Change (UNFCCC) in December 1995 and acceded to the Kyoto Protocol in July 2002, and it designated the MOE as the national focal point for both. The First National Communication (MOE 2002) was prepared with the support of the Global Environment Facility (GEF) and the United Nations Development Programme (UNDP) and submitted in 2002. The Second National Communication was being prepared and the country was implementing three projects under the Clean Development Mechanism (CDM) at the time of SPCR planning. Within the region, Cambodia had also joined the ADB-administered Core Environment Program of the Greater Mekong Subregion (GMS) when it began in 2006. This program is aimed at achieving environmentally friendly and climate-resilient growth.

At the national level, Cambodia had begun to take action on climate change even before preparing the SPCR. The National Climate Change Committee (NCCC) representing key line ministries was established in 2006 to develop and coordinate climate change policies, operations, and mainstreaming (Cord et al. 2010). The CCD within the MOE acts as NCCC secretariat. Under the auspices of the First National Communication, the CCD drafted an action plan on climate change (MOE 2001), but this plan was not implemented. The NAPA developed in 2006, with support from the GEF and UNDP (MOE 2006), was the first significant prioritization of options for adaptation. It identified 39 priority projects in agriculture, water, health, and coastal zone development. A scoping assessment undertaken by the Asian Institute of Technology (AIT) and the United Nations Environment Programme (UNEP) in 2010 provided a detailed stocktaking of adaptation activities and responses in the country (AIT–UNEP 2010).

### *Pilot Program for Climate Resilience contributions to international and national engagement in climate change adaptation*

International engagement in climate change adaptation was not the primary focus of SPCR preparation, but this aspect of readiness has been strengthened in two important ways. First, the regular participation of government officials in CIF international events, such as the partnership forums and PPCR country meetings, has provided an opportunity for Cambodia to share its



experiences in climate change and development, build networks, and learn from others. Second, the inclusion in ADB's GMS Economic Cooperation Program of three projects in the SPCR portfolio has amplified discussions on climate resilience at both a political and a technical level in key regional forums, such as GMS leaders summits, ministerial conferences, and regional working groups.

The contribution of SPCR preparation to climate-related policies and strategies is somewhat difficult to dissociate from simultaneous efforts to strengthen climate policy, particularly the development and implementation of the CCCA. However, relevant indirect and direct results of PPCR activities are discernible. The engagement of line ministries in SPCR preparation at the policy-making level, with the aim of establishing an “all of government” approach, considerably advanced climate policy discussions and established key policy-level partnerships, particularly between the MOE and the ministries of interior, planning, women's affairs, and water resources and meteorology (ADB 2013b). SPCR preparation and phase 1 implementation also had a very positive effect on the MOE in clarifying climate change policies and contributed to increasing the number of staff engaged in climate change activities (CIF 2009).

SPCR development had more direct outcomes in terms of climate change strategies and policy advice. The SPCR, the first fully funded strategic approach to addressing climate change in Cambodia, included a diagnosis of climate change risks as currently understood, options for adaptation approaches and interventions, a stocktaking of existing adaptation activities, and a review of climate-related policies. The inclusion of gender concerns in climate change policy was supported through the development and government endorsement of the outline for the Gender and Climate Change Master Plan in partnership with the Ministry of Women's Affairs (Ministry of Women's Affairs 2013). Additional output from the phase 1 TA, including guidelines for mainstreaming into national and subnational investment planning and policy briefs covering key climate change issues (Box 1), has contributed and continues to contribute to climate change policy and strategy development.

#### *Lessons learned regarding international and national engagement in climate change*

Throughout SPCR preparation and phase 1 implementation, the enabling environment in terms of climate policies, institutions, and strategies was still developing and the expected outcomes for mainstreaming in phase 1 were therefore not easy to achieve. More of the phase 1 resources should have been focused on building the enabling environment.

To optimize resources and capacity and accommodate internal MOE management issues, the PPCR team was located outside the CCD. Its location in the Conservation Department has been a significant barrier to internal (with other ministries) and external (with development partners) coordination and to stronger cooperation between CCCA and SPCR implementation (this barrier has been addressed in phase 2).

Given the relative newness of climate change policies and institutions, it was overly optimistic for some observers to expect immediate government “ownership” of the program. From the start, the government took responsibility for decisions made on the PPCR, and understanding and ownership have deepened steadily throughout SPCR development, project design, and early implementation.

The limited cooperation and coordination between the CCCA and the development and early implementation of the SPCR was regarded by development partners and other observers as a lost opportunity. The mainstreaming efforts of both programs could have been more closely coordinated and complementary. The opportunity for much closer cooperation is now being addressed.<sup>6</sup>

---

<sup>6</sup> With the second phase of the CCCA about to begin and the interrupted SPCR mainstreaming TA to resume implementation shortly.

### 1.2.3 Integration of Climate Change into Development Planning in Cambodia

#### *Situation at Pilot Program for Climate Resilience commencement*

**Human and institutional capacity development.** At the start of SPCR planning, the institutional and human resource capacity to address climate change in Cambodia could have stood some improvement. Structures and technical capacity within the MOE were emerging, but high demands were placed on this nascent capacity, including responsibility for UNFCCC activities (national communications and NAPA), the implementation of GEF- and donor-funded climate change projects, and the proposed preparation of a climate change strategy and action plan. There was therefore insufficient capacity to support mainstreaming and the integration of climate change concerns into sector development planning. Limitations in understanding and technical capacity for climate risk management were also major challenges at subnational levels, and relevant training to provide this capacity still had to be organized in the provinces and communes (MOE 2011a).

By 2010, three important exercises intended to assess capacity needs related to climate change had already been accomplished. A sector adaptive capacity assessment done during NAPA preparation noted the need for greater technical, financial, and institutional capacity to deal with climate hazards among government agencies and local communities (MOE 2006). A national capacity self-assessment (MOE 2007) reviewed government capacity to address environmental concerns with regard to three UN conventions, including the UNFCCC, and found that, in general, staff engaged in environmental tasks could have benefited from better technical preparation and skills training in adaptation, vulnerability assessment, land degradation, and drought mitigation work. A more recent comprehensive assessment, carried out under the auspices of the Adaptation Knowledge Platform (AIT–UNEP 2010), identified a clear need for capacity development relative to adaptation knowledge, systems, structures, and policies.

**Integration of climate change concerns into policies and strategies.** Although action to address climate change risk was progressing, the integration of climate change concerns into national and sector development policies and strategies was still at an early stage. The Rectangular Strategy for Growth, Employment, Equity and Efficiency 2004 included consideration of climate change as a significant issue, and the National Strategic Development Plan update (2009–2013), finalized in 2010, mainstreamed some aspects of climate resilience and disaster risk reduction. The national plan for reducing disaster risks integrated climate change issues and highlighted the complementary nature of disaster risk reduction and climate change adaptation activities. Recognizing the importance of addressing the issue of climate change below the national level, the National Program for Sub-National Democratic Development 2010–2019 emphasized the need to bring climate change into the program implementation mainstream. At the sector level, climate change was being integrated into the Strategy for Agriculture and Water 2010–2013, but the strategy and policy documents of the public works and transport, rural development, and industry, mines, and energy ministries did not yet address climate change and resilience.

**Coordination.** Coordination and sharing between government agencies dealing with climate hazards had already been flagged by the National Capacity Self-Assessment (MOE 2011a) and the NAPA (MOE 2006) as needing improvement to enable the government to respond effectively to climate change. While the interministerial NCCC was already in place at the start of SPCR planning, it had just begun to meet regularly. The CCD was the main driver of coordination efforts, and had achieved some progress under the CDM in supporting and organizing sector-specialized interministerial technical working groups. The National Committee on Disaster Management, the national interministerial coordination body for disaster risk management, had only diffuse links with the NCCC (ADB, IFC, and World Bank 2009). Informal cooperation on climate change between development partners took the



form of a monthly meeting chaired by UNDP and ad hoc meetings with NCCC members. A proposal committing development partners to a cooperation framework on climate change was being considered.

**Monitoring and evaluation.** At the start of SPCR planning, monitoring and evaluation (M&E) of national or sectoral climate change action had not yet begun. The NAPA indicated that only project-by-project M&E existed but recognized that establishing mechanisms for coordination and monitoring was the next step. Several development partners had begun to plan and implement climate change projects and programs, including the CCCA and the Mekong River Commission Climate Change and Adaptation Initiative, each with its M&E plan. The proposed climate change strategy and action plan was expected to provide a national framework for monitoring and evaluating climate change activities.

*Pilot Program for Climate Resilience contributions to integration of climate change into development planning in Cambodia*

**Contributions to human and institutional capacity development.** The impact of SPCR preparation activities on the capacity development of the MOE and participating line ministries, while difficult to quantify, has been considerable. The MOE teams and project teams consulted for this study consistently indicated that capacity to understand and manage climate finance and climate resilience projects had improved as a result of involvement in SPCR planning and phase 1 implementation (Box 3). Capacity was gradually built up through the program of technical meetings, workshops, and training during phase 1, particularly the SPCR consultation workshops, training in science-based climate change adaptation, procurement training, and the phase 1 final achievements workshop. Capacity-building outcomes are also evident at the project level. The preparation of the Provincial Roads Improvement Project provided the executing and implementing agencies with practical experience in applying their respective climate change action plans developed under the CCCA. The Climate Resilient Rice Commercialization Sector Development Program, on the other hand, included the building of executing and implementing agency capacity for climate-resilient rice production, and joint workshops with local, provincial, and national participants where their respective roles and responsibilities under the project were discussed.

**Box 3: Comments on Capacity Building under the Pilot Program for Climate Resilience**

Major achievements have been the progress in awareness and capacity building in the Ministry of Environment and the key line ministries—the Ministry of Interior, the Ministry of Planning, and the Ministry of Economy and Finance, as well as the Ministry of Women’s Affairs and the Ministry of Rural Development—which have taken ownership and responsibility for building climate resilience.

Source: PPCR Phase 1 Completion Report.

In the early stages of Pilot Program for Climate Resilience development the Ministry of Economy and Finance learned a great deal in a short time about climate change issues and climate change financing, especially about climate proofing and what adaption projects might look like.

Source: Ministry of Economy and Finance interviews.

This was the first project in this department to consider adaptation issues comprehensively and the great benefit has been moving toward a climate change adaptation approach in road construction, which will help the project team to continue to apply this approach in future projects. Sharing the experience with other initiatives in the department is also a priority.

Source: Interviews with the Provincial Roads Improvement Project team.

SPCR preparation has also contributed to an assessment of capacity to adapt to climate change. The Synthesis Report on the Cambodia Hydro-Meteorological Information System identified gaps and needs regarding hydrometeorological monitoring networks. A capacity needs assessment across three key sectors (water resources, agriculture, and transport infrastructure and urban planning) was conducted during the inception phase of the mainstreaming TA, and a capacity-building plan was prepared and has been endorsed by the three ministries. Under the Provincial Roads Improvement Project, a needs assessment has been done and a capacity-building plan covering mapping technology, water management approaches, and emergency management and communication systems has been developed.

**Contributions to the integration of climate change into policies and strategies.** The anticipated outcomes of the phase 1 TA related to mainstreaming climate change (Table 3) were rather ambitious, given the stakeholders' low awareness and poor understanding at the outset. However, important contributions were made to the dialogue exploring the issue. These included a review of the implications of climate change for national planning, an inventory of national and sectoral plans for climate change, and a guidance paper on national mainstreaming. A series of seminars dealing with mainstreaming climate change and disaster risk management at the subnational level identified key concerns, including capacity, financing, gender and inclusion, vulnerable sectors, and possible entry points, and laid the basis for the development of a further guidance paper on subnational mainstreaming. The value of this work is increasingly recognized as the focus of climate change action in Cambodia shifts toward subnational capacity building and mainstreaming (according to interviews with Sida and UNDP representatives).

**Contributions to coordination.** SPCR preparation and phase 1 TA implementation improved understanding of climate change and increased sharing of experiences between government ministries and departments because of the broad sector coverage of the SPCR, and contributed to a much more collaborative (and less competitive) approach to addressing climate change issues within government (CIF 2009). These efforts have also fed into the policy and planning coordination activities under phase 1 of the CCCA. Coordination work has continued. In the inception phase of the SPCR TA (ADB 2012b), a wide-ranging review of coordination progress and challenges was undertaken in 2014, a coordination team for SPCR implementation comprising 13 line ministries was established, and two coordination meetings were held. The development of the monitoring and reporting activity under the SPCR has also made important contributions to coordination efforts (see below).

**Contributions to monitoring and evaluation.** Monitoring and reporting activities under the SPCR were slow to get off the ground, reflecting the evolution of the global CIF PPCR framework and revisions in the framework. The MOE demonstrated a strong commitment to this aspect of the SPCR from the start, and a PPCR M&E working group comprising 10 line ministries was formed in 2012 and tasked with setting baselines and targets for the PPCR indicators. Cambodia published a brochure on its M&E status—the first PPCR country to do so—and presented it at an international CIF meeting in Istanbul (Government of Cambodia 2012). Following the development of the revised CIF PPCR results framework in 2013, the MOE, with support from the CCD, the PPCR M&E working group, and the Ministry of Planning (MOP) and in collaboration with the International Institute for Environment and Development and the CCCA, is now developing a national framework for climate change M&E, which will be integrated into national and subnational government and sector M&E systems. The SPCR TA is providing critical support for MOP involvement in this process, thus ensuring more effective integration into national development monitoring. The MOP is also expected to have a much greater role in SPCR monitoring as a result.



### *Lessons learned regarding the integration of climate change into development planning in Cambodia*

Institutional and human capacity development needs were identified at an early stage as a major constraint on addressing climate change. A coordinated approach is required to address this constraint. SPCR implementation should promote and link up with a systematic and joint national strategy for building climate change capacity that encompasses government ministries, subnational government, and civil society.

Capacity building and mainstreaming are closely linked. While training is effective in improving the implementation of individual projects, mainstreaming demands a more sophisticated and longer-term capacity development approach linked to organizational change. Stronger collaboration between the second phase of the CCCA and the implementation of the SPCR capacity-building TA could be synergetic.

Ensuring the adequate integration of climate change concerns into national development plans, such as the Rectangular Strategy for Growth, Employment, Equity and Efficiency and the National Strategic Development Plan, is critical to gaining momentum and identifying entry points for mainstreaming climate change and disaster risk management into development planning.

The Ministry of Economy and Finance (MEF) had a central role in establishing and driving coordination on SPCR development in the early stages, when the MOE still had to develop its capacity to absorb or manage large amounts of climate finance and limited influence to coordinate the work of competing ministries. As the MOE has grown in strength, there has been less need for the MEF to be directly involved in coordination.

Establishing and maintaining interministerial coordination requires a strategic communications approach, linked to effective planning and management tools, including a comprehensive M&E approach. It is important to build on existing national structures and processes, and to maintain momentum.

Both the SPCR and the CCCA have begun to address the important issue of monitoring and have made significant progress. Integrating the PPCR Results Framework into the national M&E system being developed under the CCCA should be a starting point for integration into

the national system. The mutual benefits of closer collaboration between these two initiatives on M&E are clear.

Increased commitment to monitoring and reporting must be made across government agencies. To move forward, technical and institutional capacity to integrate climate change indicators into national, sectoral, program, and project M&E systems as part of the mainstreaming process must be strengthened.

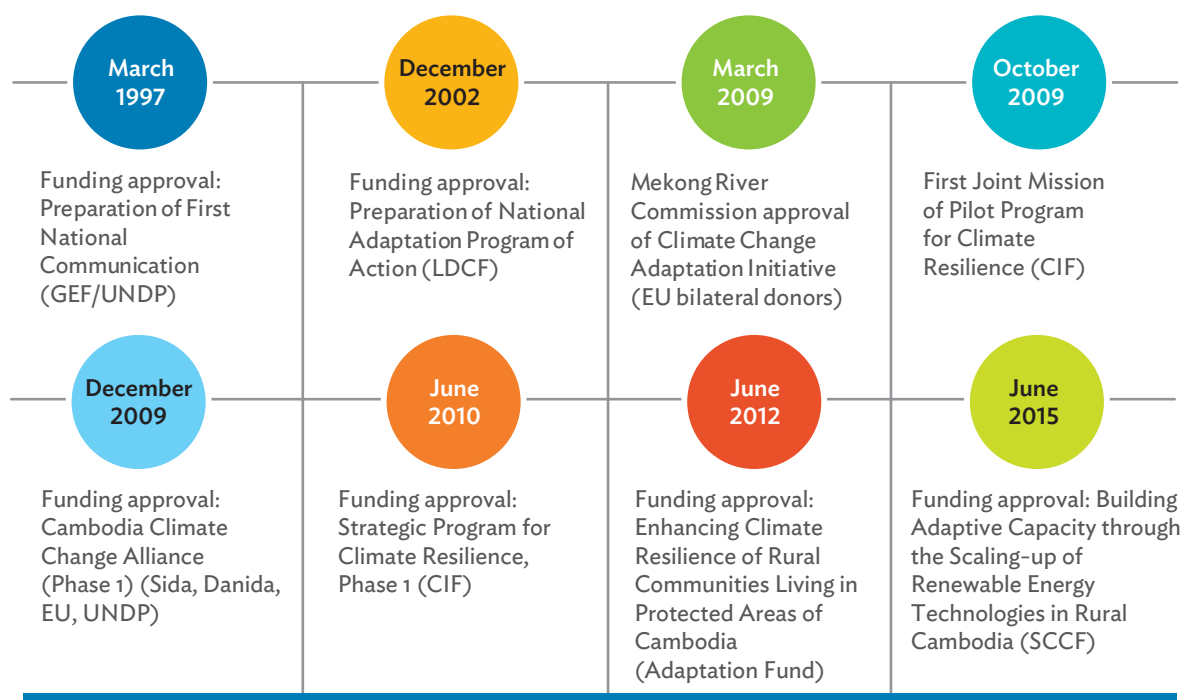
Data availability and data quality present major challenges for monitoring. The reliability of data, particularly those collected in remote areas, cannot be guaranteed and temporal coverage is not reliable. SPCR monitoring activities should not only include the collection and analysis of data from existing sources but also contribute to improving data quality and reliability.

## 1.2.4 Readiness for Climate Finance

### *Situation at PPCR commencement*

In 2009, the context of climate finance was changing rapidly in Cambodia. Before the PPCR funding agreement was reached, external finance for climate change—for example, for the preparation of the First National Communication, the NAPA, and the National Capacity Self-Assessment—was mostly limited to grant assistance from the UNDP–GEF. GEF-financed projects in renewable energy and water resources planning in agriculture were also being implemented. Then, broader partnerships with donors for climate finance started to build up (Figure 3). Apart from the SPCR, other major initiatives under development included the

**Figure 3: Cambodia Milestones in Climate Finance**



CIF = Climate Investment Fund, GEF = Global Environment Facility, EU = European Union, Danida = Danish International Development Agency, LDCF = Least Developed Countries Fund, SCCF = Special Climate Change Fund, Sida = Swedish International Development Cooperation Agency, UNDP = United Nations Development Programme.

Source: ADB.

CCCA (\$8.4 million in EU and bilateral funding), the Mekong River Commission Climate Change and Adaptation Initiative (\$15.9 million in multilateral funding),<sup>7</sup> and the UNEP–GEF Vulnerability Assessment and Adaptation Programme for Climate Change within the Coastal Zone (\$4.6 million from the GEF and the EU). ADB's Cambodia and GMS financial assistance also reflected ADB's increasing engagement in climate change (ADB 2011a).

Civil society experience in gaining access to and managing climate finance on a smaller scale was likewise growing. International and national NGOs were implementing initiatives in renewable energy, climate resilience, and climate change awareness and education, funded by multilateral and bilateral donors. Such initiatives were also eligible for climate change funding from the GEF Small Grants Programme, which has been operating in Cambodia since 2004.

Modest progress was made in exploring the economic consequences of climate change and developing institutional financial arrangements for addressing the associated development needs. The national self-assessment exercise (MOE 2006) noted that climate change was not at the forefront of MEF or MOP thinking and that line agencies had generally not dealt with its impact on their sectors, including the possible effects on socioeconomic development. At the national level, apart from the budget allocation for the CCD, sustainable financing mechanisms still had to be instituted for climate change activities and a separate facility or fund still had to be developed, although a trust fund was envisaged under the planned CCCA program. At the subnational level, the PPCR First Joint Mission noted that climate risk management needed to be integrated into provincial planning or budgeting and that provincial budgets could not cover even current priority development needs, let alone the cost of adaptation (MOE 2007).

#### *Pilot Program for Climate Resilience contributions to readiness for climate finance*

In the last 5 years, Cambodia has made progress in building capacity to gain access to and manage climate finance, including key contributions from phase 1 implementation and SPCR preparation. The preparation phase of the SPCR, the first major investment program in climate change adaptation, provided valuable learning related to climate finance within the MEF, which championed and supported the early stages of SPCR development. It also gave the MEF, the MOE, and relevant line ministries their first hands-on experience in putting together an investment plan for climate resilience, and improved understanding of the design and preparation of bankable climate change projects.

The preparation of mainstreaming guidelines and the related policy dialogue in phase 1 helped build capacity and knowledge in both the MEF and the MOE with respect to climate change and disaster risk management as considerations in macroeconomic management, the economics of adaptation in Cambodia, and development investment portfolios. The policy dialogue in support of the mainstreaming guidelines for the subnational level also facilitated understanding of the integration of climate change and disaster risk management into investment planning in the provinces and districts. In addition, with PPCR funding, ADB has been supporting the establishment of subnational investment facilities under the National Program for Sub-National Democratic Development to deliver climate finance at the local level. The PPCR team in the MOE has likewise assisted the ministry in costing and prioritizing climate change objectives in national and sector development strategies and in conducting feasibility studies to obtain Green Climate Fund (GCF) resources for the government's climate change strategies (CIF 2009).

---

<sup>7</sup> Initial budget covering Cambodia, the Lao People's Democratic Republic, Thailand, and Viet Nam.



