FINAL INCEPTION REPORT

TA-8179 CAM

MAINSTREAMING CLIMATE RESILIENCE INTO DEVELOPMENT PLANNING

CONSULTANCY PACKAGE 1

PREPARED FOR: MINISTRY OF ENVIRONMENT, ROYAL GOVERNMENT OF CAMBODIA AND ASIAN DEVELOPMENT BANK

PREPARED BY: ICEM – INTERNATIONAL CENTRE FOR ENVIRONMENTAL MANAGEMENT IN ASSOCIATION WITH FRASER-THOMAS PARTNERS

CLIMATE INVESTMENT FUNDS

ADB

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Prepared by	ICEM
Prepared for	ADB
Suggested citation	ICEM, 2015, Mainstreaming Climate Resilience into Development Planning in Cambodia (TA 8179-CAM) Package 1, Prepared for ADB - Asian Development Bank by ICEM – International Centre for Environmental Management, Hanoi, Vietnam

The TA-8179 CAM Mainstreaming Climate Resilience into Development Planning – Package 1 Inception Report includes four annexes which, because of their size, appear as separate volumes. This volume is highlighted below:

- TA-8179 CAM Mainstreaming Climate Resilience into Development Planning – Package 1 Inception Report Main Volume
- Annex 5: Further Institutional information on SPCR ministries
- Annex 8: Capacity Needs Assessment for SPCR ministries
- Annex 9: Knowledge management, communication and dissemination plan stakeholder engagement plan

Annex 10: Climate change projections for Cambodia

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ABBREVIATIONS

ADB	Asian Development Bank
AP	Adaptation Planning
AusAID	Australian Agency for International Development
AWG	Adaptation Working Group
CAM	Climate change adaptation and mitigation methodology (ICEM)
CBNA	Capacity Building Needs Assessment
CC	Climate Change
CCAP	Climate Change Action Plan (by sector)
CCCA	Cambodia Climate Change Alliance
CCCSP	Cambodia's Climate Change Strategic Plan
CCD	Climate Change Department
CCTT	Climate Change Technical Team
CCWG	Climate Change Working Group
CDC	Council for Development of Cambodia
CIF	Climate Investment Funds
CSO	Civil Society Organisation
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DANIDA	Danish International Development Agency
DMF	Design and Monitoring Framework
DRR	Disaster Risk Reduction
GCF	Green Climate Fund
GEF	Global Environment Facility
GIS	Geographic Information System
GMS	Greater Mekong Sub-region
ICEM	International Centre for Environmental Management
IPCC	Intergovernmental Panel on Climate Change
KMIS	Knowledge Management and Information System
M & E	Monitoring and Evaluation
MAFF	Ministry of Agriculture, Forestry and Fisheries
MCRDP	Mainstreaming Climate Resilience into Development Planning
MEF	Ministry of Economy and Finance
MOE	Ministry of Environment
MOEYS	Ministry of Education, Youth and Sports
MOI	Ministry of Interior
MOP	Ministry of Planning
MOWA	Ministry of Women's Affairs
MOWRAM	Ministry of Water Resources and Meteorology
MPWT	Ministry of Public Works and Transport
MRD	Ministry of Rural Development
NAP	National Adaptation Plan
NAPA	National Adaptation Program of Action
NCCC	National Climate Change Committee
NCDD	National Committee for sub-national Democratic Development

NCDM	National Committee for Disaster Management
NCGG	National Council on Green Growth
NCSD	National Council for Sustainable Development
NGO	Non-Government Organization
NSDP	National Strategic Development Plan
PPCR	Pilot Program for Climate Resilience
RGC	Royal Government of Cambodia
SAPA	Sector Adaptation Planning Approach
SCCSP	Sectoral Climate Change Strategic Plan
Sida	Swedish International Development Cooperation Agency
SPCR	Strategic Program for Climate Resilience
TA	Technical Assistance
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	United Nations - Reducing Emissions from Deforestation and Forest Degradation
USAID	United States Agency for International Development
VA	Vulnerability Assessment
VA&AP	Vulnerability Assessment and Adaptation Planning

EXECUTIVE SUMMARY

Introduction

1. The Asian Development Bank has contracted the consortium of ICEM (International Centre for Environmental Management) and Fraser-Thomas Partners to provide technical assistance to the Climate Change Department (CCD) within the Ministry of Environment (MOE) under the National Council on Sustainable Development (NCSD) in implementing the project titled "Mainstreaming Climate Resilience into Development Planning in Cambodia (TA 8179-CAM) Package 1". The TA supports NCSD and MOE to implement the Royal Government of Cambodia's (RGC) Strategic Program for Climate Resilience (SPCR). This report provides a comprehensive blueprint for successful implementation of the project until its target completion date in April 2019.

2. The expected impact of the TA is that Cambodia has increased resilience to climate variability and climate change, which will lead to improved livelihoods, especially for vulnerable groups such as women and children. The expected outcome of the TA is that there will be sustained institutional and technical capacity to integrate adaptation concerns into development planning. Package 1 of the TA has three Outputs each comprising a number of Activities.

3. Output 1 - SPCR coordination, technical support, and capacity to mainstream climate resilience into development planning strengthened. Output 1 focuses on strengthening coordination of the SPCR across the key target ministries, and building the capacity of national and provincial policy makers, technical staff and civil society organisations (CSOs) in climate resilience for development planning.

4. The key target ministries for the SPCR are those dealing with the agriculture, water resources, and urban and transport sectors: Ministry of Water Resources and Meteorology (MOWRAM), Ministry of Agriculture, Forests and Fisheries (MAFF), Ministry of Public Works and Transport (MWPT) and Ministry of Rural Development (MRD). The project will also focus on the other ministries and agencies represented in the SPCR Coordination Committee: Ministry of Economy and Finance (MEF), Ministry of Planning (MOP), Ministry of Women's Affairs (MOWA) and Ministry of Interior (MOI), and particularly the National Committee for Sub-national Democratic Development (NCDD) and the National Committee for Disaster Management (NCDM).

5. Output 2 - Detailed feasibility studies for selected NAPA projects conducted and development of NAP. Output 2 will result in feasibility studies for adaptation projects, at least two of which will be developed into funding proposals for global adaptation funds. Also under this Output, support will be provided to RGC to develop Cambodia's National Adaptation Plan (NAP) as part of the United Nation Framework Convention on Climate Change (UNFCCC) NAP process for identifying medium- and long-term adaptation needs and strategies.

6. Output 4 - Climate change adaptation knowledge products developed and disseminated. Output 4 will utilise the activities from Outputs 1 and 2 as well as other sources to develop knowledge products and disseminate information about project approaches and results.

7. The TA also consists of another Output that is being implemented by Plan International under Package 2 of the TA: Output 3 - Civil society support mechanism established and capacity of NGOs and CSOs to mainstream CCA and DRR into their operations strengthened. An additional package (Package 3) of activities on Gender and Climate Change, Monitoring and Evaluation and sub-national mainstreaming is under development as part of the SPCR program and will be implemented in parallel with Packages 1 and 2.

8. This summary has four sections describing (i) the institutional and topic-related context of the project, (ii) the project team's method and approach to the project, (iii) the detailed implementation plan for each project activity, and (iv) recommendations for the successful implementation of the project for consideration and endorsement by ADB, MOE and other government partners.

Project Context

Strategic Program for Climate Resilience

9. This Technical Assistance (TA 8179-CAM Package 1) is part of Component 4 of the Strategic Program for Climate Resilience (SPCR) in Cambodia under the broader Climate Investment Funds' (CIF's) Pilot Program for Climate Resilience (PPCR). This project will build on lessons learned during the first phase of the PPCR in Cambodia, which was implemented between 2010 and 2013.

10. In addition to the technical assistance provided under TA 8179, the SPCR consists of seven investment projects that will incorporate project-specific activities to enhance climate resilience. Total PPCR support to Cambodia has an indicative allocation of up 101 million (55 million in grant, 36 million in concessional credit, 10 million private sector projects). The SPCR investment projects have mobilized an additional 463.31 million, including 53 million from government, for a total portfolio of 564.31 million.