### *Lessons learned regarding readiness for climate finance*

The capacity to absorb climate finance is a major issue. The 2011 floods, for example, cost more than \$400 million, but the country has not responded with operations that could reduce this impact. Climate finance is mostly supply driven and the government has yet to respond strategically to the demands of donors. A closer match between funding and absorptive capacity must be achieved.

The plethora of development partner approaches, financial procedures, and reporting requirements and the competition for government capacity are serious barriers to more effective and collaborative action on climate change. Stronger coordination on climate finance between development partners and between development partners and government is needed.

Several development partners, including ADB, are supporting the delivery of climate finance at the subnational level, but the National Program for Sub-National Democratic Development is doing its utmost to monitor and coordinate all these different activities. Development partners must coordinate their efforts more closely and support the Ministry of Interior in learning from experience and developing effective structures and mechanisms for prioritizing and delivering local-level climate finance.

## **1.3 DISCUSSION AND CONCLUSIONS: CAMBODIA**

---

The 5 years since the start of SPCR planning have seen major progress in Cambodia's response to climate change. Climate finance has grown significantly, as has the number of projects and programs focusing on climate change risk at both the national and the subnational level. A national strategic plan for addressing climate change is in place and considerable progress has been made in integrating climate change concerns into national and sectoral policies and strategies. Capacity to address climate change has begun to strengthen, particularly within the MOE, and Cambodia has become more active and vocal on the international stage through its participation in Conference of the Parties meetings, CIF meetings, and ADB's GMS program. The government has taken strong ownership of the two main programs (SPCR and CCCA). However, the growth in institutional capacity and domestic resources dedicated to climate change has not matched the rapid increase in external climate finance beyond these two programs, and the country is hard put to manage and coordinate climate change action effectively.

The implementation of the phase 1 TA and the development of projects in the SPCR portfolio has taken longer than anticipated and has met with many challenges, yet these activities have made substantial contributions to the progress referred to above. Measuring these contributions and attributing them properly is sometimes difficult because similar and complementary climate change interventions are being implemented at the same time. However, most stakeholders, particularly the government, acknowledge that the SPCR preparation and the investment projects have achieved notable outcomes and impact in strengthening government coordination, raising awareness of climate change, sustaining policy dialogue on climate change, developing national and sector strategies, assessing vulnerability and capacity, and instituting M&E systems. Moreover, the process has contributed a number of studies that continue to support climate change action in Cambodia. On the other hand, perhaps more could have been achieved under the phase 1 TA if the design had been better matched to the early capacity-building and awareness needs, and if closer collaboration had been established with the CCCA.



The learning curve for all stakeholders involved in the development of the SPCR has been steep but the process has yielded some valuable lessons. The expectations of stakeholders, particularly the hope for rapid progress in phase 2 implementation, were overly optimistic, given the government's modest capacity, the poor enabling environment, and a complex program comprising eight separate projects. The multi-stakeholder approach adopted under PPCR guidelines was successful and played an important role in raising awareness and providing space for generating ideas and building consensus. However, the program did not adequately sustain this engagement and coordination with an effective communications strategy. The failure to build stronger collaboration with the CCCA from the start may have resulted in commonalities between the CCCA and phase 1 objectives and activities, which give cause for concern in a situation of low capacity and resources. More efforts must now be exerted to bring the PPCR and CCCA initiatives (funded by the same donors) together. Finally, external support for climate change activities in Cambodia remains supply driven and continues to outstrip the government's capacity to manage that support. Much greater cooperation between development partners and between development partners and government is needed. It is anticipated that the implementation of the PPCR TA—Mainstreaming Climate Resilience into Development Planning—and improved collaboration between the PPCR and the CCCA will go a long way toward addressing these shortcomings in the near future.

## 2 Nepal

### 2.1 DEVELOPMENT OF THE NEPAL STRATEGIC PROGRAM FOR CLIMATE RESILIENCE

#### 2.1.1 Introduction: Climate Change Risks and Vulnerability in Nepal

Nepal has four distinct seasons: pre-monsoon (March–May), monsoon (June–September), post-monsoon (October–November), and winter (December–February). These seasons differ enormously in temperature and precipitation across Nepal’s variable geography. The highest rainfall occurs in the central and mid-hills, and northeast and east of the Kathmandu valley. Average annual rainfall is about 1,800 millimeters. In the north, the high mountain ranges provide a final barrier against the monsoon winds, giving rain-shadow areas across the Tibetan Plateau. The extensive Himalayan glaciers, a vast natural water reservoir, are another prominent feature of Nepal’s hydrometeorology.

Climate modeling indicates that mean temperatures in Nepal will increase, with greater increments expected in the winter season and in the western and central parts of the country. There is already evidence that mean annual temperatures increased by more than 0.04°C from 1977 to 1994. This warming is more pronounced at high altitudes and has contributed to increased glacier melt and to flash flooding as new lakes are formed behind unstable moraines and then released. The climate model projections for precipitation are less clear and sometimes contradictory, but according to most of them, monsoon and post-monsoon rainfall will increase in both amount and intensity. This forecast is borne out by recent records, which confirm an increasing incidence of disasters caused by extreme weather events, including droughts, floods, hailstorms, landslides, and crop disease (National Planning Commission 2010).





Nepal's settlements and ecosystems are diverse and particularly vulnerable to climate change. More than 80% of the population lives in the rural areas (UN DESA 2015) and relies heavily on rather fragile ecosystems for its livelihood. According to government estimates, 1.9 million people in Nepal are highly vulnerable to the risks of climate change, and 10 million more are increasingly at risk (ADB 2013a). Climate change also presents a serious challenge to the gains achieved in poverty reduction and human development and threatens the vulnerable infrastructure essential to the functioning of the country's economy. In addition, climate vulnerability in Nepal has a regional dimension. The glaciated areas hold vast stocks of water, and both precipitation and the flow of meltwater from Nepal contribute to over 40% of the flow of the river Ganges, the most populous basin in the world.

## 2.1.2 Preparation of the Nepal Strategic Program for Climate Resilience

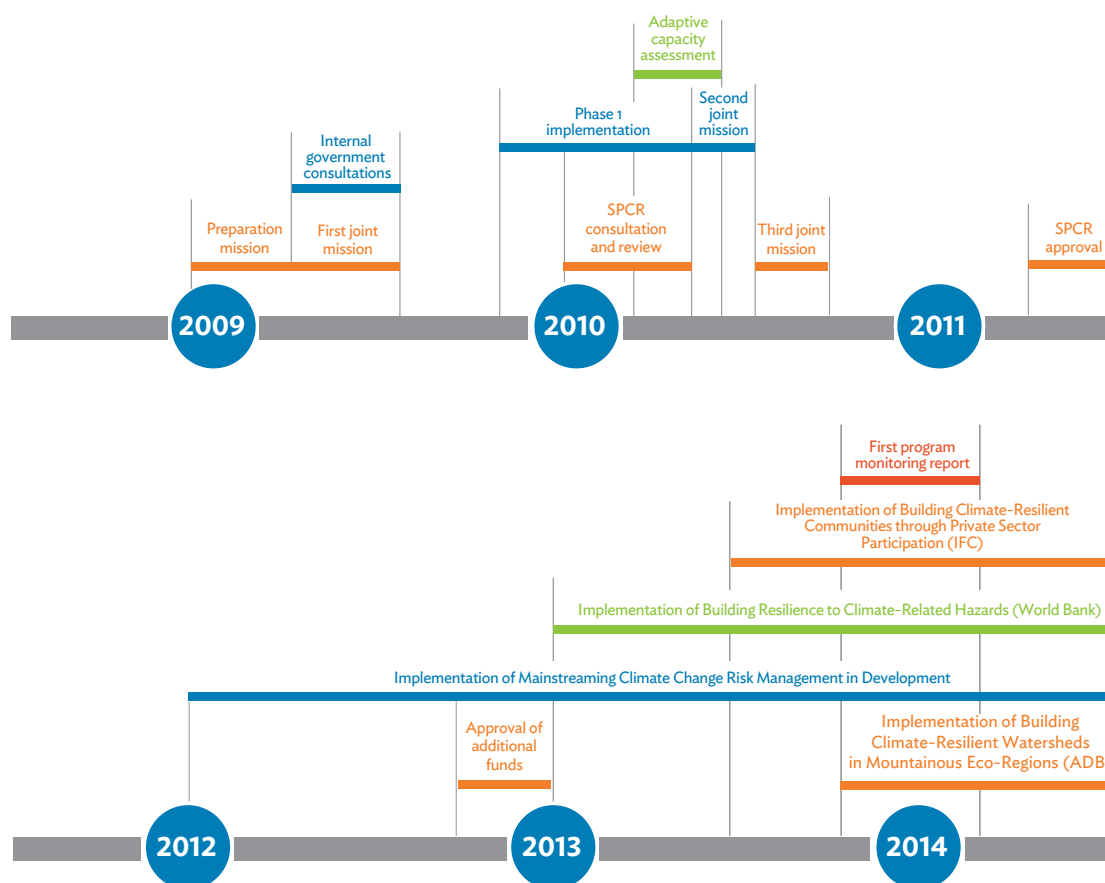
Preparations for PPCR funding began in 2009 with joint MDB preparation missions and the launch of an internal government dialogue and stakeholder consultation process leading up to SPCR approval in June 2011. SPCR preparation was supported by a small-scale phase 1 TA (\$225,000) approved by ADB in March 2010 and implemented from May to November 2010. Under the TA, the development of project concepts for the SPCR had five components, four of which have begun implementation (Table 5). The initial financial envelope proposed for SPCR funding (\$50 million in grants and \$36 million in concessionary loans) evolved considerably as the government became progressively less inclined to take out loans for climate change adaptation. At the request of the government, the loan component was reduced to \$21.6 million, of which \$6.6 million took the form of nongovernment financing channeled directly through the IFC for private sector adaptation activities. The final financial envelope of \$116.4 million included an anticipated \$25 million in cofinancing. Figure 4 shows the key milestones in the development of the SPCR.

**Table 5: Components of the Nepal Strategic Program for Climate Resilience**

Component	Expected Outcome
<b>Component 1:</b> Building Climate Resilience of Watersheds in Mountain Eco-Regions	Improved access to, and enhanced reliability of, water resources
<b>Component 2:</b> Building Resilience to Climate-Related Hazards	Improved resilience through enhanced capacity to predict and respond to climate-related hazards
<b>Component 3:</b> Mainstreaming Climate Change Risk Management in Development	Safeguards for Nepal's development programs, policies, and projects from the effects of climate change
<b>Component 4:</b> Building Climate-Resilient Communities through Private Sector Participation	Enhanced food security through the promotion of climate-resilient agriculture; reduced vulnerability of farmers; and climate proofing of selected vulnerable private infrastructure
<b>Component 5:</b> Enhancing Climate Resilience of Endangered Species	Enhanced capacity, knowledge, and incentives to improve climate resilience of critically endangered species by safeguarding their natural habitats against climate threats

Source: Proposal—Nepal Strategic Program for Climate Resilience, June 2011.

**Figure 4: Key Milestones in the Development of the Nepal Strategic Program for Climate Resilience**



ADB = Asian Development Bank, IFC = International Finance Corporation, SPCR = Strategic Program for Climate Resilience.

Source: ADB.

The adoption of a small-scale TA for phase 1 with relatively few consultants provided an efficient and flexible way for the Ministry of Science, Technology and Environment (MOSTE) to support SPCR development. Building government ownership of the process was a key objective and a detailed program planning process was developed with MOSTE to promote this (Government of Nepal 2010) and to ensure broad stakeholder participation as envisaged under the PPCR guidelines (CIF 2009). At the start of the phase 1 TA, the preparation of the Nepal NAPA was almost complete and the TA built effectively on this work, notably engaging the NAPA technical working groups (TWGs) and adding a new TWG for the private sector. In addition, phase 1 drew on the output and experience of an ongoing ADB climate change TA (ADB 2008), particularly regarding institutional assessment and also for some financial support for SPCR stakeholder consultation activities. The phase 1 TA comprised an in-depth literature review, extensive stakeholder consultations to identify and develop priority projects, a comprehensive risk assessment, an assessment of adaptive capacity (at sector, district, and community levels), and further research by, and consultations with, the TWGs.

SPCR planning identified priority climate change risk factors, including the availability and quality of water (component 1), food security (component 4), and the health of the ecosystem (component 5). The comprehensive risk assessment identified two other major concerns: the capacity of communities to adapt to anticipated climate change and the capacity of

local governments to assist them in this regard (components 2 and 3, and the housing subcomponent of component 4). These risk areas matched priority areas of action under the NAPA. A grant-funded TA under component 3 supports the mainstreaming of climate change into development planning (ADB 2011c). Strong political will to act on climate change and the simpler processing of grants enabled the implementation of this SPCR TA to begin within a year of SPCR approval (Table 6); by January 2015, implementation was more than 50% complete (Box 4). All SPCR projects are now being implemented, and both the TA (component 3) and the IFC project (component 4) in particular have made significant progress (Table 6).

**Table 6: Nepal Strategic Program for Climate Resilience: Project Portfolio and Progress Update**

SPCR Project	Progress
<b>Component 1: Building Climate Resilience of Watersheds in Mountain Eco-Regions (ADB)</b> (\$24.4 million PPCR grant, including \$0.9 million for preparatory TA, \$4.6 million cofinancing from Nordic Development Fund) CIF approval: Aug 2013 ADB approval: Sep 2013	Downscale modeling, vulnerability assessments, and critical hydrologic studies completed in the project area as part of preparatory TA Project management unit (PMU) set up in Dadeldhura, western Nepal Project staff recruited and inception phase completed Consulting firm selected and negotiations at an advanced stage Subprojects to improve water availability for communities in target districts under preparation
<b>Component 2: Building Resilience to Climate-Related Hazards (World Bank)</b> (\$31 million PPCR grant) CIF approval: Jun 2011 WB approval: Feb 2013	PMUs fully staffed and procurement of two major consultancies completed Key design (system integration) consulting team deployed Specifications for GIS and remote sensing laboratory finalized Five regional workshops held for project stakeholders Work on agricultural management information system initiated
<b>Component 3: Mainstreaming Climate Change Risk Management in Development (ADB)</b> (\$7.2 million PPCR grant, \$0.6 million cofinancing from the Nordic Development Fund) CIF approval: Oct 2011 ADB approval: Dec 2011	Consultants deployed June 2012, inception phase completed Sep 2012, and inception report published Feb 2013 TA office established and operational in MOSTE Implementation more than 50% complete with significant progress achieved in all three output categories (mainstreaming, knowledge management, and management for results) and midterm progress reported
<b>Component 4: Building Climate-Resilient Communities through Private Sector Participation (IFC)</b> (\$28.8 million PPCR funding) \$19.8 million cofinancing CIF approval: Jun 2011 IFC approval: Apr 2013	Enhanced food security through the promotion of climate-resilient agriculture: project launched, field-level diagnostics completed, and practices and training manuals developed for the three agribusiness companies Climate-proofing of hydropower infrastructure to protect vulnerable installations and communities: climate change risks and opportunities identified for Upper Trishuli 1 Hydropower Plant and cost-benefit of adaptation measures/incremental investment options estimated, procurement of consulting firm ongoing Feasibility study of low-cost climate-resilient housing: consultant hired to carry out market survey, market survey completed, report being reviewed by IFC/World Bank
<b>Component 5: Enhancing Climate Resilience of Endangered Species</b>	Project dropped

ADB = Asian Development Bank, CIF = Climate Investment Funds; GIS = geographic information system; IFC = International Finance Corporation; MOSTE = Ministry of Science, Technology and Environment; PPCR = Pilot Program for Climate Resilience; SPCR = Strategic Program for Climate Resilience; TA = technical assistance.

Sources: ADB, World Bank, IFC, and CIF.

#### **Box 4: Main Achievements of ADB TA 7984—Mainstreaming Climate Change Risk Management in Development (February 2015)**

- Institutional analyses completed for eight key government departments
- International experience reports on climate change risks prepared for eight sectors
- District-level climate threat modeling, including sector analyses, completed for eight case-study districts
- District-level vulnerability assessments and adaptation planning completed for eight case-study districts
- Training workshops in vulnerability assessment and adaptation planning held for key personnel
- Synthesis reports presenting sector reform priorities for strengthening climate resilience completed for six sectors
- Department of Hydrology and Meteorology staff trained in hydrologic modeling for climate change risk assessment and training manual completed
- Guides developed for sector-level climate resilience planning
- Extensive consultations (dialogues, workshops, and roundtables) on climate change risk management held with government counterparts

Source: ADB (2015).

### **2.1.3 Challenges Faced in the Development of the Nepal Strategic Program for Climate Resilience**

The planning, development, and early implementation of the Nepal SPCR was a significant achievement in a challenging institutional and political context. When SPCR planning began, Nepal, a least developed country, was still emerging from a prolonged period of violent conflict and undergoing a protracted political transition. Decision making was often slow and unclear, issues in the public sphere were commonly contested, and the delivery of development aid had become difficult.<sup>8</sup> Early development of the SPCR was constrained by weak government ownership of the program, the limited capacity of relevant institutions, and the evolving government policy for taking out loans for climate change adaptation.

A key principle of PPCR programming is a country-led and country-driven approach (CIF 2009). In Nepal, this was not easy to achieve at the start, given the considerable asymmetry between MDBs and government in their grasp of climate change adaptation, the government's insufficient understanding of the CIF financing mechanism and MDB roles, the inadequate institutional capacity of government and other stakeholders, and the time constraints imposed on program development. To ensure timely decision making, broad stakeholder engagement, and adherence to MDB and CIF guidelines, the MDBs had to provide a certain amount of support at the start. Government ownership was also affected by concerns over the link between the SPCR and the recently completed NAPA. The need for further assessment of climate change risk under phase 1 and the difficulty of obtaining direct PPCR funding for NAPA projects were issues that the government did not appreciate at first. Yet, government commitment to the SPCR has remained strong throughout program development and ownership of the program has gradually but surely strengthened over time, particularly as the projects have begun implementation.

<sup>8</sup> Despite the difficulties, government and major donors (including ADB) had signed an agreement to harmonize and align their approaches to climate change in Nepal.

During SPCR development, slow progress toward political consensus and reform contributed to the government's institutional incapacity. Despite this, the government, motivated by the NAPA and UNFCCC activities, moved decisively on climate change and developed structures, strategies, and policies (section 2.2.2). There was a new Ministry of Environment at the start of SPCR planning,<sup>9</sup> although its limited technical capacity and influence over the key ministries involved in adaptation held back program development. This capacity was reinforced during preparation, through the continued participation of the multi-stakeholder NAPA TWGs and the implementation of the phase 1 TA, as well as through improved internal government coordination and other official processes, under the leadership of key government officials. During project implementation, further capacity challenges have emerged. In particular, the high staff turnover under the current government career structure and the government's increasing reliance on local rather than international consultants have slowed the pace of capacity development for climate change adaptation.

The evolving debate in Nepal and globally on loan finance for climate change adaptation also affected SPCR development. The government's approval of the financial framework for the SPCR in November 2010, including up to \$60 million in concessional loans, drew a strong reaction from civil society stakeholders, who argued that PPCR funding should be compensatory and additional, in accordance with UNFCCC principles.<sup>10</sup> After public discussion, with the government proactively participating, the decision to take out loans was made and the SPCR was approved, although the two sides remained somewhat divided in their views. Continuing external advocacy and internal government dialogue on the issue ultimately forced a shift in policy. Loans for climate change adaptation would henceforth be considered on a case-by-case basis, and only for projects that included "hard" output, such as infrastructure and equipment. As a consequence, the financing of the SPCR was restructured and concessional credits were removed from the financing of the SPCR component 1 project Building Climate Resilience of Watersheds in Mountain Eco-Regions.

#### **2.1.4 Lessons Learned from the Development of the Nepal Strategic Program for Climate Resilience**

The mission-based approach to SPCR planning engaged stakeholders and promoted dialogue within government, civil society, and the private sector, but it was not conducive to ensuring the continuity of the process, establishing relationships among the various stakeholders, or generating government ownership of the planning process.

Given the lack of institutional strength in government and the evolving political situation in the early stages of SPCR preparation, the passage through government planning and financial processes depended on one or two key champions. This leadership was critical and also gradually strengthened MOSTE ownership of the program.

The implementation of the SPCR TA (Mainstreaming Climate Change Risk Management in Development), on the other hand, has made rapid progress because of a number of factors, including a strong, well-led PPCR team in place from the start as well as the enthusiasm and commitment of MOSTE. Having an ADB climate change adviser in the country promoting good relationships, clarifying roles and procedures, and facilitating quick decision making without recourse to ADB headquarters has also made a big difference.

---

<sup>9</sup> The Ministry of Environment was later restructured and absorbed into the larger Ministry of Science, Technology and Environment, further slowing decision making and policy development for some time.

<sup>10</sup> This has been a common concern in developing countries. Cambodia, Indonesia, and the Philippines, for instance, have also set restrictions on taking out loans for climate change adaptation.

In the SPCR phase 1 TA, the small-scale TA modality provided effective and efficient support for the SPCR development process, in view of the government's strong political will to tackle climate change, the institutional structures in place, and the experience gained under the NAPA. Direct reporting to a government PPCR focal point enabled government ownership to take hold.

The intermittent use of consultants for the mainstreaming TA was not always consistent with the mainstreaming objective, sometimes making it difficult to manage heavy workloads or work optimally to support the government through a process of gradual change. Consulting teams must aim for a consultative and "listening" relationship with the executing agency, and an effective communication and consultation process.

Particularly in the initial SPCR planning and the phase 1 TA, the government and the MDBs should have taken a more coordinated and strategic approach to communicating with stakeholders, for whom climate change adaptation was still a relatively new concept. Stakeholders raised concerns about participation and transparency arising from short notice of meetings, inadequate technical information, uncoordinated response to queries, and lack of continuity of information after SPCR approval.