Climate change in Cambodia

11. The SPCR responds to the need for action to build the capacity of RGC and Cambodia more broadly to tackle threats associated with climate change. There have been a series of important studies to understand the impacts of past and future climate change on Cambodia. These studies have included regional downscaling and vulnerability assessments (VAs) and a number of national and provincial assessments in Cambodia which have drawn down on the regional projections and adjusted and interpreted the data against local historical patterns. All studies are consistent in showing Cambodia as a hotspot for climate change in the region.

12. The main lessons from these assessments are that 1) climate change modeling and projections are improving over time; 2) it is the trends and ranges in change that need to be considered for development planning – not only the specific projections; and 3) most of the studies to date are not particularly sensitive to end users such as the infrastructure and development agencies that need to accommodate climate change in the design and management of their investments. A related finding from past assessments of climate change impacts in Cambodia is that these assessments are not necessarily of immediate use to the site-specific requirements of a road construction team or a bridge builder. In order to properly inform project design and implementation, implementers require more focused, area-specific assessment. Hydrological modelling is particularly important for major developments so that engineers can see how projected climate changes play out in their location of interest.

13. This project will provide an opportunity to address these findings by working through the SPCR investment projects and new adaptation projects to identify specific needs for climate change information in infrastructure design and implementation. The project team is also proposing an expansion of the TA coverage to include the development of a national geographic information system (GIS)-based climate change decision support tool building on an earlier tool developed by MOWRAM with ADB support. This new activity would update the MOWRAM tool with the latest raw data for regional downscaling from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and become a central and lasting product of the project.

Institutional arrangements for tackling climate change in Cambodia

14. In addition to a sound understanding of the potential impacts of climate change, successful climate change mainstreaming involves action within and between a diverse range of governance, political, technical and cultural institutions. At the time of reporting, the RGC institutional structures for addressing climate change are under reorganization. The two main bodies to coordinate climate change strategic directions and activities (the National Committee for Climate Change and the National Council on Green Growth) are in the process of being replaced by the NCSD.

15. The creation of the NCSD will have an important impact on the institutional set up of MOE and the institutional arrangements for this TA. Most significantly, the project team's key partners in the CCD are now working directly under the NCSD Secretariat.

16. At a broader, all-of-government level, Cambodia has recently adopted a national Cambodia Climate Change Strategic Plan (CCCSP). At a sector level, a number of line ministries and agencies, including MAFF, MOWRAM, MRD, MPWT, NCDM and NCDD have prepared sector climate change action plans (CCAPs) and established sector Technical Working Groups on Climate Change (TWG-CC) to support their implementation. The CCCSP is an important, whole-of-government framework for tackling climate change that is designed to be a coherent and integrated strategic framework consistent with other policies and plans such as the NAPA, the Strategic National Action Plan (SNAP) for disaster risk reduction (DRR), Cambodia's National Policy on Green Growth and sector development plans.

17. A key element of TA team's approach will be to work with MOE, NCSD and the sector agencies to strengthen efforts to implement the CCCSP. A number of the strategic objectives of the CCCSP closely align with the intent and activities of TA 8179 Package 1. Package 1 activities will contribute to the CCCSP's medium term plan of action from 2014-2018, particularly in relation to activities to develop capacity; mainstream climate change at the sector level based on the Sectoral Climate Change Strategic Plans (SCCSPs); identify opportunities to finance further adaptation activities; and operationalize a monitoring and evaluation (M&E) framework for climate change adaptation and resilience.

Method and approach

Focus on green infrastructure

18. The SPCR program identifies three key sectors: 1) climate-resilient water resources; 2) climate-resilient agriculture; and 3) climate proofing of infrastructure - particularly transport (roads) and urban infrastructure. The overall thrust of the project will be towards mainstreaming climate resilience in the planning, design and management of the infrastructure in these sectors. Other important elements of development such as cropping patterns, water conservation measures and watershed management will be addressed as part of an integrated and multipurpose approach to adaptation.

19. A related theme of this project is the need to recognize natural systems as an essential foundation for development, and to rehabilitate and promote nature as a key strategy for building sustainability and resilience in Cambodia. Those two imperatives – resilience and sustainability – are inextricably linked. The solutions to one satisfy the needs of the other.

20. This project will look for opportunities to promote green infrastructure as a key ingredient to nature-based solutions to climate change. Green infrastructure is an essential adjunct to and in some situations a replacement for conventional infrastructure. It refers to a strategically planned and managed network of green spaces and other environmental features and technologies necessary for the sustainability of any infrastructure system and area. It uses vegetation, soils, natural processes and innovative technologies to manage water, land, temperature and air quality to create healthier and resilient environments.

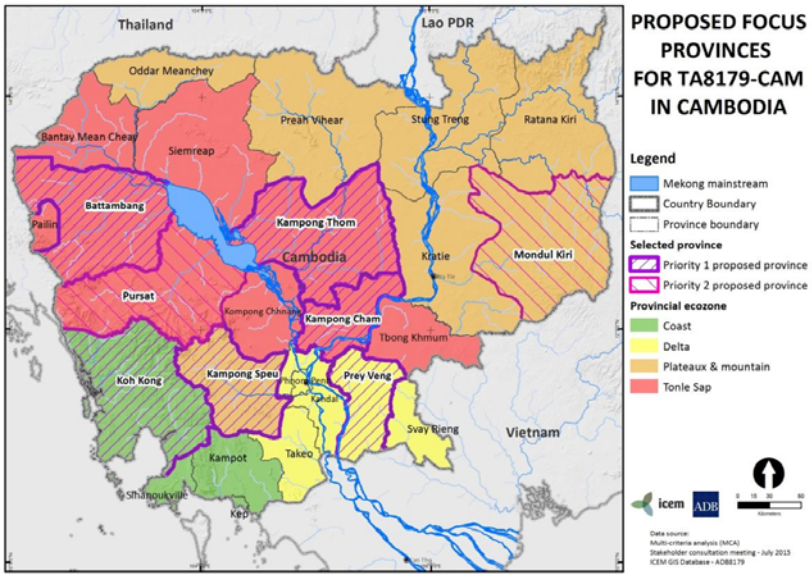
Geographic focus

21. The project will involve the key target ministries and their partners in field based demonstration, training and learning. This field work will include VAs and adaptation project development, review and learning from the SPCR project experience, and exploring the innovations and guidance needed for climate change mainstreaming. To achieve this demonstration and learning within project resources, the team will work with a clearly explained and justified geographic focus.

22. During the inception phase, a transparent and consultative process was followed to identify the most suitable provinces to concentrate the project field activities. The process involved a series of

consultations with project partners and was designed to reach consensus among ministries informed by a strong science base. A multi-criteria analysis was conducted based on factors including poverty, terrestrial biodiversity, eco-zone and presence of existing SPCR activity. Six provinces have been identified as the main focus for the project's field work, namely Kampong Thom, Kampong Cham, Koh Kong, Kampong Speu, Battambang and Prey Veng Veng; these are shown in Figure ES-1 below.

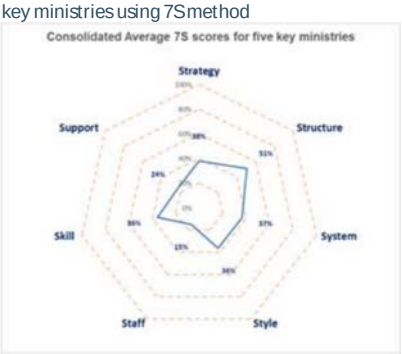
Figure ES-1 Six provinces for field activities



Capacity building method

23. Capacity building will be the principle approach for mainstreaming climate resilience in the target ministries. To understand existing capacity and capacity needs for mainstreaming climate resilience, the project team has used a 7S system of analysis which considers the following key elements of institutional capacity: Strategies, Structure, Systems, Style, Staff, Skills and Support.

Figure ES-2 Average of capacity needs assessment in key ministries using 7S method



24. The 7S analysis serves several purposes. It allows strengths and weaknesses in the various elements of institutional capacity to be identified, and implies specific actions that could be built into the ministries' existing SCCSPs to further strengthen resilience. The analysis is also a benchmark measure that can be used to monitor progress with capacity building over the life of the project and suggest where periodic adjustment should be made. Finally, the methodology applied by the project team builds on the monitoring and reporting requirements of the CIF, meaning that it will directly contribute to RGC's regular reporting requirements for CIF.