The communications strategy of the SPCR TA was important in establishing an effective working relationship between MOSTE, other government departments, and civil society and in informing the public about PPCR activities. A full-time communications position could have further enhanced external communications with regard to the PPCR.

As SPCR implementation moves forward, it will be important to ensure that the government, under pressure to achieve results, does not lose sight of the priority objective of transformational change. By applying the familiar MDB investment approach, it risks slipping into business-as-usual mode. The monitoring and reporting system will be crucial in keeping transformative goals on track.

## **2.2 PROGRESS IN NATIONAL ADAPTATION PLANNING AND CLIMATE FINANCE IN NEPAL**

---

### **2.2.1 Climate Change Awareness, Information, and Data**

#### *Situation at PPCR commencement*

At the start of SPCR planning in 2009, awareness and understanding of climate change was low but evolving rapidly at all levels as adaptation activities and climate finance began to build. A report for the UNFCCC National Capacity Self-Assessment exercise in 2008 found that national and local stakeholders were not well informed about climate change, and that public awareness of environmental issues, and hence participation in decisions on such issues, was low (MOSTE 2008). An ADB TA report also underscored the absence of environmental information services and the poor availability of climate change policy documents and information in the local language (ADB 2008). However, among key government agencies, INGOs, and a few subnational stakeholders, awareness was growing. The preparation of the NAPA had involved MOSTE, the National Planning Commission, line ministries, subnational government entities, and civil society through a series of national and regional consultations. An ADB climate change capacity-building TA had already prepared and begun implementing an awareness strategy for a broad range of stakeholders (ADB 2008). Bilateral development partners and INGOs had also begun mainstreaming climate change into their programs and preparing adaptation and mitigation interventions.

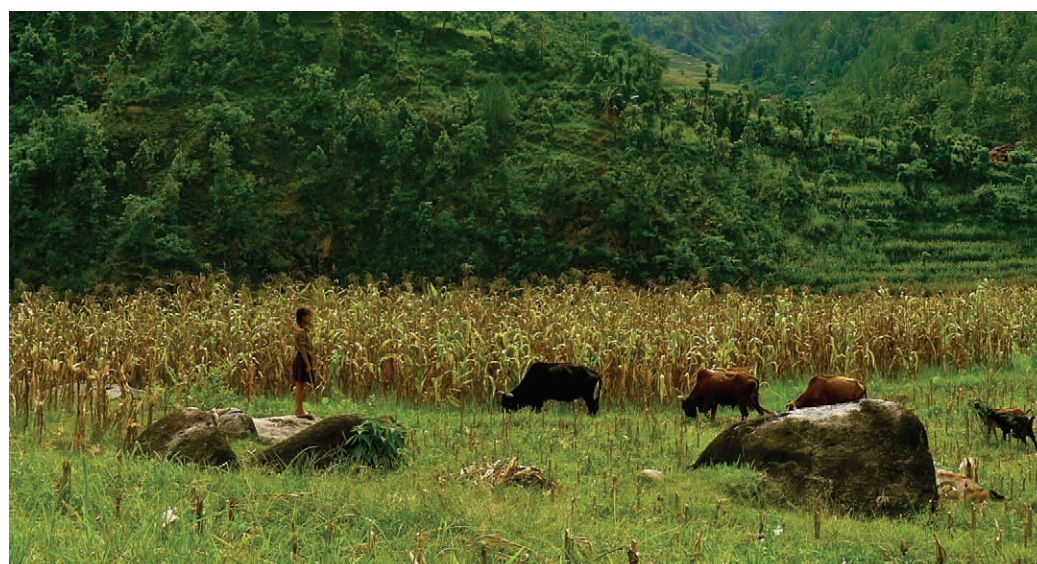


There were large gaps in the knowledge and technology required to prepare climate change projections and guide the prioritization of risks and adaptation activities, but work on vulnerability assessments had already begun. Climate modeling in Nepal, especially the development of the downscaled models that would inform investments in climate change risk reduction, is complex because the diverse terrain makes interpolation between data stations difficult. Downscaled modeling was further constrained by the inadequate coverage and limited data quality of the national monitoring network, the inadequate human and financial capacity of the Department of Hydrology and Meteorology, and the lack of a central database or clearinghouse for climate data. Despite these limitations, vulnerability assessments, all based on climate projections from global or regional models, had already been carried out for the NAPA (MOSTE 2010), for selected conservation areas and mountain communities (CARE 2010), and for the rice sector.<sup>11</sup> The abundance of Nepal's indigenous knowledge of climate change was highlighted in early vulnerability assessments, but was not well documented.

#### *PPCR contributions to climate change awareness, information, and data*

SPCR preparation closely followed the NAPA planning process, sustaining the momentum for building climate change awareness at all levels and crucially expanding the activity in a number of important ways. As project development and early implementation has progressed, awareness has continued to grow, particularly at the subnational level in the project areas. Early implementation of the SPCR projects, including further valuable work on climate risk and vulnerability assessment, has also begun to make substantive contributions to understanding of climate change and to knowledge management in Nepal.

From the start, efforts were made to ensure that stakeholders were consulted and that they participated effectively in SPCR preparation. The series of SPCR dialogues, workshops, and assessments reached nearly a thousand stakeholders, half of them at the district and community levels. Knowledge was also consolidated and debate generated among key line ministries, and private sector awareness was raised through dialogue and the establishment of a new technical working group. The public debate on concessionary lending for climate change adaptation, which was launched by civil society, gave stakeholders and the general public a better grasp of the issue. Awareness-raising and knowledge-building efforts have expanded with the implementation of SPCR projects. The SPCR TA (ADB 2011c) has



<sup>11</sup> Undertaken in 2010 by the Ministry of Agricultural Development.

supported the Curriculum Development Centre in integrating climate change content into the compulsory science curriculum for grades 9 and 10 and in providing relevant textbook input.

Three different universities have also integrated climate change into six academic programs (Box 5), developed course manuals and research guidelines, and purchased reference books for their libraries, with help from the TA project. Awareness-raising activities under the TA likewise include working with communities and local government to train nearly 800 district planners and providing intensive support to eight line ministries in mainstreaming climate change (section 2.2.3). Consultations on climate change adaptation approaches were held with communities and local governments in six districts of far-western Nepal during the preparation phase of the ADB project Building Climate Resilience of Watersheds in Mountain Eco-Regions, and more than 5,000 farmers have gained access to climate change adaptation technologies under the IFC project Building Climate-Resilient Communities through Private Sector Participation. In addition, regional workshops and roving seminars across the country have sensitized stakeholders to the need for climate change mitigation, as part of the early implementation of the World Bank project Building Resilience to Climate-Related Hazards (ADB, IFC, and World Bank 2015).

#### **Box 5: Updating University Curricula on Climate Science and Resilience in Nepal**

The project supported Tribhuvan, Pokhara, and Kathmandu universities in integrating climate change into six academic programs. In each university, the first step was the formation of a climate change curriculum working group with members from the department concerned. The technical assistance project provided support for meetings, faculty research, the development of the draft curriculum, and faculty consultations to review and improve the teaching materials. The steps required for curriculum approval were carefully followed to ensure that the content developed would become part of the official degree programs. A wider consultation process was also conducted among the faculty, students, and other stakeholders; research guidelines and resource materials were prepared for students undertaking climate change research projects for course credit; reference books were acquired for the department library; and course manuals for the revised curriculum were prepared to guide faculty members.

Source: ADB (2015b).

SPCR preparation and the early implementation of SPCR projects have further enriched climate change knowledge through modeling and vulnerability assessment work. A comprehensive climate risk and adaptive capacity assessment at the national, district, and community levels (ADB 2013a) was done during the planning phase of the SPCR, although it was constrained by the difficulties of building reliable climate projections. To improve the accuracy of climate projections needed for the detailed design of investments, the preparatory TA for the ADB project Building Climate Resilience of Watersheds in Mountain Eco-Regions (ADB 2011b), employing a multimodel ensemble approach, developed downscaled climate projections that were later used for the vulnerability mapping of 135 watersheds in the middle and high mountain regions of Nepal (ADB 2012a). MOSTE and the PPCR team subsequently worked further on the vulnerability assessment approach, applying the findings of a critical appraisal of international methodologies in the course of developing a country-specific approach that later became the basis for 56 vulnerability assessments in eight districts (Accham, Banke, Chitwan, Dolakha, Kathmandu, Mugu, Panchthar, and Myagdi) (MOSTE 2015b).

Key studies and knowledge work on climate change in Nepal that have been completed so far include a comprehensive assessment of the impact of climate change on river basin

hydrology (ADB 2011b); a review of lessons learned from international experience with climate change adaptation in eight sectors, including irrigation, roads, and water-induced disaster management; and the documentation of indigenous knowledge and practices related to climate change adaptation in Nepal (MOSTE 2015a). The SPCR TA continues to support the development and management of climate change information and knowledge through the following activities:

- establishing an MOSTE/PPCR website that provides news and updates on program progress and acts as a repository for SPCR-related documents (Ministry of Population and Environment 2015),
- improving the functionality of the Nepal Climate Change and Development Portal (MOSTE 2015) by building an accessible database of climate change research and development activities, and
- supporting research projects encompassing the six NAPA themes through the small-grants program of the SPCR TA.

### 2.2.2 Lessons Learned regarding Climate Change Awareness, Information, and Data

The phase 1 TA and the multi-stakeholder approach to SPCR preparation were effective in raising awareness of climate change in MOSTE and the line ministries, and among other stakeholders. The early stages of the PPCR are still referred to as an important time that laid the foundations for the stakeholder participation and ownership necessary for the successful implementation of the SPCR.

MOSTE took the vulnerability assessments very seriously. Together with the phase 1 consultants and later with the SPCR TA team, the ministry engaged intensively in the testing and analysis of assessment methodologies. This led to important adjustments and innovations, and to the development of a methodology suitable for the Nepalese context.

At first, the government needed to be convinced that it had to step up engagement with civil society, particularly its participation in the SPCR steering committee. However, the government has increasingly recognized the importance of civil society participation in climate change adaptation efforts, including its critical role in awareness raising, particularly in remote communities, and in advocacy work.

Assessments done with academic institutions under the SPCR TA revealed significant gaps in awareness, understanding, and knowledge of climate change in the education sector. Capacity building in climate change science and research program design is now being implemented under the Mainstreaming TA.

Curriculum development and revision is a formal process within the institutions and follows prescribed procedures. Supporting the integration of climate change content requires working within this institutional framework. The process may take more time than anticipated as the institution could change its curriculum revision objectives and time frame for reasons beyond the project's direct control.

### 2.2.3 International and National Engagement in Climate Change

#### *Situation at PPCR commencement*

Nepal signed the UNFCCC in June 1992 and ratified the convention in May 1994. The country has been an active member in Conference of the Parties (COP) meetings since ratification and

in COP 15 (2009) provided critical support for the establishment of the Mountain Alliance Initiative Agenda, signaling a more intensive engagement in international climate change negotiations. The First National Communication was prepared with support from the GEF and the UNEP and submitted in July 2004, and Nepal acceded to the Kyoto Protocol in 2005. By the time of SPCR planning, Nepal was already an active participant in the CDM, implementing four projects and finalizing a country approval system. The International Centre for Integrated Mountain Development is based in Nepal and the country is actively engaged in a number of regional environmental and sustainable development programs including the Adaptation to Climate Change Initiative. Nepal is also a member of the South Asian Association for Regional Cooperation, which has an action plan and an expert group on climate change and has espoused a number of regional climate change initiatives.

At the national level, Nepal had begun to take action on climate change well before the preparation of the SPCR. A steering committee and a technical committee for the CDM were formed in 2006, which also marked the establishment of the Climate Change Division (CCD) within MOSTE. MOSTE is the focal point for the UNFCCC and the designated national authority for the CDM. The UNFCCC National Capacity Self-Assessment process, begun in 2002, was finally completed in 2008 with support from the UNDP and the GEF. In 2009, the Prime Minister created the ministerial-level Climate Change Council (CCC), mandated to provide coordination, guidance, and direction for climate change policies. The Multi-stakeholder Climate Change Initiatives Coordination Committee (MCCICC) was later formed to coordinate climate change initiatives at the operational level. The CCD acts as secretariat for both these main climate change committees.

The first stand-alone climate change strategy, the NAPA, was prepared in 2009/10 with support from the GEF, the UNDP, and bilateral donors, and was the first detailed identification and prioritization of adaptation options for the country. By the time the SPCR was completed in 2011, MOSTE had also approved a climate change policy aimed at establishing a climate change center, implementing the NAPA, promoting climate change adaptation, and developing a more reliable forecasting system to mitigate the adverse impact of climate change, among other goals (Government of Nepal 2011).

#### *PPCR contributions to international and national engagement in climate change*

SPCR preparation and project implementation has promoted and strengthened international engagement in climate change in Nepal. The phase 1 TA, and later the SPCR TA, supported the participation of government officials in CIF international events and online exchange for program development, including the partnership forums and PPCR country meetings, as well as MOSTE participation in other international climate change adaptation events.<sup>12</sup> Moreover, according to MOSTE (and interviews with ministry staff), SPCR preparation has provided indirect support and backstopping to individuals attending UNFCCC COP meetings. Work on the monitoring and reporting framework for MOSTE has also enhanced international engagement. Development agencies have taken a strong interest in learning from this initiative, and the German international development agency GIZ has cited Nepal's Climate Change Program Results Management Framework as an example of international best practice (ADB 2012a).

Since the climate change policy, the institutional structures, and the NAPA are already in place, the SPCR has mostly served to enhance these achievements and take them forward. The development of the SPCR itself was a major addition to the national strategic approach to climate change, particularly providing more detailed prioritization of adaptation options at the local level, greater consideration of adaptation options in terms of “bankable”

<sup>12</sup> For example, the Eighth International Conference on Community-Based Adaptation to Climate Change (CBA8) in Kathmandu in April 2014, organized by the International Institute for Environment and Development.



investments, and an initial stocktaking of adaptation activities in the country. SPCR development also contributed considerably to the ongoing policy dialogue on climate change adaptation, especially among involved line ministries and within MOSTE and the Ministry of Finance (MOF). National engagement has further intensified with the implementation of the SPCR TA, which has involved cooperation with key line ministries in identifying policy priorities regarding climate change adaptation and support for the prioritization of options and adaptation planning at the district level (section 2.2.3). Additionally, the TA project has engaged the Nepal Academy of Science and Technology more strongly in climate change, appointing it as the implementing agency for a research grant program and also strengthening its climate change database work.

#### *Lessons learned regarding international and national engagement in climate change*

Despite the complex political and economic challenges it faces as the country emerges from past conflict, the government has commendably maintained a strong commitment to addressing climate change, as manifested in its support for various climate change programs and related institutions. However, policy and coordination bodies, such as the CCC and the MCCICC, rarely meet and follow-through on policy initiatives could speed up.

It is important to recognize that the government has invested strongly in the UNFCCC planning modalities, particularly viewing the NAPA as a key reference point and the local adaptation plan of action (LAPA) as a valuable tool for local planning. Donor initiatives, including the SPCR, must work to strengthen links between village and district planning processes and the LAPA.

Since SPCR approval in 2011, the number of climate change adaptation projects and initiatives has grown dramatically; most are not directly supervised by MOSTE. A detailed stocktaking of climate change adaptation activities is now proposed by MOSTE to assist the government in planning and coordination. The participation of the SPCR TA in this activity would enhance its work in monitoring and database development.

The Climate Change Department of MOSTE has become outward looking with a strong focus on international action and negotiations. Since the SPCR is managed outside the CCD organizationally, there is a need to establish stronger feedback links between the SPCR (and other programs) and the CCD so that experience from project implementation can feed into international negotiations and policy development.

These are some of the very first efforts to mainstream climate change into development planning, and the need for sharing and learning is great. Attending CIF PPCR meetings has been useful, but the potential for participation in international meetings is limited. A CIF-wide online learning platform or similar approach could accelerate sharing and learning across mainstreaming projects.

### **2.2.4 Integration of Climate Change into Development Planning in Nepal**

#### *Situation at PPCR commencement*

**Human and institutional capacity development.** Before SPCR preparation, support from the GEF, the UNDP, and other organizations to expedite UNFCCC commitments, including the National Capacity Self-Assessment process, the First National Communication, COP negotiations, and the NAPA, had raised technical capacity but mostly internally and only among a few MOSTE staff. Increasing support and coordination was required for the rapidly rising pipeline of externally funded climate change projects, stretching the limited resources further. Government line agencies, in general, could not effectively address climate change risk or environmental protection on their own. At the subnational level, MOSTE was

unrepresented, and local bodies and NGOs lacked adequate training or financial resources to implement climate change risk management measures (ADB, IFC, and World Bank 2009; MOSTE 2015c).

Despite the rising pressures on the limited human resources available, not much had been done to critically assess capacity development needs since the completion of the National Capacity Self-Assessment exercise in 2008. This study provided a broad review and prioritization of capacity needs, including legislation, policy, plans, research and technology, information, and climate data, as well as adaptive capacity needs in key sectors. However, the study was not sufficiently detailed to inform specific investments in capacity development for the management of climate change risk. The NAPA process did not include a capacity assessment exercise, although it did identify the need to build capacity for adaptation at the local level and referred to the self-assessment findings regarding the financial, technological, and human resource constraints. An ADB TA (ADB 2008c) being implemented as SPCR planning started was aimed at developing a sustainable institutional framework for managing environmental protection and climate change, and produced a training needs assessment for mainstreaming climate change and environmental management into government training programs at the national and subnational levels.

**Integration of climate change into policies and strategies.** The consideration of environmental issues in national and sectoral policies and strategies had been growing since the early 1980s, but an adequate and clearer priority attached to climate change issues was only just beginning to emerge. The most recent national planning initiative at the start of SPCR planning, the Three Year Interim Plan 2007–2010 (National Planning Commission 2007), included objectives to promote green development, make development activities climate friendly, mitigate the impact of climate change, and promote adaptation. Specifically, it proposed a national climate change policy, key climate change studies, and a framework for action on adaptation and mitigation. The National Strategy for Disaster Risk Management (Ministry of Home Affairs 2009) also recognized the growing importance of climate change in relation to planning disaster response and highlighted the lack of integration of climate change into national policies and programs as a constraint. At the sector level, there was little progress, but climate change risk was increasingly cited as a justification for the expansion of rural renewable energy and the National Water Plan (Water and Energy Commission





Secretariat 2005) had prioritized increased research on climate change. Apart from the imprecisely defined environmental mandate given to local government under the Local Self-Governance Act (1999), climate change was not included in local government policies and planning.

**Coordination.** Although unified coordination on climate change was not mentioned in the National Capacity Self-Assessment report, clarity of institutional roles and information sharing between line agencies in climate change activities had clearly progressed by the time of SPCR planning. Policy-level and operation-level coordination mechanisms had been established (section 2.2.3) and the CCC had already provided important guidance on the institutional arrangements for climate change, confirming MOSTE as the focal agency and establishing the CCD within the ministry. However, MOSTE was a relatively junior ministry and its capacity to undertake this crucial coordination role was still untested. Perhaps the most effective coordination work had been achieved through the formation and work of the thematic working groups set up to support NAPA preparations. Led by line ministries and containing a broad range of stakeholders, these groups worked together to guide the technical development and promote broad ownership of the NAPA.

**Monitoring and evaluation.** No institutional mechanism had yet been established for the monitoring and evaluation of climate change activities in the country. The recently completed NAPA did not include a monitoring framework but envisaged the development of a central M&E system managed within MOSTE that would rely on self-monitoring of participating projects supported by a network of regional or local technical assistance and coordination units. The National Strategy for Disaster Risk Management (2009) highlighted the importance of M&E but also did not contain a detailed framework for monitoring the proposed activities. Besides the SPCR, major climate change adaptation projects were under preparation. Among these were the Nepal Climate Change Support Program and the Hariyo Ban Program, both of which included project-specific M&E plans.

#### *PPCR contributions to the integration of climate change into development planning in Nepal*

**Contributions to human and institutional capacity development.** Capacity development, including needs assessment and the delivery of capacity-building initiatives, has been a central aspect of SPCR preparation and implementation. Under the phase 1 TA, a comprehensive national adaptive capacity assessment, encompassing vulnerable communities, vulnerable sectors, and key public sector and civil society organizations, was undertaken. The study identified the capacity-building and institutional measures needed to improve readiness for action on adaptation and fed directly into the design and implementation of SPCR investments (Table 6). The SPCR TA Mainstreaming Climate Change Risk Management in Development continues to build on this assessment work, having completed institutional assessments regarding climate change risk management for eight key government departments involved in infrastructure. It has also supported MOSTE in establishing a “core group” of technical specialists that can go on to build the capacity of these departments to mainstream climate change adaptation into their planning and implementation activities. Capacity assessment has been an integral part of project preparation for the other SPCR components.

Capacity building has been both a consequence of the SPCR planning and development process and a key focus of its implementation. The technical meetings, consultations, and internal dialogues that composed the development phase of the SPCR and the design phase of the component projects have contributed to capacity building, both within MOSTE and among the line agencies, particularly as regards vulnerability assessments, private sector participation in adaptation, and the design of adaptation initiatives. More direct capacity-building achievements so far include the training of nearly 800 local planners in 31 districts in adaptation planning (Box 6); the training of core staff of the Department of Hydrology and Meteorology in hydrologic modeling and threat profile preparation; numerous

### Box 6: District Training for Adaptation Planning

The aim of the training is to increase awareness of climate change at the local level and provide local planners with the skills needed to integrate measures for climate change adaptation into district development plans. In the first phase, a consortium composed of the nongovernment organizations (NGOs) Samuhik Abiyan, Rupantaran, and the National Association of Village Development Committees in Nepal implemented the training program in 31 districts. A collaborative and consultative approach to training design and delivery was adopted of the training was adopted. A manual was prepared for a 6-day program, which encompassed conceptual understanding of climate change and its impact, policies for integrating and mainstreaming climate resilience, and skills and tools for community-based vulnerability assessments. An intensive training of trainers was organized to establish a common understanding of the approach. This included co-facilitators selected from the district development committee, government line agencies, the Local Development Training Academy, the Regional Government Training Centre, and NGOs and other organizations involved in local planning. The training also included the preparation of a community adaptation plan in the field. Thirty-one such plans have been completed.

Ensuring gender-balanced participation in some project activities has been difficult since women are underrepresented in government positions. The training strengthened women's participation by encouraging women from other participating groups, such as community-based organizations and local NGOs, to be involved.

Source: ADB (2011c).

vulnerability assessment training programs, including several for the MOSTE “core group”; the training of trainers (technical coordinators, extension officers, and lead firm technical experts) in adaptation approaches in agriculture; and the training of more than 5,000 farmers in climate-adaptive farming practices under the IFC project.

**Contributions to the integration of climate change into policies and strategies.** Nepal's national climate change policy was already well developed at the inception of SPCR planning and contributions to policy and planning efforts in Nepal have been mostly at the sector and subnational level, particularly through the activities of the SPCR TA Mainstreaming Climate Change Risk Management in Development. A key outcome of this project has been the identification of strategies and entry points for policy reforms that will strengthen climate resilience in eight key sectors. The policy reform priorities were developed in close consultation with the government sector focal points and a technical working group in each department through a series of sector synthesis and policy reform working sessions. The project has also developed a climate change risk management system (CCRS) to support the mainstreaming of climate change adaptation into sector planning based on practical case study examples undertaken in eight districts. The CCRS comprises tools to facilitate climate change vulnerability assessment and adaptation planning and a dedicated process for the development of sector adaptation plans of action (SAPAs) that complement Nepal's existing climate change planning framework consisting of the NAPA and LAPAs. The training in adaptation planning has additionally resulted in the preparation of 31 community-level adaptation plans.

The sustained interaction with line agencies on mainstreaming under the SPCR TA Mainstreaming Climate Change Risk Management in Development has resulted in further autonomous actions by government departments on mainstreaming. For example, the Department of Irrigation has changed the name of its environment division to Environment and Climate Change and a mainstreaming initiative in the department has already been approved. The Department of Irrigation is also integrating climate change issues into its

environmental impact assessment procedures, preparing job descriptions that incorporate climate change, and engaging in a dialogue on incorporating climate change issues into the irrigation master plan. The Department of Urban Development and Building Construction has likewise started to strengthen its environmental screening and to integrate climate change risk assessments into major upcoming projects.

**Contributions to coordination.** The multi-stakeholder approach used in SPCR preparation provided a strong model for further coordination of climate change activities and established an enabling environment for MOSTE coordination with line agencies in project implementation. A review of SPCR coordination in 2012 (CIF 2012) indicated that, while structures were in place for high-level coordination (e.g., CCC and MCCICC), stronger coordination at the operational level of MOSTE's project portfolio could have made it possible to identify synergies, share lessons, or support monitoring. Following a consultation with MOSTE and PPCR stakeholders, a two-tier coordination modality was established, creating a platform for the coordination of all projects under the MOSTE Climate Change Program (CCP).<sup>13</sup> The Climate Change Program Coordination Committee (CCPCC) brings together project directors or nominated senior project representatives in order to share progress, facilitate coordination and the sharing of information and data, avoid duplication in activities, evaluate progress and performance, and document lessons learned. The CCPCC Technical Working Group, comprising project managers and M&E specialists, assists the CCPCC particularly in designing and overseeing the implementation of a coordinated results management framework.

Support for the coordination of climate change activities in Nepal has also come from other aspects of SPCR implementation, including the “core group” of technical experts engaged in mainstreaming in the infrastructure sector under the SPCR TA Mainstreaming Climate Change Risk Management in Development, and the Joint Working Group on Agricultural Meteorology (WOGRAM), created under the World Bank SPCR project Building Resilience to Climate-Related Hazards (Table 6) to improve collaboration between suppliers and users of weather data and information in preparing useful weather and climate information products for farmers. WOGRAM includes representatives from the Department of Hydrology and Meteorology, the Ministry of Agricultural Development, and the Nepal Agricultural Research Council.

**Contributions to monitoring and evaluation.** The Nepal SPCR was one of the first such programs to develop a comprehensive results management framework and in a significant innovation has developed a framework for monitoring the contributions of all MOSTE Climate Change Projects (the CCP; see footnote 13) while also satisfying the requirements for the CIF PPCR core indicators. Baselines have been set for the core indicators through an extensive consultation process, and the expected results and contribution of all projects to the nine NAPA priorities have been agreed on. To capture the data on the five core programmatic indicators and the 60 substantive project indicators against the NAPA outcomes, project-level NAPA scorecards are now being developed. The monitoring data will be stored and managed in a CCP management information system developed under the SPCR TA and comprising three elements:

- data (hydrometeorological data, climate change projections, agricultural field data, and data products, e.g., risk maps, threat profiles);
- results (indicator scores, lessons-learned templates, progress reports, project activities, and output); and

<sup>13</sup> The Climate Change Program of MOSTE comprises PPCR projects plus three other projects, all of which are contributing toward NAPA objectives.

- knowledge (project output, reports, documentaries, and other knowledge products).

This extensive work on management for results is a considerable achievement, which has built the capacity of core government officials and also benefited the wider development community working on the monitoring and evaluation of climate change interventions in Nepal and beyond.

#### *Lessons learned regarding the integration of climate change into development planning in Nepal*

The SPCR is only one of the many capacity assessment and capacity-building initiatives for climate change adaptation that have been planned or are currently being implemented in Nepal. However, mainstreaming climate change into development planning will require a sustained, long-term effort and a coordinated strategic approach to capacity building throughout government.

The low representation of women in government ministries and departments is a constraint on achieving gender balance in climate resilience planning and capacity development efforts. Addressing this constraint will involve reaching out to gender focal points in government departments and identifying strategies to promote women's participation in SPCR activities.

The high turnover of staff due to promotions and transfers is a major constraint on project implementation, particularly sustainable capacity building. Effective strategies adopted under the SPCR TA to minimize this impact include formalized handovers and briefings for new staff, the selection of two to five focal persons in each partner department, roundtable meetings and tiffin talks,<sup>14</sup> and more in-depth work to mainstream systems.

Locating government management of the SPCR outside the CCD has spread the climate change workload in MOSTE and, to some extent, reduced the impact of staff turnover. However, it has also resulted in less effective overall coordination and knowledge sharing regarding climate change across MOSTE.

Although the training in adaptation planning carried out under the SPCR TA focused on the formal district planning process, extending the training beyond the district would improve its effectiveness. One option would be to provide more support to local planners participating in the training in rolling out the training to social mobilizers working with the village development committees.

Given the constraints on progress in high-level policy development in the current political context, major programs, such as the SPCR and the Nepal Climate Change Support Program, are being more effective by building capacity and supporting initiatives and policy development within MOSTE and the line agencies. This will also serve to create demand for further action on climate change policy.

Government departments involved in infrastructure have identified higher investment costs as the main challenge resulting from the mainstreaming of climate change adaptation. MOSTE, through the SPCR, should raise government awareness of the need to consider climate change adaptation concerns in external and internal infrastructure financing, and advise on appropriate policies and budgeting.

In mainstreaming climate change adaptation at the local level in Nepal, experience from the SPCR TA highlights the importance of sensitizing local political representatives as well

<sup>14</sup> Tiffin talks are short lectures or seminars held in the workplace during lunch breaks.

as local government officials. Political figures are more likely to take the lead in planning for climate change and support mainstreaming in ongoing development activities. When leaders take up the issue, funds are also more likely to be allocated.

Although a number of structures exist for government and stakeholder coordination (e.g., CCC and MCCICC), these bodies have not met regularly in recent times or made a significant impact on the climate change agenda in Nepal. There is a need for greater clarity regarding the objectives of coordination and the barriers to stakeholder participation in such efforts.

Efforts to enhance internal government coordination on climate change action are well advanced and currently well supported, but wider coordination is lacking. Development partner coordination has slowed in recent times and coordination between NGOs, especially between international and local NGOs, in disaster risk reduction is not good, although it is improving.

From the start, the partnership between the MOF and MOSTE has been very effective in promoting more effective coordination across government. This is especially true of the debate on loans versus grants, and discussions on managing climate change risks with the major spending ministries. This relationship will become more important as flows of climate finance increase.

The consultations with government agencies on the development of the new coordination platform have resulted in requests to include additional climate change adaptation initiatives not funded by the PPCR. MOSTE will have to try its best to balance the desire to include all government climate change initiatives with the objective of maintaining a manageable scope of project coordination.

While the CCP has been established within MOSTE and endorsed by all parties, its identity as a cohesive program of eight projects needs further consolidation. More frequent and effective sharing between the programs, through meetings and other mechanisms, is required.

Under the SPCR, there is a gap in the relationship between the work on mainstreaming at the central level and the mainstreaming work in the districts, particularly under the NCSSP. More consistent links between the two initiatives must be established; otherwise, local planning will end up as a one-off activity without much sustainability.

Several projects are currently working on climate change adaptation planning at the subnational level, but these are not coordinated (there is even some geographic duplication) and do not actively share their experience. A comprehensive stocktaking of such initiatives and better coordination mechanisms through the Ministry of Federal Affairs and Local Development are needed at this level.

Monitoring and evaluation is well established within government, especially in the National Planning Commission. However, the capacity of line agencies for this work remains limited and few departments have dedicated staff. As a result, PPCR monitoring and reporting activities with line agencies often depend on nonspecialists with other responsibilities. There is a need for institutional strengthening in M&E within line agencies to ensure that the PPCR monitoring and reporting mechanisms are effective and sustainable.

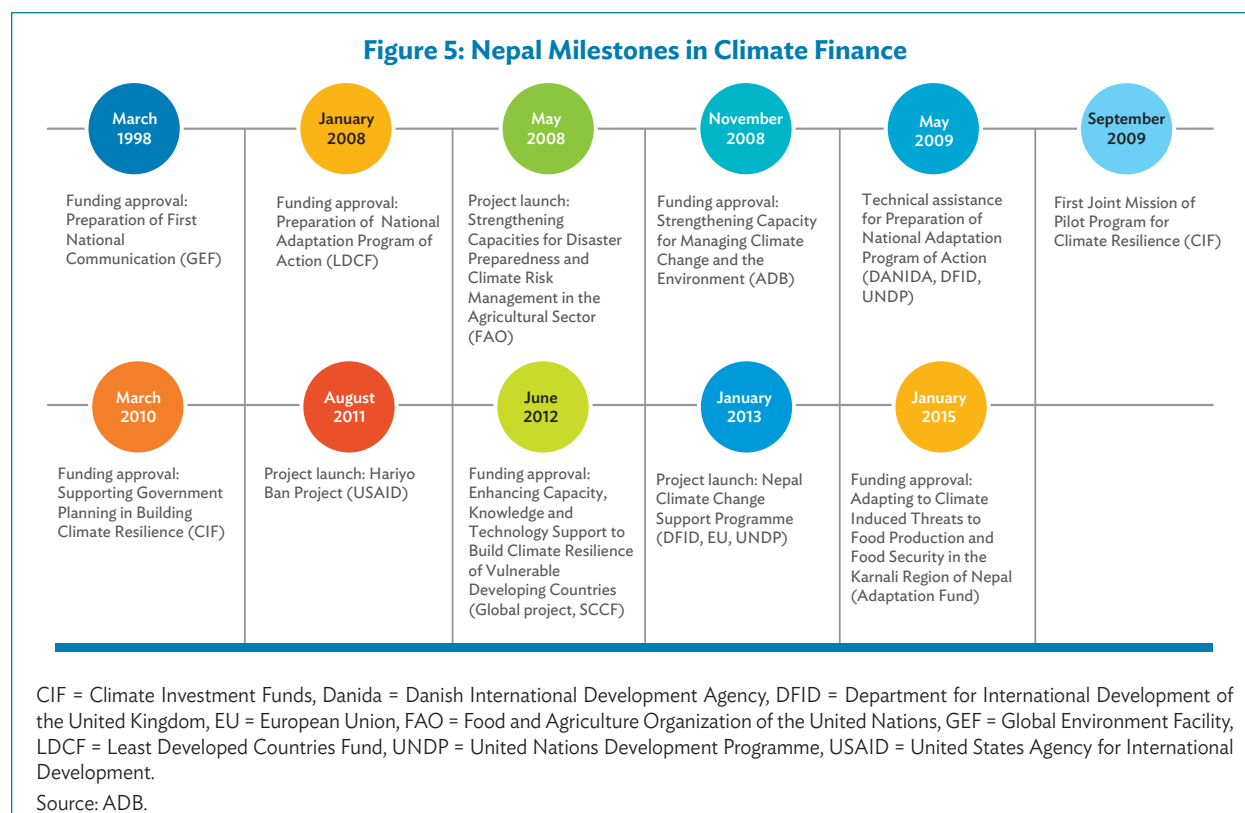
## 2.2.5 Readiness for Climate Finance

### *Situation at PPCR commencement*

When Nepal agreed to participate in the PPCR in 2009, finance for climate change action in the country was evolving and expanding rapidly. Finance for renewable energy from development partners such as Denmark, the EU, Germany, Japan, Norway, and the World Bank was well established and the pipeline for donor funding was building as climate change mitigation converged with poverty reduction as an investment imperative. Finance for climate change adaptation, previously embedded purposely or indirectly in large poverty reduction projects supported by development partners including ADB, Germany, Switzerland, the United Kingdom (UK), various UN agencies, and the World Bank, was also changing.<sup>15</sup>

The preparation of the NAPA, with support from Denmark, the GEF, Department for International Development of the United Kingdom (DFID), and the UNDP, signaled a major escalation in finance aimed specifically at improving climate resilience including the PPCR (over \$80 million in CIF funding), the National Climate Change Support Programme (\$22 million from the EU, the DFID, and the UNDP), and the Hariyo Ban Project (\$30 million from the United States Agency for International Development). The government and major donors, including the MDBs, had recently signed an agreement on approaches to addressing climate change covering harmonization and alignment issues, but this agreement did not cover finance issues. Key milestones in climate finance for Nepal are summarized in Figure 5.

Then as now, the MOF was responsible for managing the public finances and supervising the implementation of the annual budget. All external aid, including climate finance, was dealt with



<sup>15</sup> See Annex 2 of the SPCR for a summary of climate change and associated projects supported by development partners.





by the Foreign Aid Coordination Division, which is experienced in a broad range of financing modalities. At this stage, Nepal has some limited experience in trust fund management through the Nepal Peace Trust Fund, which was established with donor assistance in 2007 to support the implementation of the Comprehensive Peace Accord and subsequent peace agreements. A fund mechanism for supporting renewable energy initiatives was also being prepared (Alternative Energy Promotion Center 2014). Apart from the budgetary allocations for MOSTE climate change activities and contributions in finance or in kind to relevant projects, there was no specific budget allocation or mechanism for climate change adaptation activities. A report published shortly after SPCR completion noted that budgeting remains the main weak link in the policy–strategy–implementation chain in Nepal, and that considerable off-budget funding and the use of diverse structures for delivering development finance are likely to continue to apply to climate finance (Bird 2011).

In terms of portfolio management of aid projects, ADB (2009) pointed out several constraints on progress, including the changeable political environment, frequent transfers of project staff, and deficiencies in staffing and incentives for project implementation, unsatisfactory procurement management, and M&E by the government. Moreover, the MOE had only recently been formed and its experience and capacity to deliver bankable climate change projects was still very limited.

#### *PPCR contributions to readiness for climate finance*

Nepal's knowledge of, and experience in, managing climate finance has grown considerably in the last 6 years. SPCR preparation contributed to a much stronger capacity within the MOF, MOSTE, and the National Planning Commission to address the financial, technical, and administrative aspects of climate change investment planning (ADB 2013a). In particular, the partnership established between the MOF and MOSTE was effective in delivering an SPCR endorsed by the CIF and having access to CIF funds. It also provided both ministries with a beneficial learning experience in the design and financing of adaptation projects. As a result of the escalation in climate change–related activities, the government has recently established budget coding to track expenditure on climate change initiatives. The controversy that arose over taking out loans for climate change adaptation, although problematic at the time, had a number of positive outcomes, including government outreach to civil society and public discussion on the issue, which also served to raise awareness of climate finance and government policy. The debate led as well to a more considered internal government policy dialogue and agreement on a clearer policy for taking out loans (section 2.1.3).

The SPCR TA Mainstreaming Climate Change Risk Management in Development has also contributed to readiness for climate finance, particularly at the sectoral and subnational levels. The Nepal Academy of Science and Technology was selected to implement a small grants research fund to encourage academic research on climate change and environmental management issues. After the approval of the first tranche of projects, the academy reported (according to interviews with its staff) improved capacity to manage a climate change research fund, deliver larger grants than previously, and build an effective monitoring system to ensure appropriate disbursement. At the sectoral level, the process of developing institutional assessments in eight sectors and the ongoing development of sector adaptation plans for action have encouraged dialogue on the financial implications and costs of mainstreaming adaptation and increased demand for more appropriate policies and budget allocations. At the local level, the training of planners across 31 districts (the first phase) was aimed at increasing understanding of the cost of adaptation initiatives and generating a commitment to allocate funds. This message has also been imparted to district-level stakeholders, political parties, and social activists. As an immediate outcome of this training, district and village development committees and line agencies have been able to allocate funds for climate change-related initiatives (ADB 2012a).

### *Lessons learned regarding readiness for climate finance*

Significant levels of climate finance are currently flowing into Nepal, but absorption capacity is low and this is a major challenge. Donors have signed an agreement on climate change but have not been able to agree on the best modalities for delivering finance for climate change, and the situation remains competitive. There is a need to get the MOF and donors together to discuss modalities and coordination.

PPCR funding was the first significant climate finance in Nepal and the MOF had to struggle with managing the preparation process, including the debate over taking out loans for adaptation. For the MOF, it was a steep learning curve, but it regarded this as a positive experience preparing the ministry for further climate finance and contributing to its thinking about climate change in budget implementation.

The government remains slow to get fully engaged in GCF processes. So far it has not been involved in GCF meetings, and it is not yet considering GCF accreditation. The government will probably rely initially on the UN and the MDBs for access to GCF funds, but stronger engagement with the GCF is important since the government wishes to move toward direct access sometime in the near future.

Government agencies need to have a better appreciation of the role of the private sector in building climate resilience, and SPCR loan financing to the sector. There is a need to develop more mechanisms to facilitate public-private interaction and public-private partnerships in climate resilience and climate finance. Local banks could have an important role in delivering climate finance and enabling private sector actors to invest in climate resilience (Climate Policy Initiative 2013). Government and development partners should support the implementation of capacity-building measures and the creation of innovative financing mechanisms that could create such a deal flow.

## **2.3 DISCUSSION AND CONCLUSIONS: NEPAL**

---

The PPCR has been an integral part of a significant expansion in climate finance and climate action in Nepal over the last 5 years. Through its long and arduous pursuit of constitutional consensus and political stability, the government has remained remarkably committed to

acting on climate change, moving the issue forward nationally and increasing its participation in international negotiations. Institutional structures, including a climate change policy, are in place and, despite reorganizations, MOSTE is gradually building capacity. The MOF has been a central and supportive player, effectively managing the rise in climate finance and initiating consideration of climate change in budget implementation. Nepal's main development partners, ADB among them, have played an important role, their early coordination and commitment to climate change influencing the government's engagement and response. Although an overarching strategic approach has yet to be formulated, government ownership of the core programs under its NAPA umbrella, such as the SPCR and the Nepal Climate Change Support Programme, is strong, and considerable work on planning for climate change has begun at the sectoral and subnational levels. However, capacity constraints continue to slow progress and the country sometimes struggles to manage and coordinate the expanding climate finance.

The momentum of the SPCR preparation phase and the early start of the implementation of the SPCR TA Mainstreaming Climate Change Risk Management in Development reflected the government's commitment to action on climate change. Consequently, under the SPCR, considerable advances have already been achieved in Nepal's climate change response, including early progress in integrating climate change adaptation into development planning. The multi-stakeholder approach adopted at the start has continued, especially through the managing-for-results component, and this has raised awareness and sustained the engagement of a broad range of stakeholders and also contributed to the development of a highly regarded results management framework and the establishment of improved coordination structures. The SPCR preparation has been central in pioneering and developing effective vulnerability assessment methods at the community, district, and sectoral levels and in building capacity and disseminating lessons on this essential aspect of adaptation planning. A further significant achievement has been the successful integration of climate change into school and university curricula in a challenging institutional environment.

At the central government level, engagement with line agencies, begun in the planning phase of the SPCR, has intensified with the implementation of in-depth institutional assessments, capacity building in climate change adaptation, and innovative work in adaptation planning through sector adaptation plans of action with eight key infrastructure agencies; early impact on operational approaches in some agencies is already starting to emerge. The first round of training



for local government officials and other stakeholders in integrating climate change adaptation into district planning yielded important lessons, which have already informed the next round of training and have been disseminated widely among stakeholders in Nepal. However, more needs to be done to strengthen the connection between central institution building and local planning so that more coherent planning and policy-making links can develop. SPCR preparation and early implementation has added considerably to knowledge management for climate change in Nepal through vulnerability assessments and mapping, technical studies undertaken during project preparation and implementation, and the development of websites, databases, and management information systems for storing and disseminating climate data.

Although three of the main SPCR projects are still in the first stages of implementation, the preparation of the SPCR and the early work under the SPCR TA Mainstreaming Climate Change Risk Management in Development have provided some valuable lessons. The public debate over taking loans, the communications gap following SPCR approval, and the difficulties in coordination among stakeholders have highlighted the importance of more strategic and versatile communications in ensuring better internal coordination of the program and more effective external communications with stakeholders. As in other countries, institutional incapacity is a major challenge to progress on climate change action, and the commonly experienced high turnover of staff can hold back capacity-building efforts. However, adjustments in the way of working can lessen this problem, and as most officials continue to circulate within the bureaucracy, capacity gained in development programs is not completely lost. Capacity building of local government and the private sector may also be more critical in the long term. Coordination of government agencies and the wider stakeholder group has been difficult, but through the SPCR TA, Nepal has importantly begun to look more carefully at the overall coordination approach and how it can be made more effective. Finally, the development partners themselves need to consider the possibility of better harmonizing and aligning their support for climate change, particularly the delivery of finance, to help Nepal manage the rising levels of climate finance better.