25. As part of the inception phase, the project team has used the 7S to conduct a comprehensive Capacity Building Needs Assessment (CBNA). The CBNA report, which is included as an Annex 8 to this report, provides detail of how the capacity of key ministries was assessed and identifies potential actions to form the basis of a capacity building plan to be implemented with the support of the project team. Figure ES-2 presents the average baseline performance of the five key target ministries following the consolidation of the needs assessments conducted during the inception phase of the project. Technical capacity in staff and the need for tools and methods for conducting climate change assessments and adaptation planning (AP) are shown to be high priorities for support in all ministries.

Engaging with SPCR projects and Integrated Assessments

26. The 7 SPCR investment projects and the adaptation project feasibility studies and proposals will provide a unique opportunity for the project team to learn from and undertake capacity building in the field with climate change vulnerability assessments and adaptation planning (VA&AP).

27. The SPCR projects are at different stages of implementation, and have developed their own VA&AP methods and processes. The TA project team will work with each SPCR project, and use them as a foundation for training and field exercises involving the host ministry and the wider SPCR family. The adaptation project feasibility studies and proposals (NAPA and NAP projects) to be prepared with the partner ministries will provide a supplementary opportunity to demonstrate how VAs and adaptation measures can be performed and applied. The work with the SPCR projects and supplementary VA&AP will lead to the identification of needed innovations in policies, procedures and safeguards within each line agency.

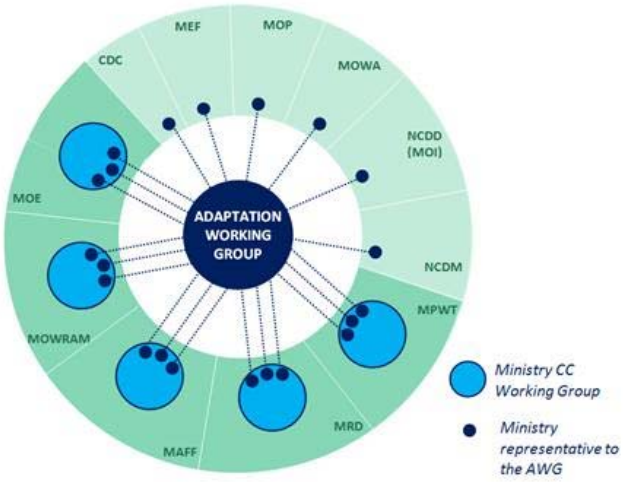
28. In these demonstration activities, the project team will draw on ICEM's climate change adaptation and mitigation methodology (CAM). CAM is a flexible process and set of tools that can be applied to sectors, areas and communities down to any level of development activity. It is applicable to varying assessment scales from localized projects to settlements up to city size, and to larger spatial planning units such as watersheds and provinces. For the demonstration activities, this approach will be integrated with existing methods in use in Cambodia and shaped and adjusted by national teams and stakeholders to suit local conditions. Six integrated assessment and planning exercises relating to existing and proposed infrastructure systems will serve as the basis for the adaptation project feasibility studies and proposals.

29. The demonstration activities and the lessons learned from the 7 SPCR projects will guide reform to sector guidelines and design standards and other changes to mainstream climate resilience into sector planning.

Establishing an Adaptation Working Group (AWG)

30. In order to develop an effective partnership and coordination with participating agencies from each sector, the MOE project team will establish an SPCR Adaptation Working Group (AWG) drawn from the existing climate change working groups (CCWGs) in each ministry. Three technical officers from each of the key ministries will form this core group of technical specialists, with one representative each from the other SPCR coordination ministries – MEF, MEP, MOI and NCDM. The make-up of the AWG is shown in Figure ES-3 Structure of the SPCR Adaptation Working Group.