## 3 Tajikistan

### 3.1 DEVELOPMENT OF THE TAJIKISTAN STRATEGIC PROGRAM FOR CLIMATE RESILIENCE

---

#### 3.1.1 Introduction: Climate Change Risks and Vulnerability in Tajikistan

Tajikistan is a landlocked mountainous country with more populous lowlands in the southwest and northwest. The climate is continental and semiarid with some desert areas. Climate variability is high, both according to elevation and from year to year. In the lowlands, summers are hot and winters mild, while in the high mountains the summers are cooler and winter temperatures severe, falling to  $-20^{\circ}\text{C}$  on average. Annual precipitation is around 600 mm in the lowlands and rising to 1,500 mm at higher elevations, but there are extensive rain shadows in the high Pamir Mountains in the east. Water resources are particularly sensitive to climate variability, as most rivers are sustained by meltwater from mountain glaciers (which cover 6% of the country) and snowfall. Vast amounts of water are stored in Tajikistan's glaciers. Tajikistan is also vulnerable to climate hazards that can endanger communities, such as glacial lake outburst floods, meltwater and rainfall floods, mudflows, drought, landslides, avalanches, and storms.

Climate projections for Tajikistan indicate rising temperatures, reduced precipitation, and higher levels of evapotranspiration, together with increased frequency of extreme weather events, such as floods, droughts, and storms. The resulting increase in variability of the





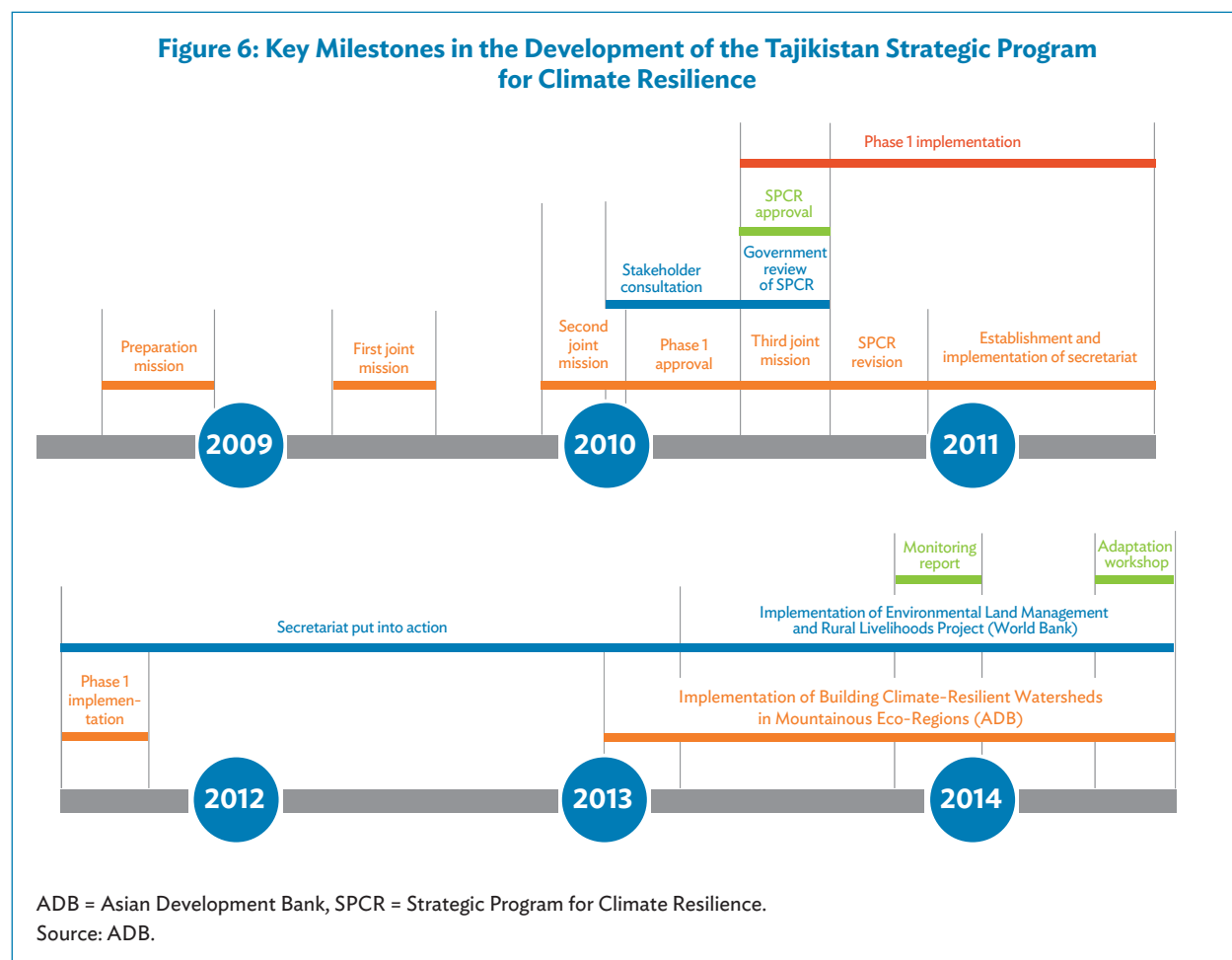
hydrologic cycle could affect river flows and long-term water availability, leading to disruptive downstream impact on ecosystems and the water resources required for hydropower, domestic consumption, and irrigation (and therefore food security). An increase in climate-linked disasters could seriously threaten agricultural production and rural livelihood, e.g., through crop losses and through the degradation of arable land, forests, and pastures. Future changes in water availability also have a significant regional political dimension because of the protracted and unresolved conflict over water use that has affected Tajikistan and its neighboring countries since the collapse of water-sharing arrangements existing under the former Soviet Union.

Recent economic growth in Tajikistan has been encouraging, but the country's adaptive capacity is weakened by persistent rural poverty and the enduring legacies of a centrally managed economy. Although living standards have improved and poverty has declined substantially, in 2009 more than 25% of the population was surviving on less than \$2 per day. This figure reached nearly 50% in the rural areas, where livelihood is most vulnerable to climate change owing to a dependence on natural resource-based livelihood, exposure to climate hazards, and low access to food security and support services, especially in remote areas. The significant number of males migrating for employment has resulted in an increasing feminization of poverty, with female heads of households facing additional social, economic, and political barriers that limit their coping capacity. Tajikistan's emergence from the centrally planned Soviet economy was slowed by civil war and, despite reforms, the country has yet to address legacies that continue to limit climate resilience, including poor land and environmental management, dilapidated infrastructure, a weak investment environment, low competition, lack of social reform, onerous external debt, and limited institutional capacity.

### 3.1.2 Preparation of the Tajikistan Strategic Program for Climate Resilience

SPCR preparation in Tajikistan began in April 2009 with a preliminary MDB mission and the formal agreement of the government to participate. Early preparatory work was strongly supported by the DFID through a grant-funded consultancy. A preparatory phase 1 TA, aimed at strengthening Tajikistan's capacity and analytical evidence base to support the design and implementation of the SPCR projects, was approved in June 2010 and implemented from September 2010 to March 2012. The Tajikistan SPCR was endorsed by the CIF in

November 2010 pending content revisions, which were completed in January 2011. The SPCR requested \$50 million in grants from PPCR funds and indicated initial cofinancing of up to \$71 million in grants and loans. The five projects in the SPCR are all currently being implemented. The final financial envelope of \$155.2 million comprises \$70.8 million in PPCR funds and anticipated cofinancing of \$84.4 million. The total envelope includes \$15 million in PPCR funding for two projects under the CIF private sector set-aside program (see footnote 3). Figure 6 shows the key milestones in the development of the SPCR.



From early on in SPCR planning, it was clear that a comprehensive phase 1 TA would be needed to build the technical knowledge and capacity required to implement the projects and investments envisaged under the program. A consultation and proposal preparation process, led by the World Bank, identified six recommended activities covering capacity and institutional assessment, awareness raising, climate modeling, climate resilience in the energy sector, sustainable land management, and a river basin approach to climate resilience. These studies were assigned to the participating MDBs according to comparative advantage and packaged into four TA projects (Table 7). Most of phase 1 was completed within 18 months of approval, and the resulting studies are regarded by government and other stakeholders as an important body of work that has directly contributed to the preparation of the SPCR projects and continues to contribute to project implementation. The studies have also been used by development partners in the preparation of new adaptation projects and by academics in Tajikistan in their own climate change research.



**Table 7: Phase 1 Technical Assistance Studies in Tajikistan**

Phase 1: Technical Assistance Study	Responsible MDB	Main Objectives
Hydroclimate Modeling and the River Basin Approach to Climate Resilience	ADB	To ensure that hydrometeorological and water sector institutions have the basic ability to anticipate climate impact, and to provide resiliency measures for vulnerable sectors and river basins
Improving the Climate Resilience of Tajikistan's Energy Sector	EBRD	To analyze the climate vulnerability of Tajikistan's hydropower sector, and to provide recommendations on how this analysis can be used to inform investment planning to support specific adaptation activities leading to a more climate-resilient hydropower sector
Sustainable Land Management Approaches for Climate Resilience	World Bank	To identify best sustainable land management practices that would improve rural livelihood and resilience to climate change, and to recommend a feasible policy and legal framework for their upscaling
Measuring Institutional Adaptive Capacity and Climate Change Awareness	World Bank Implemented by UNDP	To produce an assessment of Tajikistan's institutional, technical, and human resource capacity to mainstream climate change considerations into key policy areas, and to conduct an initial awareness-raising campaign to build capacity to deal with climate change impact, vulnerability, and adaptation

ADB = Asian Development Bank, EBRD = European Bank for Reconstruction and Development, UNDP = United Nations Development Programme.

Source: ADB (2014).

Tajikistan's SPCR comprises a portfolio of five projects, including four investment projects covering the improvement of hydrometeorology services, climate-resilient hydropower, land management and rural livelihood, and climate resilience in the Pyanj River Basin. There is also a major TA project supporting capacity building for climate resilience (Table 8). Some modifications were made in the originally planned implementation of the SPCR: the merging of the capacity-building, climate science, and climate modeling components into one TA, and the integration of the hydrometeorology services project into a wider regional initiative being undertaken by the World Bank (Table 8). The design of projects in the SPCR emerged directly from the SPCR consultation process and was not a modification of pipeline investments. To some extent, this prolonged the design phase, but all projects have begun full implementation and preparation activities have already provided some lessons.

**Table 8: Tajikistan Strategic Program for Climate Resilience—Project Portfolio and Progress Update**

SPCR Project	Progress
<b>Building Capacity for Climate Resilience (ADB)</b> \$6 million technical assistance (PPCR grant) CIF approval: Jan 2011 ADB approval: Jun 2012	Support for PPCR Secretariat since Jun 2012 Consulting firm mobilized Jul 2013 Inception report released Oct 2013 Significant progress achieved on all output, but delays in recruiting replacement team leader and secretariat consultants in 2014 slowed progress New team leader in place by 3rd quarter of 2014
<b>Improvement of Weather, Climate and Hydrological Service Delivery (World Bank) (part of the Central Asia Hydrometeorology Modernization Project)</b> (\$7 million PPCR grant and \$12 million cofinancing) CIF approval: Jan 2011 World Bank approval (main project): May 2011	Project start-up Mar 2012 Procurement ongoing (Oct 2014)
<b>Enhancing the Climate Resilience of the Energy Sector (EBRD)</b> (\$11 million PPCR grant, and \$65 million cofinancing from EBRD, DFID, and Government of Austria) CIF approval: Aug 2013 EBRD approval: Jul 2014	Procurement of TA services ongoing (Oct 2014)
<b>Environmental Land Management and Rural Livelihoods Project (World Bank)</b> (\$9.5 million PPCR grant and \$5.4 million GEF grant) CIF approval: Feb 2013 World Bank approval: Mar 2013	Project implementation initiated Oct 2013 Contracting of NGO implementers nearing completion (Oct 2014) Additional funding from World Bank and CIF anticipated
<b>Building Climate Resilience in the Pyanj River Basin Project (ADB)</b> (\$22.3 million PPCR grant, including \$0.75 million for project preparation) CIF approval: Jun 2013 ADB approval: Jul 2013	Project management office established Consulting firm being recruited (Oct 2014)

ADB = Asian Development Bank, CIF = Climate Investment Funds, DFID = Department for International Development of the United Kingdom, EBRD = European Bank for Reconstruction and Development, GEF = Global Environment Facility, NGO = nongovernment organization, PPCR = Pilot Program for Climate Resilience, SPCR = Strategic Program for Climate Resilience.

Source: ADB, EBRD, and World Bank.

### 3.1.3 Challenges in the Development of the Tajikistan Strategic Program for Climate Resilience

SPCR preparation and planning in Tajikistan has been recognized as a critical turning point for the country, when consideration and examination of climate change began to accelerate and build toward action. At the start of SPCR planning, climate change discourse on climate change was still fairly undeveloped in the country and the issue was relatively new and unfamiliar at the government and institutional levels. Consequently, preparations for significant investments in climate change adaptation faced a number of challenges, including weak institutional arrangements and capacity, inadequate readiness for a multi-stakeholder approach, and the limited evidence or scientific analysis available on which to base the design of an investment portfolio.

Since climate change was not yet a significant consideration in the development of government policies, the task of dealing with the issue fell on a diversity of institutional structures without sufficient power to initiate and sustain action. Responsibility for environmental issues was spread over a number of agencies and departments, and within these, awareness and understanding of the adverse risk and impact of climate change was minimal. Legacies of central planning, such as hierarchical management approaches and disregard for environmental management, limited interagency coordination and weakened motivation to take action. Moreover, the social disarray resulting from the civil war had slowed government reforms and disrupted education, contributing to a decline in the number of qualified personnel in government, academe, and the educational system. Striking a balance between achieving understanding of climate change issues and maintaining momentum toward implementation was therefore difficult.

The multi-stakeholder approach of the SPCR is essential in building broad-based country ownership of the program and indeed was even more critical in Tajikistan, given the awareness and capacity constraints outlined above. However, building a wider engagement of stakeholders was challenging in a country where consultative and participatory processes are out of the ordinary. Persuading the government of the value of the approach took time and support, and it was particularly difficult to improve engagement between government and civil society as levels of trust were low at the start. Ensuring adequate inclusion and consideration of women in the process was also challenging, because of the continuing, and in some respects increasing, gender inequality, and occasionally required positive action on inclusion in the process. The multi-stakeholder approach naturally raised stakeholder expectations in a country with investment needs on so many fronts, and managing these expectations was an integral task of the SPCR preparation process.

From early on, it was clear that the scientific and socioeconomic evidence base with respect to climate change was not strong enough to support the development of major investments in adaptation or to promote effective decision making and policy development in Tajikistan. In particular, there were key gaps in the scientific base, especially in the implications of changes in hydrology, glacial melt, and climate impact in mountainous terrain. Weaknesses in the systems for gathering and managing basic data on meteorology and hydrology limited assessment of near- and longer-term climate trends through downscaled climate modeling. In turn, this meant that not enough knowledge or analysis of the key socioeconomic vulnerabilities in relation to climate change had been generated at the local level.

### **3.1.4 Lessons Learned from the Development of the Tajikistan Strategic Program for Climate Resilience**

The high turnover of government staff, unsatisfactory staff capacity, and the tendency for trained staff to leave government service are serious and continuing problems that require appropriate responses, e.g., more effective and joined-up capacity-building approaches, continuous training of new and replacement staff, supervision of more than one project by skilled personnel, and more flexible arrangements for the involvement of government staff in projects.

Despite strong efforts to ensure a multi-stakeholder approach, government receptiveness to NGOs (and vice versa) continues to influence the engagement of civil society in climate change issues at the national level, particularly in policy processes, and its participation in a consulting or contracting capacity in government-managed programs.

Transparency has been a key feature of SPCR preparation in Tajikistan, but stakeholders have sometimes expressed concern over areas where transparency could be improved,

e.g., executing agency selection, secretariat accountability, NGO involvement in projects, consultant selection, ADB's procurement process, and quality of translation of SPCR documents.

In some phase 1 studies, there was a divide between locally trained scientists and international consultants and scientists in terms of conceptual approaches and terminology, which took some time to overcome. Given the time pressure, this sometimes meant that local scientists did not feel they could contribute fully to the process, which they perceived to be externally driven.

Given the difficulties in establishing and sustaining government engagement, the deputy prime minister's commitment and leadership were crucial factors in driving SPCR preparation forward at the start. In particular, he brought authority and commitment to the process, and this facilitated initial coordination efforts, ensured effective decision making, and encouraged ministerial involvement.

DFID support for, and engagement in, the preparation of phase 1 was crucial in ensuring that space was created for all stakeholders and that an appropriate balance was maintained between achieving a better understanding of climate change and implementing the phase 1 TA. DFID made the institutional arrangements for implementation a priority and, as a result, the national secretariat is a major legacy of SPCR preparation.

At the start, the need for additional evidence was not so clear to the government and the PPCR team had to make the case for it. The preparation of the phase 1 proposal was led effectively by the World Bank, which actively pushed for MDB and government participation. The implementation of phase 1 was straightforward, but the consolidation and dissemination of the findings could have been more effective.

A better communications approach—e.g., earlier engagement with the government to build political support and improve early ownership, improved protocols for communicating with government agencies for more effective processing, higher-quality translation to increase the effectiveness of communications, and sustained communication during lulls in program activity to maintain transparency—could have been adopted.



## 3.2 PROGRESS IN NATIONAL ADAPTATION PLANNING AND CLIMATE FINANCE IN TAJIKISTAN

### 3.2.1 Climate Change Awareness, Information, and Data

#### *Situation at Pilot Program for Climate Resilience commencement*

The first joint MDB mission to Tajikistan in 2009 reported that awareness of the adverse risks and impact of climate change among government officials, business circles, and the public was low. At the government level, there was political will to move forward on the issue and recognition of the need for action, but unclear direction regarding the way forward (ADB, EBRD, and World Bank 2009). Among development partners, including INGOs, there was greater awareness and relevant initiatives, e.g., CARE, were starting to be developed. The World Health Organization (WHO), UNDP-GEF, and the World Bank all had ongoing or imminent projects with a climate change focus. At the community level, while people were experiencing climate change and were aware of it, and some were active in adaptation through participation in rural development or agricultural projects, most were unmindful of the climate change discourse or had a narrow understanding of the climate change risks faced by the country. A measure of awareness of vulnerability to disaster and disaster risk reduction at all levels was achieved through an ongoing (since 2004) national program implemented the UNDP.<sup>16</sup>

As already mentioned (section 3.1.3), the situation regarding climate data and data management was particularly problematic. Information about the weather, water, and climate was of poor quality and often not easily accessible or not in a format that facilitated analysis. Moreover, the significant variations in climate across such a mountainous country demanded a much more sophisticated network of data collection than currently existed. Hydrometeorological institutions were not able to conduct basic climate forecasting or prepare climate change impact assessments. While a center had been established to manage information about disasters and emergency situations, there was limited capacity to integrate climate change into the relevant information management system. National vulnerability assessments had been carried out as part of the first and second national communications, but below the national level, little had been done. CARE had carried out some early vulnerability assessments at the community level and the WHO was about to undertake a health sector assessment.

#### *Pilot Program for Climate Resilience contributions to climate change awareness, information, and data*

SPCR preparation marked the start of a serious dialogue within government on climate change issues and a broader engagement with climate change that involved civil society, local government, and communities as the process developed. Together with the phase 1 studies and project preparation and implementation, SPCR preparation has raised awareness and understanding across all stakeholder groups, initiated work to improve climate data and information management, and contributed to more accurate assessments of vulnerability.

The preparation of the SPCR in Tajikistan was the first time a multi-stakeholder approach to program development (and implementation) had been attempted on a national scale, and, despite challenges, the process had a major impact on climate change awareness in the country (Box 7). The establishment of the PPCR Secretariat as an information hub was crucial. It contributed to a critical shift in understanding and awareness of climate change within

<sup>16</sup> The Disaster Risk Management Programme implemented by UNDP. [www.tj.undp.org/content/tajikistan/en/home/operations/projects/crisis\\_prevention\\_and\\_recovery/drmp.html](http://www.tj.undp.org/content/tajikistan/en/home/operations/projects/crisis_prevention_and_recovery/drmp.html)



### Box 7: The Pilot Program for Climate Resilience Secretariat

During the preparation of the Strategic Program for Climate Resilience, all stakeholders agreed that there was an urgent need to establish a mechanism to coordinate the implementation of Pilot Program for Climate Resilience (PPCR) projects, and communicate PPCR findings to government and other stakeholders in the country and abroad. The PPCR Secretariat was established in March 2011 with financial support from the Asian Development Bank. Its main responsibilities are:

- coordinating the activities being managed by the multilateral development banks under the PPCR and other relevant activities being implemented in the country;
- providing a single point of contact for the program between government, multilateral development banks, civil society, local government, the academe, and the private sector;
- supporting the implementation of the secretariat work plan through strategic and operational planning, including institutional strengthening, coordination, monitoring, reporting, and communications; and
- providing integration and capacity building for gender-sensitive approaches and awareness activities in the overall work of the secretariat.

Source: Government of Tajikistan (2011).

government and provided a focus for interaction with other active stakeholders (government agencies, international and national NGOs, and academe), which rose in number from 70 to 200 during the phase 1 implementation (ADB 2014). A PPCR website operating in both English and Russian (and later Tajik) was launched in 2011. It provided updated information about implementation and was a repository of PPCR documentation (Tajikistan Pilot Program for Climate Resilience 2014). The phase 1 TA studies and preparation phases of the individual projects also included substantial outreach and awareness activities. The ADB study on climate resilience, for example, reached out to local government in more than 30 districts, and consulted more than 1,300 individuals from communities, district- and village-level government organizations, and community-based organizations.

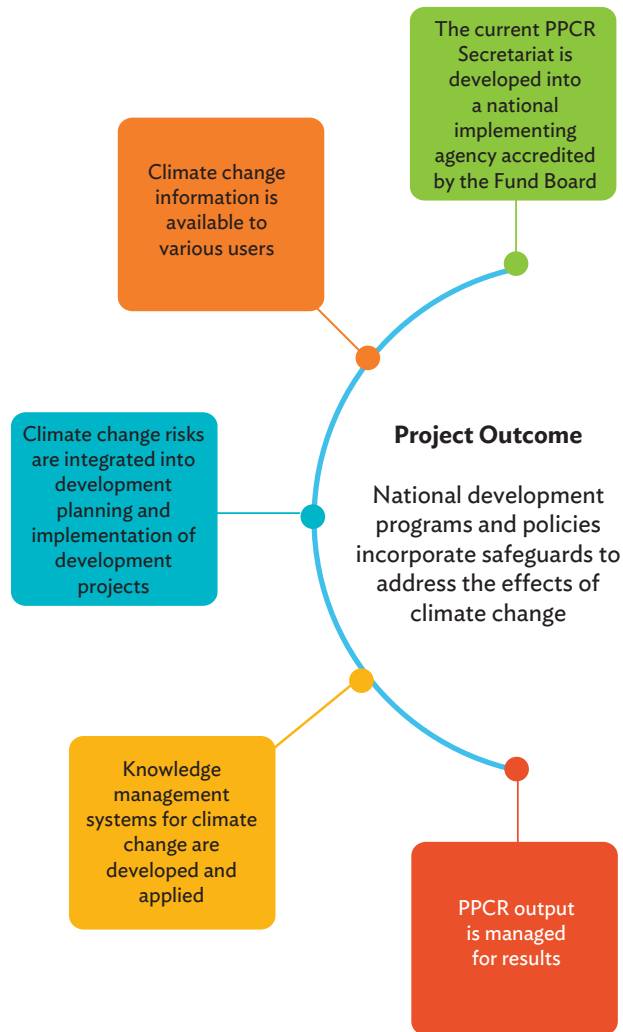
During the implementation of the SPCR TA Building Capacity for Climate Resilience, work on awareness has continued and expanded (Figure 7). The PPCR website was renovated and improved in 2013 and a Tajik version was launched. A syllabus for climate change curricula was completed for four universities, which started offering the programs in September 2014, and students from the Tajik Lyceum of Communication were the first to complete the course in climate change adaptation. The TA has also been active in improving NGO engagement in SPCR preparation activities, preparing terms of reference for NGO engagement, conducting a series of roundtable discussions, and engaging NGOs more deeply in climate change knowledge management activities.

The phase 1 studies on hydro-climate modeling and sustainable land management approaches considerably enhanced climate data and information in Tajikistan. The digitizing of climate data greatly improved access to the data sets, which were directly used in the development of SPCR investments and have supported the preparation of other initiatives, including a regional water and energy project.

The phase 1 study on climate resilience for natural resources investment developed climate models downscaled to an 11-kilometer grid for two major river basins—the highest resolution applied to date—including projections for temperature, precipitation, evapotranspiration, runoff, and river flow up to the year 2100. These models provided a much sounder basis



**Figure 7: Tajikistan SPCR TA: Building Capacity for Climate Resilience: Project Output and Outcome**



ADB = Asian Development Bank, PPCR = Pilot Program for Climate Resilience, SPCR = Strategic Program for Climate Resilience.

Source: ADB (2012c).

for future vulnerability assessment and investment planning. The World Bank study on sustainable land management practices documented 46 technologies and 24 approaches, providing baseline data and analysis of existing sustainable land management practices that directly informed phase 2 investments and prompted further academic research on how best to improve rural livelihood and resilience to climate change.

Work on vulnerability assessment was expanded as a result of phase 1 and SPCR project preparation activities. The downscaled climate models were used in assessing climate change risks for key sectors such as settlements, agriculture, and transport, at district and community levels, in 34 districts and 208 communities in the Pyanj and Vakhsh river basins. Building on this work, the preparatory TA for the Pyanj River Basin Project carried out a climate vulnerability, impact, and adaptation assessment, identifying priority communities that were

particularly vulnerable to climate change with respect to water resources. The EBRD phase 1 study on improving climate resilience in the energy sector also carried out a groundbreaking vulnerability assessment of the Kairakkum hydropower facility and existing hydropower plants on the Vakhsh river cascade, identifying climate-proofing strategies for the SPCR energy project and providing an effective methodology for future hydropower assessments.

#### *Lessons learned regarding climate change awareness, information, and data*

Public awareness of climate change has increased considerably and continues to grow. To sustain and build on this, knowledge and outreach work should now focus on specific adaptation activities linking climate change to issues such as water resource management, energy use, disaster risk reduction, health, and other practical adaptation responses.

Much greater awareness of climate change issues across all stakeholders in Tajikistan should not obscure the persistent lack of capacity of institutions or civil society to undertake climate change science, risk, and vulnerability assessments and adaptation initiatives.

To develop its hydropower sector in a climate-resilient manner and make sound decisions about how it can optimize its hydropower facilities now and in the future, the government must have solid capacity to monitor, forecast, and analyze climate change data.

Climate data coordination and sharing is a problem. The PPCR Secretariat does not own data and so can hardly be a sharing hub for data at this stage. Ideally, the data and information should be placed in a centrally accessible database and shared properly. A structure that involves the national statistics department is needed for this.

NGOs have substantial experience in climate change adaptation (especially in agriculture) and energy efficiency at the subnational level, and are driving and building on these activities all the time. The government should capture these lessons and institute a mechanism for bringing these experiences into the policy dialogue on climate change.

Many barriers stand in the way of greater NGO participation in national programs like the SPCR; the relationship between government and the MDBs tends to be exclusive, and the government is not seeking closer engagement. NGOs themselves should be more active in defining their roles in climate change action and building trust.

The multi-stakeholder approach was an achievement in the Tajikistan context, but much remains to be done to make this a genuine and sustained approach to addressing climate change. Mainly because of the undeveloped capacity of all stakeholders, including the government in the main coordinating role, civil society, the academe, and the private sector are still weakly engaged in the process.

## **3.2.2 International and National Engagement in Climate Change**

#### *Situation at Pilot Program for Climate Resilience commencement*

Tajikistan ratified the UNFCCC in 1998 and the Kyoto Protocol in 2008. The State Organization for Hydrometeorology Institute (Hydromet), under the Committee for Environment Protection, is the national implementing entity for the UNFCCC. Tajikistan prepared its First National Communication in 2002 and its Second National Communication in 2008, with technical and financial support from the GEF, the UNDP, and the UNEP. The Ministry of Energy and Industry is the designated national authority for the Clean Development Mechanism of the Kyoto Protocol, but Tajikistan had no active projects at PPCR inception. The country had chaired the regional group of the UNFCCC, participated in the working groups of the IPCC, and contributed to an international report on climate change

and health, prepared by the World Health Organization. At the regional level, Tajikistan had been a member since 2002 of the Central Asia Regional Economic Cooperation (CAREC), a partnership of 10 countries supported by six multilateral institutions, including ADB. Cooperation encompasses climate change-sensitive sectors such as transport and energy.

In terms of institutions and plans dedicated to climate change adaptation, only limited progress had been made beyond the preparation of national communications under the UNFCCC. The government passed the Law on Nature Protection of 1994, which focused mainly on environmental protection and pollution but did recognize the need for systematic climate observation and specifications on levels of emissions for substances harmful to the ozone layer. The only government agency with designated responsibilities with respect to climate change was Hydromet. In 2003, as part of the national communication activities, the government, with support from the GEF and UNDP, prepared an action plan for climate change mitigation, which included the identification and broad prioritization of adaptation options encompassing sustainable resource use, adaptation in key sectors (water, agriculture, transport, health, urban development), natural disasters, and food security. No further work to develop possible interventions or investments in support of this plan was evident.

#### *Pilot Program for Climate Resilience contributions to international and national engagement in climate change*

SPCR preparation has enhanced international engagement in climate change in Tajikistan in several ways. The regular participation of government officials and the PPCR Secretariat in CIF international events, such as the partnership forums and PPCR country meetings, has facilitated multilateral and bilateral exchange with other PPCR countries. Technical support and advice offered by the secretariat to the official Tajikistan delegation at the COP18 in Doha included help with lobbying activities in the Group of Mountainous Landlocked Developing Countries and the Group of Highly Vulnerable Countries, as well as in the preparation of a side event on the Tajikistan experience. The secretariat also assisted the government in its preparations for the COP 19 and in the drafting of a country report presented at the European Climate Change Adaptation Conference in Brussels. The World Bank SPCR component Improvement of Weather, Climate and Hydrological Service Delivery has supported the attendance of Hydromet staff at a number of regional workshops on aspects of meteorology in Almaty, Astana, and Bishkek.

The preparation and early implementation of the SPCR has been fundamental to building national institutional arrangements for addressing climate change. Government dialogue on climate change intensified considerably as a result of SPCR development, and provided an early framework for policy discussions on adaptation, sustaining and deepening the political will to address the issue. The deputy prime minister established a focal point to coordinate government engagement with the PPCR team and, crucially, the phase 1 TA created a secretariat under the Committee on Environment Protection (COEP) to coordinate SPCR activities, ensure stakeholder participation and gender inclusiveness, and act as a hub for climate change information and communications (Box 7). The secretariat is staffed by a senior adviser, a communications officer, and a senior program officer; the SPCR foresees its ultimate institutionalization within a government agency—a national implementing agency—under output 5 of the TA project Building Capacity for Climate Resilience.

SPCR preparation has had a pioneering role in strategy formulation in the country. This development of Tajikistan's first fully funded program for climate change adaptation marked the country's first opportunity to adopt a multi-sectoral strategic approach, including comprehensive risk and vulnerability analysis, consultative prioritization and planning, and detailed stocktaking of climate change adaptation activities in Tajikistan. The SPCR TA Building Capacity for Climate Resilience has continued to build on this experience, initiating

a multi-stakeholder process of developing a national adaptation strategy,<sup>17</sup> including creating a National Adaptation Strategy Advisory Group with representatives from line ministries, academic institutions, and NGOs; implementing two strategy development workshops; and selecting pilot districts for local adaptation planning.

### *Lessons learned regarding international and national engagement in climate change*

The lack of an overarching national framework for climate change interventions is limiting progress toward policy-based budgeting, efficient resource allocation, and oversight. While additional policies supporting climate resilience are needed, substantial progress could be made simply by effectively implementing policies that have already been approved.

More than 5 years after it agreed to participate in the PPCR, the government still has no embedded climate change unit or officers assigned to government-funded action on climate change, and continues to rely on external funding from development partners.

In designing and implementing the national adaptation strategy, a focus on people, particularly the rural poor, needs to be maintained. The strategy should include consideration of how it will contribute to poverty reduction and set out in detail the links between climate change and poverty. It should also be based on economics and respond to the economic impact of climate change.

The work of the PPCR Secretariat, especially in the early stages, has contributed significantly to sustaining momentum for climate change adaptation within government and provided an active hub both for exchange of information and for dialogue between stakeholders. Most respondents viewed the secretariat as playing a crucial and valuable role, but concerns about its continuity are emerging.

The recent dip in secretariat activity, as a result of recruitment difficulties and a change in leadership in the consulting team for the ADB TA, has generally reduced communication, information sharing, and coordination, and put at risk the progress made so far. A plan for maintaining these vital activities should have been established earlier.

At a time when the restructuring of government agencies related to environmental issues hampered the building of institutional structures for addressing climate change and delayed some decisions necessary for SPCR implementation, the secretariat was important in maintaining momentum and providing focus for SPCR preparation.

## **3.2.3 Integration of Climate Change into Development Planning in Tajikistan**

### *Situation at PPCR commencement*

**Human and institutional capacity.** At the start of SPCR preparation, institutional and human capacity to support environmental and climate change programming was hindered by inadequate capacity to produce and absorb weather and climate information (Government of Tajikistan 2011). The preparation of UNFCCC national communications, with GEF and UNDP support, increased capacity among a core group of environmental scientists, but with mostly individual rather than institutional impact, given the weak institutional arrangements for environmental issues. A study by the Organization for Security and Co-operation in Europe (OSCE 2010) reported that staff of various ministries needed to gain a better understanding of climate change and that funding and even consideration of

<sup>17</sup> A major recommendation of the institutional and stocktaking assessment of the phase 1 TA was that Tajikistan should endorse a national action plan on climate change adaptation, guided by recent experiences of similar countries in developing NAPAs.

environmental initiatives had fallen into widespread disuse. The report recommended the capacity building of both the MOF and the COEP. The national capacity self-assessment exercise in 2003–2005 (Government of Tajikistan 2005) emphasized the need for greater public awareness, education, and stakeholder involvement in relevant UN convention–related issues and identified 12 broad priority areas for capacity building, but no detailed capacity assessments directly linked to capacity development interventions for climate risk management had been undertaken.

**Integration of climate change into policies and strategies.** Despite sporadic early efforts to build understanding of climate change, especially under the UNFCCC, climate change issues were hardly integrated into Tajikistan’s development policies, plans, and programs, if at all. The issue was not referred to in the National Development Strategy (2006–2015), while the National Disaster Risk Management Strategy and Action Plan only mentioned the fact that climate change was likely to increase the intensity and frequency of certain risks, but and that more could have been done to address this matter. The Third Poverty Reduction Strategy (2010–2012) did include consideration of climate change issues but not in a comprehensive or crosscutting manner with respect to the strategies presented, and did not identify adequate or strategic adaptation measures or possible funding mechanisms. At the sectoral level and in subnational planning, climate change was not considered.

**Coordination.** Only minimal coordination of climate change concerns took place within government and between government and other stakeholders at the start of SPCR planning. Following the signing of the Kyoto Protocol in 2008, the government had formed an interagency council for the coordination and implementation of projects under the CDM, chaired by the Deputy Prime Minister and encompassing key line agencies, but a mechanism for coordinating other aspects of the climate change response still had to be developed. The COEP had responsibility for coordination with respect to international agreements related to environmental issues but did not have a clear mandate for coordinating the efforts of other ministries or line agencies. In general, a lack of interagency communication and coordination was cited as a major barrier to the implementation of national development plans.

**Monitoring and evaluation.** A monitoring and evaluation culture within government has been slow to develop in Tajikistan, because the benefits of such systems were not well understood and there was not enough capacity to implement appropriate initiatives. Mechanisms for the effective monitoring of national strategies, such as the National Development Strategy and the Poverty Reduction Strategy, were not yet fully operational, and most M&E activities in the country were still driven by development partners through development projects and programs or specific interventions to support national planning or strengthen the capacity of specific agencies, such as the national Statistical Agency.

#### *PPCR contributions to the integration of climate change into development planning in Tajikistan*

**Contributions to human and institutional capacity development.** Support for the preparation of a major investment program by a group of stakeholders with limited experience or knowledge of climate change adaptation, plus the implementation of a series of analytical studies under phase 1, resulted in important capacity-building initiatives and outcomes. The least measurable, but probably most significant, outcomes have resulted from the multi-stakeholder process and included joint missions with MDBs, wide stakeholder consultations, surveys, government dialogue, programming workshops, self-assessments, and project preparatory TA, all of which have served to build the capacity of all participating stakeholders to understand and respond to climate change adaptation needs in Tajikistan.

The phase 1 studies included two important capacity-building initiatives: Hydroclimate Modeling and the River Basin Approach to Climate Resilience (ADB), and Measuring Institutional Capacity and Climate Change Awareness (World Bank; implemented by UNDP).



Crucially, the ADB modeling study established a Climate Science and Impact Modeling Partnership—an international panel of climate experts working with Hydromet staff and other experts in Tajikistan. The partnership carried out a gap analysis of the hydrometeorological modeling and forecasting capacity to assess capacity-building needs and also supported capacity building through the training of hydro-climate modelers, the development of climate impact models for critical sectors, and the development of climate hazard management methodologies for key socioeconomic sectors. The World Bank and UNDP capacity and awareness study, on the other hand, used gap analysis to assess capacity for climate impact management and adaptation across stakeholder groups in four key sectors (water, energy, agriculture, and health), including national, subnational, and community-level analyses. A review of technical and human resources, as well as recommendations and capacity-building road maps, which fed directly into the design of the SPCR TA Building Capacity for Climate Resilience, was part of this study.

Technical assistance from the secretariat and from the other phase 1 studies also contributed significantly to capacity building. As already mentioned (section 3.2.2), the secretariat provided capacity-building training to government officials participating in UNFCCC activities, including COP meetings, and has continued to build capacity within the COEP to manage Tajikistan's climate change adaptation response. The implementation of the study on sustainable land management (World Bank) increased the skills of the implementing team of Tajik scientists in survey development and data handling, improved their knowledge of sustainable land management approaches and technologies, and gave them experience in working with new computer programs. The implementation of the study to improve climate resilience in the energy sector (EBRD) supported the capacity building of Hydromet staff in the use of a snowmelt model for climate risk assessment, and facilitated the transfer of technical knowledge to Tajik experts in the assessment of climate change risks to hydropower facilities and the evaluation of other risk factors in the sector.

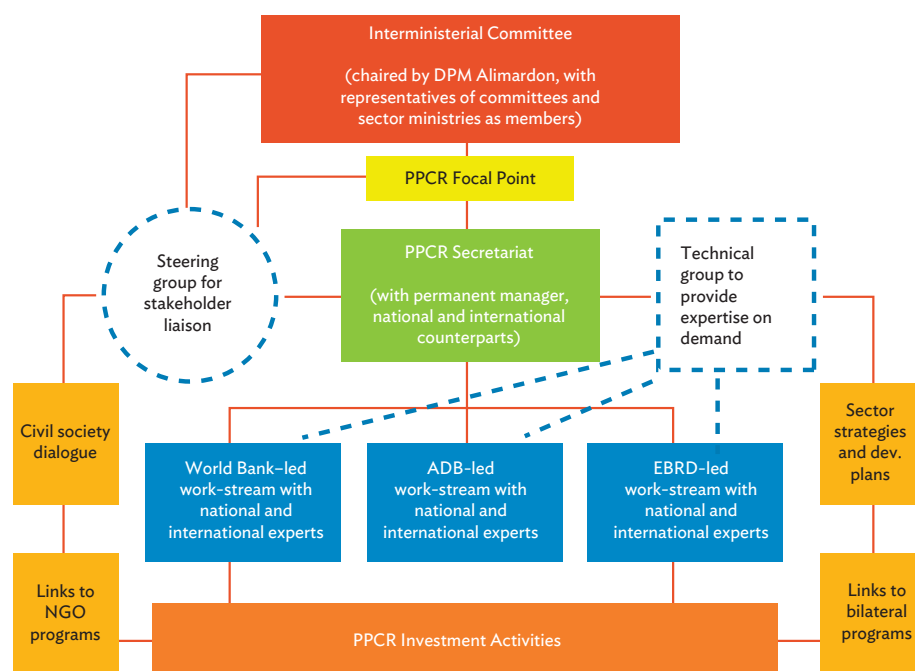
#### **Contributions to the integration of climate change into policies and strategies.**

Although climate change concerns have not been significantly integrated into national or sectoral policy development, SPCR preparation has set up a more favorable environment for policy revisions in a number of ways. First, as mentioned, the preparation of the PPCR and its component projects has made a major contribution to policy dialogue within the government and led to internal dialogue on the inclusion of adaptation measures in the work plans and development strategies of several ministries, particularly those in agriculture, land reclamation and water resources, and energy and industry. Second, the phase 1 capacity assessments in the hydrometeorology, water, agriculture, energy, and health sectors have provided detailed reviews of the relevant legal, policy, and institutional frameworks for integrating climate change concerns. The sustainable land management study in phase 1 also recommended a feasible policy and legal framework for upscaling sustainable land management in Tajikistan. Third, the capacity-building TA has recently completed a review of national and sectoral programs and budgets, developed an analysis of adaptation costs and benefits in Tajikistan, and drawn up a portfolio of potential adaptation options across key sectors. A climate risk screening tool for the transport sector has also been prepared and similar tools for other sectors are in preparation.

**Contributions to coordination.** Given the less-than-ideal institutional arrangements and the lack of any mechanisms for intergovernment coordination, it was clear early on in SPCR preparation that immediate action to establish a coordination structure was needed to maintain stakeholder engagement and ensure the cohesiveness of the program. Even before the phase 1 studies were completed, a framework for coordination was developed, approved by government, and put in place (Figure 8)—a very significant contribution to the institutional arrangements for addressing climate change in the country. At the center of the framework is the PPCR Secretariat, providing overall interagency coordination and

communication of SPCR activities in Tajikistan, with support from a steering group of key stakeholder representatives and a technical group of local and international experts. The secretariat is linked to a high-level interministerial committee through a senior government focal point. So far, this structure has proved robust and effective, although ensuring that the secretariat is adequately staffed has been a challenge. There have been criticisms from civil society that developing the secretariat under a TA project means that it is not genuinely independent.

**Figure 8: Pilot Program for Climate Resilience: Coordination Framework in Tajikistan**



ADB = Asian Development Bank, DPM = deputy prime minister, EBRD = European Bank for Reconstruction and Development, NGO = nongovernment organization, PPCR = Pilot Program for Climate Resilience.

Source: Government of Tajikistan (2011).

**Contributions to monitoring and evaluation.** Given the capacity constraints and limited integration of M&E systems into government operations in Tajikistan (see above), progress has been modest, but the SPCR work on monitoring is providing essential awareness raising and capacity building through a multi-stakeholder approach. The M&E component of the SPCR is managed under output 4 of the SPCR TA Building Capacity for Climate Resilience; this means that SPCR output is managed for results (Figure 7). The TA has been gradually building capacity through a series of stakeholder workshops and ADB technical backstopping covering key aspects, including M&E of climate change, the proposed PPCR Climate Change Results Framework, and the scorecard process for monitoring the CIF core indicators. These workshops have also served to support annual reporting commitments. The first monitoring report, for the period November 2010 to March 2014, was completed and submitted to the CIF in June 2014.