Figure ES-3 Structure of the SPCR Adaptation Working Group



Knowledge and communications

31. The activities from Outputs 1 and 2, including working with and learning from adaptation practices in the SPCR investment projects and the demonstration of VA&AP in formulating project feasibility studies, will be used to develop knowledge products and systems to inform stakeholders and the broader public about the project's activities and the value of efforts to enhance climate change resilience. The project team will distil learning and experience from the case analyses of SPCR investment projects into a resource kit on indigenous approaches to climate resilience. A detailed knowledge management, communications and stakeholder engagement strategy is included as Annex 9 to this report.

32. As part of its work to strengthen capacity and conduct outreach with key stakeholders, the project team will engage with universities to build capacity for teaching about climate change. The approach to integrating climate change into curriculum will build on knowledge products and lessons learned from the project as well as curriculum materials developed by other climate change programs in Cambodia.

Implementation

Organisation

33. Package 1 of the TA will be implemented by a team of 14 part- and full-time experts, including five part-time international experts and nine national experts. Mobilization of the team is complete. This team supports the SPCR Program Office and the National SPCR Coordinator located within the NCSD's CCD. The project is viewed as an integral part of the CCD mandate and program.

Inception Phase

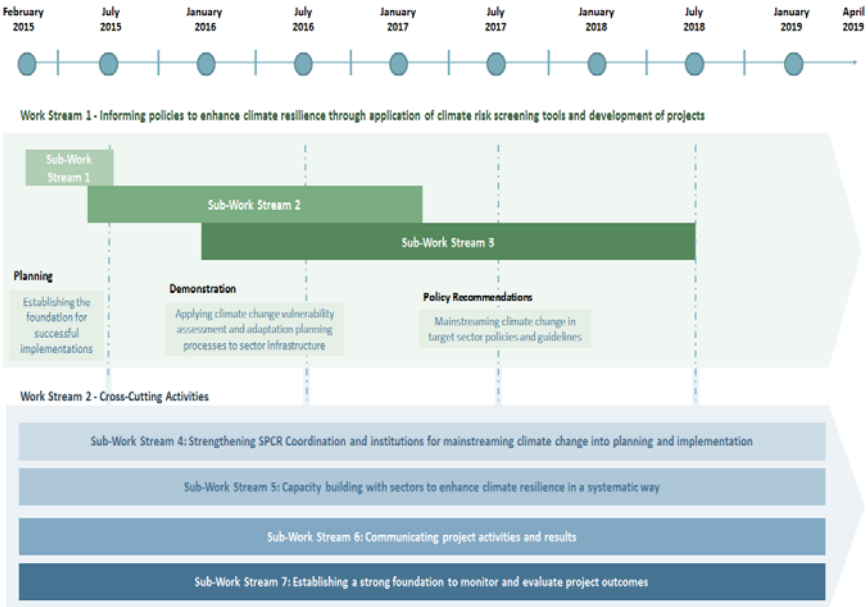
34. Since being mobilized between February and May 2015 the project team has conducted an extensive series of consultations with project stakeholders and consolidated the baseline assessment of

capacity and capacity needs in key target ministries. The project team has also developed a comprehensive plan for the successful implementation of the project.

Implementation Plan

35. In keeping with the key challenges and guiding principles for implementation identified by the project team, the implementation methodology has required adjustments in the allocation and sequencing of the package outputs and activities as identified in the TA 8179 Design and Monitoring Framework (DMF) (Annex 1). For the purpose of implementation the project team has grouped the DMF activities into streams of related and reinforcing action that encourage gradual reform and enhance resilience in a systematic way (Figure ES-4).

Figure ES-4 Summary of TA 8179 Package 1 implementation plan



36. The first work stream, Informing policies to enhance climate resilience through application of climate risk screening tools and development of projects, will be implemented over approximately two and a half years and form the foundation of the package's mainstreaming activities. This work stream will be implemented in three sub-work streams.

37. Establishing the foundation for successful implementation – This sub-work stream comprises the inception phase of the project that culminates in the Inception Workshop and final Inception Report

38. Applying climate change VA&AP processes to sector infrastructure and development activities – During this sub-work stream the project team will demonstrate the application of proven climate change VA&AP approaches to key infrastructure and other socio-economic and natural resource assets at provincial and local levels. These demonstration activities will be integrated with documenting lessons learned from the SPCR investment projects, capacity building and project feasibility activities for sector counterparts in target ministries to encourage applied and holistic learning and enhanced capability to transform on-the-ground assessment into successful initiatives to tackle climate change.