### *Lessons learned regarding the integration of climate change into development planning in Tajikistan*

Capacity building faces serious challenges in Tajikistan. The status of the COEP has changed five times in recent years, staff capacity is a continuing concern, and staff turnover is very high. Solutions include continuous training, sharing of management responsibilities among existing competent staff, and greater use of local and international experts to build capacity on the job. Building capacity at the community and local government levels, where job mobility is lower, may be more sustainable.

The mode of capacity building adopted under the climate modeling partnership was very successful. The mix of short periods of direct collaboration between international and national experts in Tajikistan, continuing communication, and online long-distance support was an efficient and effective approach.

International and some national NGOs are already undertaking climate change adaptation initiatives at the national and local levels, including providing training in climate change and adaptive measures. They are flexible organizations and have strong links with communities. Government and development partners should leverage this capacity in implementing the SPCR and other climate change initiatives.

The dip in activity of the secretariat in 2014 following the departure of the original TA lead consultant and the subsequent delayed recruitment of secretariat staff reduced the influence of the secretariat and weakened the mechanism for coordination. The government and the MDBs needed to take early action to maintain the core activities of the secretariat and keep up the momentum of coordination.

The SPCR coordinating structure is good but not flexible enough at present to serve as a platform for other climate change initiatives such as mitigation or disaster risk management. The implementation mechanisms are too narrow. The government should adopt this structure but widen it to address all aspects of climate change and avoid duplication.

Despite the strong achievements in coordination under the SPCR preparation, the program needs to forge stronger collaborative ties with the UNFCCC national communications group in the country, including ties with the Climate Change Centre of Hydromet. This wider involvement should be a priority of the PPCR Secretariat.

There is some concern that the secretariat is not regarded by all stakeholders as independent, and its being an output of the ADB TA has made this issue more prominent. The question being raised is, Can the secretariat serve the needs of all SPCR components? The secretariat must ensure that it effectively coordinates and supports the cohesiveness of all SPCR components.

## **3.2.4 Readiness for Climate Finance**

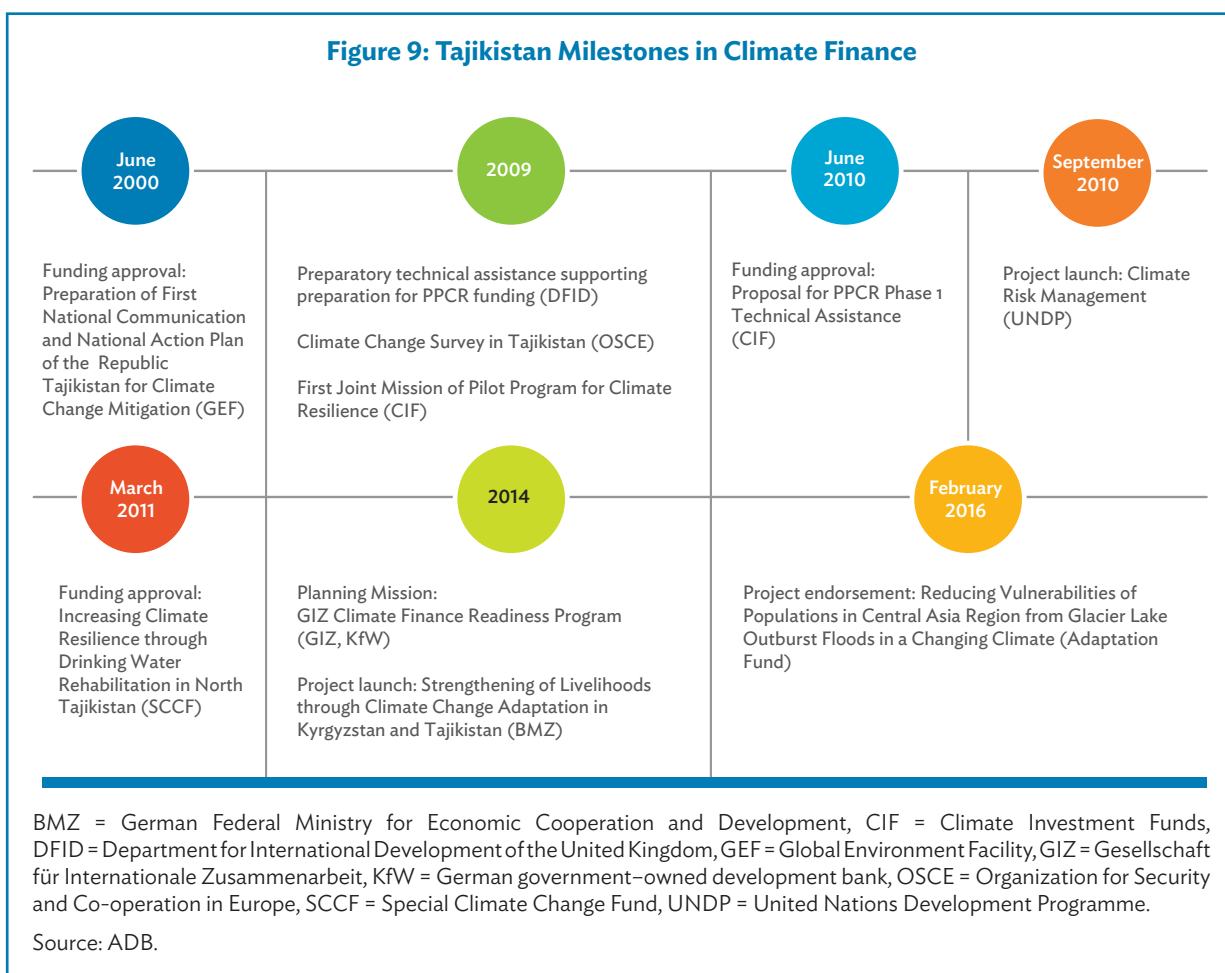
### *Situation at PPCR commencement*

At the start of SPCR preparation, Tajikistan's knowledge of and experience in climate finance was very limited. The major development partners in climate and environmental issues were the GEF and UNDP, which had provided financial and technical support to UNFCCC activities in Tajikistan and other small TA projects, such as sustainable transport, small hydropower, and capacity building for Hydromet. A group of development partners<sup>18</sup>

<sup>18</sup> Canada International Development Agency, ECHO (European Union), Japan International Cooperation Agency, Swedish International Development Cooperation Agency, Swiss Development Cooperation, UK Aid, UNDP.

also funded the long-term disaster risk management program implemented by the UNDP. Programs for environmental protection did not receive a high priority in budget allocation processes and the OSCE reported that the funding of such programs was stagnant or declining in real terms—a problem the report attributed to low knowledge of environmental issues in the MOF (OSCE 2010). The ADB country partnership strategy 2010–2014 also noted the flaws in public sector finance capacity and systems. There was certainly no direct budgetary allocation for climate change activities other than government contributions in cash or in kind for externally funded projects. No agency in Tajikistan was accredited for direct access to climate finance. Key milestones in climate finance for Tajikistan are summarized in Figure 9.

**Figure 9: Tajikistan Milestones in Climate Finance**



#### *PPCR contributions to readiness for climate finance*

Government knowledge of climate finance and its capacity to gain access to and manage climate funds remain limited in Tajikistan, but PPCR preparation and early implementation contributed in an important way to capacity building. The preparation phase of this first major investment program in climate change in the country yielded valuable learning on climate finance within the COEP and also provided the MOF and key line ministries and agencies with experience in putting together an investment plan focusing on climate resilience, giving them a better understanding of how climate change adaptation projects are designed, prepared, and funded. Assessments of line ministry capacity carried out under phase 1 studies included assessments of budgeting allocations and financial management, and identified strategies for linking the development of climate change policy to changes in budget allocation. Assistance

from the PPCR Secretariat to the COEP in developing a strategy and proposal for gaining access to additional CIF finance included support for a series of meetings between the COEP and key CIF development partners. The SPCR TA Building Capacity for Climate Resilience is currently undertaking a gap analysis of several government agencies to assess potential candidates for the national implementing agency for the Adaptation Fund, which will facilitate Tajikistan's first direct access to climate finance.

#### *Lessons learned regarding readiness for climate finance*

There is strong political will to work with PPCR funding and move forward on a suitable climate change response, both nationally and internationally, but the government has yet to commit serious resources to climate change. Increased support for the secretariat, the development of stronger institutional structures, and greater harnessing of the expertise available in the academe are possible starting points.

Given the low capacity of stakeholders with respect to climate change and the high mobility of government staff, it is important to ensure that the anticipated rise in climate finance available does not run too far ahead of the development of adequate capacity to manage it and deliver effective projects and programs.

It will be difficult to make progress on subnational finance for climate change adaptation unless the issue is fully integrated into sector and local policy development and planning. There needs to be a stronger link between efforts to develop a national adaptation strategy and capacity-building support for line ministries and government agencies in mainstreaming climate change.

### **3.3 DISCUSSION AND CONCLUSIONS: TAJIKISTAN**

---

The agreement to participate in the PPCR and the subsequent program preparation activities marked a significant turning point in Tajikistan, at which climate change began to be taken much more seriously by government and a wider group of stakeholders began working together on the issue. The first major investment program on climate change (the SPCR) is now in place and being implemented, an effective coordination mechanism with the PPCR Secretariat at its core is operational, and work on a national adaptation strategy is well advanced. The government has exerted strong climate change leadership and its political will has been sustained and even toughened, but these achievements have yet to be matched with budgetary commitments or significant institutional responses. In other words, understanding of a whole-of-government approach to climate change has yet to be achieved. A promising start has been made in improving understanding of climate change risks and building the capacity to respond to them. The number of stakeholders engaged in climate change adaptation is growing steadily. But capacity building of all stakeholder groups faces many challenges and requires innovative and concerted effort if the rise in capacity is to match the anticipated growth in supply of climate finance.

The phase 1 studies were critical to the further development and implementation of the SPCR and have also been widely acknowledged as a strong body of evidence and information that continues to support the wider evolution of climate change activities in Tajikistan. The studies increased awareness through outreach to stakeholders at the national and local levels, provided scientific and technical information that was directly used in the design of SPCR projects, carried out assessments and information that provide essential guidance for future capacity building, and served to build the capacity of scientists and other stakeholders involved in implementation. The climate modeling partnership stands out as a very effective capacity-building approach that continues to this day and should be considered for replication in other areas of climate adaptation work. The studies also considerably advanced



vulnerability assessment methodologies in Tajikistan through downscaled modeling, the river basin approach, and the hydropower assessments, all of which are now contributing to further assessment work beyond the SPCR.

The government, MDBs, and other stakeholders of PPCR pioneered the design and development of a transformative investment program to increase climate resilience in Tajikistan, and the learning from this experience has been significant. Given that serious capacity constraints limit the pace of current and future action on climate change, innovative approaches to building sustainable capacity are needed, including widening the effort to include other stakeholder groups and stakeholders at the subnational and community levels. Most importantly, government and development partners need to ensure that capacity-building efforts are closely coordinated and complementary. The development of a clear coordination mechanism right at the start of the process was important in enabling program development to proceed smoothly and transparently with adequate technical support, but government ownership of the coordination efforts must strengthen and the institutional framework for climate change must be developed further to maintain momentum and ensure that the climate change response does not fragment. While the secretariat has made an important contribution to stakeholder communications, strategies should be regularly updated and remain flexible, and should also include protocols for communicating with government agencies and ensuring the availability and quality of information in the local language.

Finally, the implementation of the multi-stakeholder approach was an important learning process for all concerned. The benefits of consultation, inclusion, and learning together were appreciated by all participants. However, it is clear that additional efforts are needed to make sure that the voice of civil society is heard and that greater use is made of its capacity, flexibility, and access to communities in activities to combat climate change. Greater trust must be established between government and civil society, and this requires action and outreach from both sides. The engagement of the private sector in SPCR preparation and implementation has so far been limited, but reliance on this sector should ultimately increase. There are obvious opportunities for private sector participation in the hydropower and agriculture sectors, and the secretariat should maintain outreach and dialogue with relevant companies and trade organizations.



# 3

## SUMMARY AND CONCLUSIONS

The development of SPCRs in Asia and the Pacific, including major investments in climate change adaptation and essential technical assistance for mainstreaming climate resilience, has been a major step forward in climate change response in the region and a considerable achievement for all the stakeholders involved. However, progress from the low levels of climate change action 6 years ago to the implementation of multimillion-dollar climate change adaptation programs has taken longer than anticipated by some stakeholders and external observers as the process faced many challenges, particularly in mobilizing and building understanding among a broad range of stakeholders, bringing them to a consensus on a programmatic approach, and coordinating the design, implementation, and monitoring of projects. These challenges have provided opportunities to learn lessons, many of which have been highlighted in these case studies, including the importance of sustaining commitment and participation from government and other stakeholders, communicating more effectively, prioritizing capacity development, ensuring effective program coordination, and balancing due process and consensus building with the need for timely program implementation (Table 9).

The literature review for this study and the stakeholder interviews have often highlighted the importance of the inclusive multi-stakeholder approach to program development adopted by the PPCR, as a valued feature of SPCR preparation and one that has been sustained in

**Table 9: Main Lessons Learned and Related Country Issues**

Cambodia	Nepal	Tajikistan
<b>Lesson: Multi-stakeholder approach to climate change adaptation programming is effective</b>		
Approach facilitated multi-party participation in a dynamic institutional environment	PPCR built on and expanded the multi-stakeholder approach developed for the NAPA	SPCR planning was a critical turning point in addressing climate change in Tajikistan
Strong participation elicited from civil society influenced program content	Awareness of climate change increased across a wide group of stakeholders	Environment for a multi-stakeholder process was challenging, particularly with respect to inclusion
Awareness of climate change increased across a wide group of stakeholders	Government became convinced of the value of engaging with CS and private sector on climate change	Government put up some early resistance to CS participation
Space and opportunities were provided for debate, gap analysis, and discussion on inclusion	SPCR preparation provided a foundation for the ultimate program coordination mechanism	Support from DFID was crucial in driving the multi-stakeholder process
Interagency contacts and communications on climate change strengthened		Stakeholder participation rose rapidly as SPCR planning proceeded

*continued on next page*

Table 9 *continued*

Cambodia	Nepal	Tajikistan
<b>Lesson: A more strategic communications approach must be taken when developing programs</b>		
<p>Communications are important in managing stakeholder expectations</p> <p>Rapidly changing institutional framework demanded responsive communications</p> <p>Lack of continuity in communications at key points raised transparency concerns</p> <p>Limited information in local languages restricted stakeholder engagement</p>	<p>Lack of continuity in communications at key points raised transparency concerns</p> <p>The challenging political and institutional environment required effective communications</p> <p>Better communications could have enhanced the debate on adaptation loans</p> <p>The TA strategy has demonstrated the value of an effective communications approach</p>	<p>Low experience with multi-stakeholder approach highlighted the need for effective communications</p> <p>The early establishment of the secretariat as an SPCR information hub was crucial</p> <p>Improved and expanded translation of documents could have improved transparency further</p> <p>Earlier engagement with government to build political support would have accelerated SPCR development</p>
<b>Lesson: High priority must be given to building capacity for climate change risk management</b>		
<p>Better training and team building in phase 1 could have enhanced progress</p> <p>Phase 1 objectives did not match the existing capacity and enabling environment</p> <p>Heavy and increasing climate change workload stretched the limited capacity of the Ministry of Environment</p> <p>Capacity to address climate change at the subnational level remains low</p>	<p>At PPCR outset, institutional capacity to address climate change risk was weak</p> <p>Gaps in knowledge and technology for climate change projections were significant</p> <p>Government career structure and processes results in high staff turnover, constraining capacity building</p> <p>Rapidly increasing climate change risk management workload is straining government resources</p> <p>ADB capacity assessments indicated priority needs and informed TA and other climate change projects</p>	<p>Initially, institutional structures for addressing climate change risk were weak and disparate</p> <p>An OECD report noted the necessity of building environmental management capacity among relevant ministries</p> <p>Civil war had significantly disrupted education and career development in government</p> <p>Government staff turnover is high and there is a limited cadre of educated and skilled personnel</p> <p>Climate Science and Impact Modeling Partnership demonstrated a very effective capacity-building approach</p>
<b>Lesson: Effective coordination mechanisms must be developed</b>		
<p>The PPCR improved communication between government agencies, which led to a more collaborative approach</p> <p>The development and implementation of the PPCR monitoring and reporting system has resulted in more effective coordination</p> <p>Rapidly growing initiatives at subnational level are uncoordinated and government is struggling to monitor and learn</p> <p>Lack of coordination between PPCR and other initiatives may have reduced potential complementarity</p>	<p>Policy coordination was in place but coordination at the operational level was insufficient at the start</p> <p>Adoption of existing NAPA TWGs and program champions supported early program coordination</p> <p>SPCR Mainstreaming TA is now establishing coordination at the implementation level and for results management</p> <p>World Bank is establishing a coordination group for the supply and use of weather data</p> <p>Core group of technical experts is needed to support coordination</p> <p>Coordination and results management has been extended to include non-SPCR projects</p>	<p>At first, a multiplicity of agencies dealt with climate change, without a clear mechanism for coordination</p> <p>Lack of interagency coordination or communication was a major barrier to national development planning</p> <p>SPCR championing by the Deputy Prime Minister was essential for effective coordination</p> <p>Established early, the secretariat and a clear coordination structure have proved robust</p> <p>Process of developing the National Adaptation Strategy has enhanced cooperation and coordination on climate change</p> <p>Development of the monitoring and reporting system has further strengthened coordination</p>

*continued on next page*

Table 9 *continued*

Cambodia	Nepal	Tajikistan
<b>Lesson: Project lead times were longer than expected</b>		
In phase 1, the complex nature of financial and procurement approvals caused delays	In general, the political situation did not favor rapid processing of externally funded projects	Knowledge and awareness of climate change was low and time was needed to build understanding and political support
World Bank and IFC withdrawal slowed program development	Government and MDB commitment meant the mainstreaming TA started within 1 year of SPCR approval	Evidence base on climate change was insufficient to support major investments and technical studies (phase 1) had to be completed before implementation
Revisions in the large project portfolio delayed the start-up of some projects	Further data analysis and climate modeling work was required before final design and implementation of some projects	Striking a balance between understanding of climate change and momentum toward implementation was difficult
Changes in contractual arrangements delayed TA implementation		
<b>Lesson: SPCR preparation has supported readiness for climate finance</b>		
SPCR preparation has provided learning on investment planning for key government agencies	SPCR preparation has provided learning on investment planning for key government agencies	SPCR preparation has provided learning on investment planning for key government agencies
Support was provided for prioritization and costing of climate change objectives in national, sector, and subnational planning	SPCR preparation triggered development of a clearer policy on taking out loans for climate change adaptation	SPCR implementation delivered studies linking policy development to budget allocations for climate action
Capacity to absorb climate finance remains low and can result in poor coordination, especially at subnational level	TA support was provided for the costing of adaptation for national and subnational agencies	SPCR implementation supported direct access to climate finance via the Adaptation Fund
	National Academy of Science and Technology improved its readiness to manage climate finance	Capacity to absorb climate finance remains low
	Capacity to absorb climate finance remains low	

CS = civil society, DFID = Department for International Development of the United Kingdom, IFC = International Finance Corporation, MDB = multilateral development bank, NAPA = national adaptation program of action, OECD = Organisation for Economic Co-operation and Development, PPCR = Pilot Program for Climate Resilience, SPCR = Strategic Program for Climate Resilience, TA = technical assistance, TWG = technical working group.

Source:

the program implementation phase in most countries. However, delivering this approach in least developed countries—the targeted recipients of PPCR funding—has sometimes been a challenge. Resources and capacity for action in the pilot countries were often low and governments sometimes needed to be persuaded of the benefits of a wider, more collaborative approach to program development. In the private sector, companies operating in the pilot countries had little understanding of climate change issues and, often more focused simply on survival, found it difficult to take a longer-term view. The distrust between civil society and government was also quite high in the countries studied, adding to the transaction costs of a broader, more consultative, and more inclusive approach. Strong engagement and technical backstopping from MDBs and other development partners in building understanding of the approach, early clarity for stakeholders about possible roles and program opportunities, and continuing and effective stakeholder communications were important in lowering these barriers.

The problems and challenges arising from inadequate communications or the lack of a strategic approach to communications were recurrent findings in this study. The lack of planning with respect to communications has sometimes resulted in inconsistent communications, which in

turn have led to misunderstanding, delays in decision making, or concerns over transparency that have affected the quality of stakeholder relationships. A further important aspect of communications highlighted here is the need to consider both the cultural and formal protocol aspects of communications between TA or project teams and the government, especially in the multi-stakeholder context. Surprisingly, there are still complaints that the provision of information in local languages is inadequate and continues to affect stakeholder inclusion. Communication strategies were not always given a high priority in the preparation of SPCRs but, where applied, have proved effective and have emphasized the importance of adopting a process approach to strategy implementation. Good communications require comprehensive stakeholder analysis, early engagement with stakeholders from the project design phase, the preparation and implementation of adequately resourced stakeholder participation and communication strategies, and the regular monitoring and review of communication approaches (ADB 2012d).

Probably the most commonly referred to issue in this study has been how the low technical and institutional capacity and high staff turnover within governments have affected the development and implementation of the SPCRs and how these factors continue to limit the pace and quality of wider climate change program development and the expansion of the public sector response to climate change in the pilot countries. These capacity issues are, to some extent, inherent in the pilot countries and the problem has been recognized in numerous studies and reviews of the PPCR process, including those made by ADB (2015a). Among the possible solutions highlighted here are spreading responsibilities for climate change adaptation beyond the designated climate change department,<sup>19</sup> instituting more formalized job handovers, working with groups within a line agency rather than a single focal person, and making greater use of informal gatherings for learning and capacity building. Stakeholders have also emphasized the need for greater capacity-building efforts within subnational government and civil society, where faster and more sustainable results can be achieved. However, genuine mainstreaming of climate resilience needs to be based on a long-term, multifaceted, and well-coordinated strategy for capacity building involving government, development partners, and civil society.

Given the all-encompassing nature of climate change impact, effective coordination of climate action, both within government and across the wider group of engaged stakeholders, is critical to ensure that gaps and duplication are minimized and use of scarce funding and other resources is maximized. Some of the challenges of coordination at the SPCR stakeholder level, at the government agency level, and at the wider national level beyond the SPCR were highlighted in this study and experiences indicate that any mechanism must be designed to fit the purpose and provided with adequate resources to maintain and manage the process. Starting coordination activities as early as possible has allowed more effective mechanisms to develop and mature, and the clear link between coordination activities and effective communication strategies has been demonstrated. The implementation of SPCR TA projects and the development of a coherent framework for monitoring and reporting have been important catalysts for deepening coordination at the SPCR level and also for providing lessons to pilot countries on broader coordination efforts of climate change initiatives beyond the SPCR. Other coordination issues that have had an impact on SPCR implementation are the growing difficulties of governments in coordinating or at least monitoring and learning from subnational adaptation initiatives and the apparent weakening of coordination between development partners in delivering climate change assistance.

For the pilot countries studied, more than 5 years have passed since the start of SPCR planning but the investment programs are still in the early stages of implementation. The fairly long lead time reflects some of the capacity and readiness constraints highlighted throughout this

---

<sup>19</sup> While this has increased potential capacity, it has sometimes had a negative effect by reducing the prominence and influence of critical mainstreaming initiatives.



report, as well as the inexperience of some stakeholders in dealing with significant levels of funding for climate change adaptation. In addition, the normal MDB due diligence procedures for investment projects can take time and projects have also had to be reviewed, commented on, and endorsed by the PPCR Sub-Committee of the CIF. However, although it took some time before the influence of critical mainstreaming activities was felt, these processes were ultimately critical in ensuring project quality, complementarity with other country initiatives, and the leveraging of substantial cofinancing from MDBs and others, including ADB's Asian Development Fund. The MDBs consulted for this study emphasized that, for all of the major project delays, there were strong reasons that could not be overlooked and the process has probably provided a more realistic timeline for climate finance or highlighted the need for the development of a more streamlined delivery process.

Despite the many difficulties in the process, the development of SPCRs in the pilot countries studies has certainly assisted those countries in preparing for an expansion of finance and action on climate change adaptation and has also contributed to the advancement of ADB strategies for providing assistance to developing member countries in building climate resilience. The pilot countries are in a much stronger position to plan further initiatives with development partners, including MDBs, and to gain access to growing climate finance. Capacity for direct access to climate finance remains low in the countries studied, but support for accreditation to climate funds (e.g., in Tajikistan) or the development of national climate finance facilities, such as national trust funds (a feature of SPCRs in the Pacific, e.g., those of Papua New Guinea, Samoa, and Tonga), could be an important next step. For ADB, the CIF initiative came at a particularly crucial time when work on project risk screening for climate change was advancing rapidly and the pilot-testing of detailed climate resilience and vulnerability assessment was revealing the costs of climate-proofing contingency in pilot countries. PPCR funding provided a valuable opportunity to demonstrate the importance of comprehensive risk-screening and assessment, advance learning on risk-screening methodologies, and clarify the demand for additional finance to address adaptation.

# APPENDIX

## PERSONS CONSULTED DURING THE STUDY

### ADB Headquarters

Nishanthi Manjula Amerasinghe, South Asia Department (SARD)

Giap Munh Bui, natural resources and agriculture economist, Southeast Asia Department (SERD)

Shihiru Date, senior transport specialist, SERD

Cinzia Losseno, senior climate change specialist, Sustainable Development and Climate Change Department (SDCC)

Cynthia Malvicini, senior water resources specialist, SARD

Javed Mir, director environment, agriculture and natural resources division, SERD

Totsuka Natsuko, senior water resources specialist, SERD

Pavit Ramachandran, senior environment specialist, SERD

Nathan Rive, climate change specialist, Central and West Asia Department (CWRD)

Charles Rogers, former senior environment specialist, SDCC

Ancha Srinivasan, principal climate change specialist, SERD

Manami Suga, natural resources economist, CWRD

Su Chin Teoh, natural resources specialist, SERD

Syarifah Aman Wooster, senior social specialist, SERD

### Cambodia

Sano Akhteruzzaman, former consultant (independent consultant), Pilot Program for Climate Resilience (PPCR), phase 1

Pan Bunthoeurn, secretary of state, Ministry of Planning

H. E. Ngan Chamroeun, executive deputy head, National Committee for Sub-National Democratic Development Secretariat

Kong Chanthan, national climate change planning advisor, National Committee for Sub-National Democratic Development

H. E. Nuth Chansokha, undersecretary of state, Ministry of Planning

H. E. Chan Darong, director general for technical affairs, Ministry of Rural Development

Soma Dor, program officer, Swedish International Development Cooperation Agency

Michael Dorval, team leader, Provincial Roads Improvement Project

Silas Everett, country representative, The Asia Foundation

Januar Hakim, senior portfolio management specialist, ADB Cambodia Resident Mission (CARM)

Pheararich Hing, climate change policy analyst, United Nations Development Programme (UNDP)

Math Kob, PPCR consultant, ADB CARM

Elodie Maria-Sube, natural resources management and climate change advisor, Delegation of the European Union to the Kingdom of Cambodia

Soth Kimkol Mony, National Committee for Disaster Management

H. E. Ma Norith, deputy secretary general, National Committee for Disaster Management

Chanhearith Ou, deputy director, Climate Change Department, Ministry of Environment

Am Phirum, deputy head of department, Department of Agricultural Land Resources Management

Chreang Phollak, director of planning, Ministry of Public Works and Transport

Vong Pisith, deputy director general, General Directorate of Public Works

Ponh Sachak, deputy director general of technical affairs, Ministry of Water Resources and Meteorology

Meas Sophal, PPCR team leader, Ministry of Environment

Rocco M. Palazzolo, team leader, Southern Economic Corridor Towns Development Project

H. E. Pheng Sovicheano, undersecretary of state, Ministry of Public Works and Transport

H. E. Pan Bun Thoeurn, secretary of state, Ministry of Planning

Mao Vanchann, climate change adaptation specialist, Ministry of Rural Development

Dr. Hean Vanhan, deputy director, Department of Agronomy and Agricultural Land Management

Delphine Vann, country manager, Forum Syd

Tek Vannara, executive director, NGO Forum

H. E. Pisith Vong, deputy director general, Ministry of Public Works and Transport

John Weeks, communications officer, Forum Syd

## Nepal

Lava Bahadur KC, undersecretary, Climate Change Management Division, Ministry of Science, Technology and Environment (MOSTE)

Gyanesh N. Bajracharya, team leader, Mainstreaming Climate Change Risk Management in Development

Sushim Baral, research grant program manager, National Academy of Science and Technology

Rajiv Pandit Chetri, advisor, Clean Energy Nepal

Bimala Devkota, senior scientific officer, Academy of Science and Technology

Er Mukesh Ghimire, energy officer, Alternative Energy Promotion Centre

Binaya Joshi, climate change officer, National Climate Change Support Program

Bubana Karki, undersecretary, Ministry of Finance

Iswor Prasad Khanal, chief, faculty of science, National Academy of Science and Technology

Binaya Kumar Koirala, senior divisional engineer, Ministry of Irrigation

Kathleen McLaughlin, development communications specialist, Mainstreaming Climate Change Risk Management in Development

Umesh Bahadur Malla, urban planning and water resource specialist, Mainstreaming Climate Change Risk Management in Development

Kapil Neupane, member, Samuhik Abhiyan (NGO)

Judy Oglethorpe, chief of party, Hariyo Ban Program, WWF Nepal

Anupa Pant, PPCR focal point, International Finance Corporation

Nita Pokharel, National Planning Commission

Vidhisha Samarasekara, senior climate change specialist, SARD

Dr. Anjana Shakya, curriculum development specialist, Mainstreaming Climate Change Risk Management in Development

Naresh Sharma, project coordinator, National Climate Change Support Program

Dr. Rishi Sharma, director general, Department of Hydrology and Meteorology

Nabina Shrestha, deputy team leader, Mainstreaming Climate Change Risk Management in Development

Ranjan Prakash Shrestha, senior program manager, Delegation of the European Union to Nepal

Er. Ramesh Pd. Singh, deputy director general, Department of Urban Development and Building Construction

## Tajikistan

Kayumov Abdulhamid, director, Environmental Centre for Central Asia

Angela Armstrong, senior natural resources management specialist, World Bank, Washington, DC

Mamadamom Abdulloev, dean of transport faculty, Tajik Technical University

Malika Babadjanova, technical officer Regional Environmental Center for Central Asia

Audrey Bartholot, program funding coordinator, Oxfam Tajikistan

Muazama Burkhanova, chairperson, Foundation to Support Civil Initiatives (NGO)

Craig Davies, senior manager, climate change adaptation, European Bank for Reconstruction and Development

Hari Dulal, international team leader, Building Capacity for Climate Resilience Project

Anvar Hamidov, water expert, Building Capacity for Climate Resilience Project

Rasulov Homidjon, director and United Nations Framework Convention on Climate Change (UNFCCC) focal point, State Agency for Hydrometeorology

Khayrullo Ibodzoda, chairman, Committee on Environmental Protection

Rasulov Homidjon, UNFCCC focal point, Committee on Environmental Protection

Svetlana Jumaeva, director, Center for Climate Change and Disaster Reduction (NGO)

Khurshed Kholov, national coordinator, Global Environment Facility (GEF) Small Grants Program

Gulnora Kholova, gender expert and national implementation consultant, ADB Tajikistan Resident Mission (TJRM)

Bojan Kolundzija, country director, Oxfam Tajikistan

David G. Lees, international consultant, Building Capacity for Climate Resilience Project

Bob Leverington, head, Department for International Development of the United Kingdom, Central Asia

Zafar Mahmudov, project coordinator, Environmental Land Management and Rural Livelihoods Project

Karimov Nasib, director, Ministry of Amelioration and Water Resources

Gulniso Nekushoeva, senior scientist, Soil Science Research Institute

Ilhom Nozimov, deputy director, Ministry of Finance

Rahimjou Rahimov, administrator, State Unitary Enterprise for Housing and Communal Services

Sulton Rahimzoda, first deputy minister, Ministry of Energy and Water Resources

Muzaffar Shodmonov, head of international department, State Organization for Hydrometeorology

Firuz Saidov, deputy team leader, Building Capacity for Climate Resilience Project

Yuri Skochilov, executive director, Youth Ecological Centre

Bobojon Yatimov, senior rural development officer, World Bank, Tajikistan



# REFERENCES

- Alternative Energy Promotion Center, Nepal. 2014. National Rural and Renewable Energy Program. Accessed 7th October. [http://www.aepc.gov.np/old/index.php?option=com\\_content&view=article&id=254:national-rural-a-renewable-energy-programme-nrrep&catid=134:nrrep&Itemid=318](http://www.aepc.gov.np/old/index.php?option=com_content&view=article&id=254:national-rural-a-renewable-energy-programme-nrrep&catid=134:nrrep&Itemid=318)
- Asian Development Bank (ADB). 2008. *Technical Assistance to Nepal for Strengthening Capacity for Managing Climate Change and the Environment*. Manila.
- . 2009. *Country Partnership Strategy: Nepal, 2010–2012*. Manila.
- . 2011a. *Country Partnership Strategy: Cambodia, 2011–2013*. Manila.
- . 2011b. *Preparatory Project Technical Assistance to Nepal for Building Climate Resilience of Watersheds in Mountain Eco-Regions*. Manila.
- . 2011c. *Technical Assistance to Nepal for Mainstreaming Climate Change Risk Management in Development*. Manila.
- . 2012a. *Climate Change and Vulnerability Mapping in Watersheds in Middle and High Mountains of Nepal*. Consultant's report. Manila (TA 7883-NEP).
- . 2012b. *Technical Assistance to Cambodia for Mainstreaming Climate Resilience in Development Planning*. Manila.
- . 2012c. *Technical Assistance to the Republic of Tajikistan for Building Capacity for Climate Resilience*. Manila.
- . 2012d. *Strengthening Participation for Development Results*. Manila.
- . 2013a. *Country Partnership Strategy: Nepal, 2013–2017*. Environmental Assessment (Summary). Manila.
- . 2013b. *Pilot Program for Climate Resilience: Cambodia. Phase 1 Completion Report*. Manila.
- . 2013c. *Stakeholder Engagement in Preparing Investment Plans for Climate Investment Funds: Case Studies from Asia*. Manila.
- . 2014. *Building the Analytical Base: A Summary of Results from Phase 1 of the Pilot Program for Climate Resilience in Tajikistan*. Manila.
- . 2015a. *Building Climate Resilience in Asia and the Pacific: Insights from ADB Experience*. Manila.

- . 2015b. Mainstreaming Climate Change Risk Management in Development. Midterm Progress Update. Manila (Project 44768-12).
- Asian Development Bank (ADB), European Bank of Reconstruction and Development (EBRD) and World Bank. 2009. *PPCR Joint Mission Report, 12–22 October 2009*. Dushanbe.
- Asian Development Bank (ADB), International Finance Corporation (IFC), and World Bank. 2009. *Aide-Mémoire: Joint Mission for the Pilot Program for Climate Resilience (PPCR), 12–22 October 2009*. Phnom Penh.
- . 2015. *Pilot Program for Climate Resilience: Nepal*. Kathmandu.
- Asian Institute of Technology–United Nations Environment Programme (AIT–UNEP). 2010. Scoping Assessment for National Implementation in Cambodia (Summary). Bangkok, Thailand.
- Bird, Neil. 2011. *The Future for Climate Finance in Nepal*. London: Overseas Development Institute (ODI).
- CARE. 2010. *Climate Change Impacts on Livelihoods of Poor and Vulnerable Communities and Biodiversity Conservation: A Case Study in Banke, Bardia, Dhading and Rasuwa Districts of Nepal*. Kathmandu.
- Climate Investment Funds (CIF). 2009. *Guidelines for Joint Missions to Design PPCR Pilot Programs (Phase 1)*. Washington, DC.
- . 2012. *Nepal Strategic Program for Climate Resilience: Progress Updates from PPCR Pilots*. Meeting of PPCR Pilot Countries and Regions, Istanbul, Turkey.
- . 2015. *Pilot Program for Climate Resilience*. Accessed 25 March. [http://www.climateinvestmentfunds.org/cif/Pilot\\_Program\\_for\\_Climate\\_Resilience](http://www.climateinvestmentfunds.org/cif/Pilot_Program_for_Climate_Resilience)
- Climate Policy Initiative. 2013. *Making Adaptation a Private Sector Business: Insights from the Pilot Program for Climate Resilience in Nepal*. San Giorgio Group Case Study. Prepared by Chiara Trabacchi and Martin Stadelmann. San Francisco.
- Cord, Danish Church Aid/Christian Aid (DCA/CA), Forum Syd, and Swedish International Development Cooperation Agency (Sida). 2010. *Cambodia and Climate Change: A Brief Review of Climate Change Responses in Cambodia*. Literature review by Robert W. Solar. Phnom Penh.
- Food and Agriculture Organization of the United Nations (FAO). 2011. *Managing Climate Change Risks for Food Security in Cambodia*. Bangkok.
- Government of Cambodia. 2010. *Pilot Program for Climate Resilience: Proposal for Phase 1*. Phnom Penh.
- . 2012. *Towards an Effective Monitoring and Evaluation Framework for Adaptation to Climate Change in Cambodia*. Phnom Penh.
- Government of Nepal. 2010. *Developing Nepal's Strategic Program for Climate Resilience: Prioritization Planning Process*. Kathmandu.
- . 2011. *Climate Change Policy, 2011*. Kathmandu.

Government of Tajikistan. 2005. *Report and Action Plan on Building National Capacity to Implement Commitments of the Republic of Tajikistan on Global Environmental Conventions*. Dushanbe.

———. 2011. *Strategic Program for Climate Resilience: Tajikistan*. Dushanbe.

Heng Chan Thoeun. 2015. Observed and Projected Changes in Temperature and Rainfall in Cambodia. *Weather and Climate Extremes* 7: 61–71.

International Institute for Environment and Development (IIED). 2013. *A Framework for Mainstreaming Climate Resilience into Development Planning*. Prepared by M. Pervin, S. Sultana, A. Phirum, I. F. Camara, V. M. Nzau, V. Phonnasane, P. Khounsny, N. Kaur, and S. Anderson. London.

Ministry of Environment (MOE), Cambodia. 2001. *National Action Plan on Climate Change*. Final draft. Phnom Penh.

———. 2002. *Cambodia's Initial Communication under the UNFCCC*. Phnom Penh.

———. 2006. *National Adaptation Program of Action to Climate Change*. Phnom Penh.

———. 2007. *Thematic Assessments and Action Plan for the Three Conventions: CBD, UNFCCC and UNCCD to Contribute to the Poverty Alleviation*. Phnom Penh.

———. 2011a. *Strategic Program for Climate Resilience: Cambodia*. Phnom Penh.

———. 2011b. *Understanding Public Perceptions of Climate Change in Cambodia*. Implemented by the BBC World Service Trust. Phnom Penh.

———. 2013a. *Concise Report on Suitability and Relevance of Currently Available Climate Resilience Decision Support Tools in Cambodia*. Phnom Penh.

———. 2013b. *Succinct Analytical Report on the Value of Multi-Model Downscaled Climate Scenarios for Cambodia in Terms of Direct Application for Policy and Plan Making*. Phnom Penh.

———. 2013c. *Synthesis Report on the Cambodia Hydro-Meteorological Information System*. Phnom Penh.

———. 2013d. *Synthesis Report on Vulnerability and Adaptation Assessment for the Key Sectors, Including Strategic and Operational Recommendations*. Phnom Penh.

Ministry of Home Affairs, Nepal. 2009. *National Strategy for Disaster Risk Management*, 2009. Kathmandu.

Ministry of Population and Environment, Nepal. 2015. *Pilot Program for Climate Resilience*. Accessed 23 February. <http://ppcr.moste.gov.np/>

Ministry of Science, Technology and Environment (MOSTE), Nepal. 2008. *Nepal Thematic Assessment Report: Climate Change*. Kathmandu.

———. 2010. *National Adaptation Program of Action (NAPA) to Climate Change*. Kathmandu.

———. 2015. *Nepal: Climate Change and Development Portal*. Accessed 23 February. <http://climatenepal.org.np/main/>

- . 2015a. *Indigenous and Local Climate Change Adaptation Practices in Nepal*. Kathmandu.
- . 2015b. *Mainstreaming Climate Change Risk in Development*. Midterm Progress Update. Kathmandu.
- . 2011. *Strategic Program for Climate Resilience: Nepal*. Kathmandu.
- Ministry of Water Resources and Meteorology (MOWRAM), Cambodia. 2010. *Report on the Status of Weather Observation in Cambodia*. Phnom Penh.
- Ministry of Women's Affairs, Cambodia. 2013. *Outline of Master Plan on Gender and Climate Change Adaptation*. Phnom Penh.
- National Planning Commission, Nepal. 2007. *Three Year Interim Plan, 2007–2010*. Kathmandu.
- . 2010. *Food Security Atlas of Nepal*. Kathmandu.
- Organisation for Economic Co-operation and Development (OECD). 2009. *Integrating Climate Change Adaptation into Development Cooperation: Policy Guidance*. Paris.
- Organization for Security and Co-operation in Europe (OSCE). 2010. *Climate Change Survey in Tajikistan 2010*. Dushanbe.
- Tajikistan Pilot Program for Climate Resilience. 2014. Accessed 11 November <http://www.ppcr.tj/>
- United Nations Department of Economic and Social Affairs (UN DESA), Population Division. 2015. World Urbanization Prospects, the 2014 revision. Accessed 6 February. <http://www.esa.un.org/undp/wup/Country-Profiles/>
- United Nations Development Programme (UNDP), International Union for Conservation of Nature (IUCN), Mekong River Commission (MRC), and Global Environment Facility (GEF). 2005. *Vulnerability Assessment of Climate Risks in Stung Treng Province, Cambodia. Mekong Wetlands Biodiversity Conservation and Sustainable Use Programme*. Vientiane.
- United Nations Development Programme–United Nations Environment Programme (UNDP–UNEP). 2011. *Mainstreaming Adaptation to Climate Change in Development Planning: A Guidance for Practitioners*. Nairobi.
- Water and Energy Commission Secretariat, Nepal. 2005. *National Water Plan*. Kathmandu.

## **Mainstreaming Climate Risk Management in Development**

*Progress and Lessons Learned from ADB Experience in the Pilot Program for Climate Resilience*

The Pilot Program for Climate Resilience (PPCR) is a funding window of the Climate Investment Funds, of which the Asian Development Bank (ADB) is a major partner in Asia and the Pacific, delivering investments through six country programs (Bangladesh, Cambodia, Nepal, Papua New Guinea, Tajikistan, and Tonga) and one regional program for the Pacific. This study looks back at the development of PPCR funding from an ADB perspective, documents the contributions of the PPCR to country readiness for adaptation planning and climate finance, and identifies some early lessons learned from Cambodia, Nepal, and Tajikistan.

### **About the Asian Development Bank**

ADB's vision is an Asia and Pacific region free of poverty. Its mission is to help its developing member countries reduce poverty and improve the quality of life of their people. Despite the region's many successes, it remains home to a large share of the world's poor. ADB is committed to reducing poverty through inclusive economic growth, environmentally sustainable growth, and regional integration.

Based in Manila, ADB is owned by 67 members, including 48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.



**ASIAN DEVELOPMENT BANK**

6 ADB Avenue, Mandaluyong City

1550 Metro Manila, Philippines

[www.adb.org](http://www.adb.org)