39. **Mainstreaming climate change in target sector policies and guidelines** – During the third sub-work stream, the experience garnered from the demonstration activities will be used to inform policy reform and climate change mainstreaming at the sector level. As part of this process, the project feasibility studies developed from the demonstration activities will form the basis of project concepts to support further action to mainstream climate change resilience in development investment decisions.

40. The second work stream, **Cross-Cutting Activities**, will be implemented over the full life of the project and focus on communicating the project's activities and monitoring project implementation. This work stream will involve four sub-work streams.

41. **Strengthening SPCR Coordination and institutions for mainstreaming climate change into planning and implementation** – This sub-work stream aims to facilitate improved coordination of the different SPCR elements through the organization of regular meetings of the SPCR Coordination Committee, fields visits by the Committee to familiarize themselves with the SPCR activities, and support for climate change activities at a national level linked to the SPCR.

42. **Capacity building with sectors to enhance climate resilience in a systematic way** – Capacity building underpins each Package 1 activity. During the inception phase, the project team has built earlier capacity needs assessments by focusing on the institutional capacity of target ministries for incorporating climate change into development investment decisions. This assessment will be updated periodically to better inform training and capacity building activities with the AWG and the implementation of demonstration and mainstreaming reforms. Also, the periodic assessments will be used for monitoring mainstreaming progress in these ministries.

43. **Communicating project activities and results** – With these activities, the project team will periodically draw together lessons learned from the demonstration activities in the first work stream to develop knowledge and communications products and systems to inform stakeholders and the broader public about the project's activities and the value of efforts to enhance climate change resilience.

44. **Establishing a strong foundation to monitor and evaluate project outcomes** – This work will draw together activities across outputs for the development of tools, methods, systems and resources to monitor and evaluate the implementation of Package 1 activities. Building climate resilience monitoring processes into the work of the departments of each ministry will also be used as part of the mainstreaming process.

45. The detailed allocation and sequencing of DMF activities according to the work streams and activity phases is provided in Table ES-1 below. While the reconceptualization of the DMF activities described here does not result in any significant change to the substance of the project activities, it implies changes to the sequencing of certain activities that will have an impact on the delivery schedule for the various technical reports to be produced by the project team. It also implies some adjustments to the way that the project team will organize itself.

Table ES-1 Allocation of DMF activities by implementation plan work stream

Work Stream	Relevant DMF Activities
Informing policies to enhance climate resilience through application of climate risk screening tools and development of projects	
1. Establishing the foundation for successful implementation	1.1
2. Applying climate change vulnerability assessment and adaptation planning processes to sector infrastructure	1.8, 2.1, 1.6, 2.2, 1.9
3. Mainstreaming climate change in target sector policies and guidelines	2.4, 2.6, 1.10, 1.5, 2.5, 1.3, 2.7, 1.11
Cross Cutting Activities	
4. Strengthening SPCR Coordination and institutions for mainstreaming climate change into planning and implementation	1.2
5. Capacity building with sectors to enhance climate resilience in a systematic way	All

Work Stream	Relevant DMF Activities
6. Communicating project activities and results	4.4, 4.3, 4.5, 4.6, 4.7
7. Establishing a strong foundation to monitor and evaluate project outcomes	1.4, 4.1, 1.7, 2.3, 4.2

Recommendations

46. As part of the Inception Phase the TA team reviewed the project DMF, sequencing of project activities, project duration, travel expenses, operational support and TORs of each project team member. Based on this review a number of recommendations have been developed for the further consideration of MOE and ADB. Recommendations are divided into the categories Implementation (I) and Contract and Budget (C) and are discussed in detail in Section 9 of the report.

47. An overview of the recommendations is provided in Table ES-2 below:

Table ES-2 Inception report recommendations

Recommendation No.	Description	Relevant Report Section
	Implementation	
I.1	Reference to the term NAPA projects in the DMF interpreted to include wider adaptation projects.	Section 8.1.1
I.2	An activity is added under Output 1 to develop an all of government GIS-based climate change decision support tool based on the latest raw data for regional downscaling and additional TA funds are made available to the Package 1 consultant to undertake the activity.	Section 8.1.2
I.3	Additional TA funds are made available to the Package 1 consultant to strengthen the project team's capacity to undertake Socio-economic analysis with the addition of an international and a national Socio-economist position.	Section 8.1.3
I.4	The allocation and sequencing of project activities detailed in Table 6-1 is accepted as the basis for the project work plan for its remaining duration.	Section 8.2.1
I.5	The delivery dates of certain technical reports are adjusted as per Table 8 1.	Section 8.2.2
I.6	The endorsement process for contracted technical reports outlined in this report is agreed.	Section 8.2.3
I.7	The approval process for contracted technical reports outlined in this report is agreed.	Section 8.2.3
I.8	If Recommendation I.2 is agreed, the terms of reference for an additional consultant will be prepared	Section 8.3.1
I.9	If Recommendation I.3 is agreed, terms of reference for an international socio-economist and a national socio-economist will be prepared.	Section 8.3.1
I.10	The adjustments to project team titles and terms of reference identified in this report are agreed.	Section 8.3.2
I.11	The project team and CCCA follow the terms of the formal agreement for collaboration provided in this report.	Section 8.4.1
I.12	The Package 1 project team establish clear agreements for collaboration and cooperation with Package 2 and Package 3 consultant teams.	Section 8.4.2
	Contract and Budget	
C.1	If Recommendations I.2, I.3, I.8 and I.9 for the development of the GIS-based climate change decision support tool and socio-economist inputs are agreed, funds from the TA contingency budget will be allocated to the consultant budget line for this additional activity.	Section 8.5

Recommendation No.	Description	Relevant Report Section
C.2	If Recommendation I.4 is agreed, a variation will be issued to the Package 1 consultant contract to reflect the revised delivery schedule for contracted technical report developed in this report.	Section 8.5

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1 INTRODUCTION

1.1 PURPOSE OF REPORT

1. This Inception Report for the Technical Assistance on Mainstreaming Climate Resilience into Development Planning in Cambodia (TA 8179-CAM) Package 1 was prepared by ICEM (International Centre for Environmental Management) for the MOE, the Asian Development Bank (ADB) and participating line ministries.

2. TA 8179 Package 1 is a 4.5 year project housed within the Climate Change Department (CCD) of MOE and administered by the ADB. The Technical Assistance is executed by MOE in close collaboration with line-ministries, agencies, provincial departments concerned, private sector, non-government organisations (NGO)s, CSOs and development partners with support from ICEM as part of the Strategic Program for Climate Resilience (SPCR) in Cambodia. It aims to strengthen institutional and technical capacity to integrate adaptation and disaster risk reduction (DRR) concerns into development planning.

3. This Inception Report has three key purposes:

   (i) To inform all partners about the team's proposed approach for successfully implementing the project reflecting extensive consultations during the inception phase;
   (ii) To identify potential challenges for implementation and recommend solutions to overcome these challenges; and
   (iii) To act as a record of TA events and activities during the project inception phase from mid-February to June 2015.

4. In summary the report aims to provide a comprehensive blueprint for successful implementation of the project until its target completion date in April 2019.

1.2 LAYOUT OF REPORT

5. The report is divided into sections following the logical flow in the way the project will be implemented:

   (i) The Project – an overview of what the project addresses
   (ii) Cambodia and climate change – the context of Cambodia's previous experiences and data sources for addressing climate change vulnerability and adaptation
   (iii) Institutional context – describing the institutional set up and polices and strategies for addressing climate change within which the project will be working, including the new institutional structure within the Ministry of Environment (MOE)
   (iv) The approach – the key strategies guiding project implementation including green infrastructure, geographic focus, engagement with the other SPCR projects, integrated and inclusive infrastructure assessments, accessing climate funds, capacity building and knowledge management and communications
   (v) The methods used by this project including policy and procedural recommendations, use of climate data, vulnerability and adaptation assessments, capacity building and knowledge management
   (vi) The implementation process including suggested adjustments to phasing and management of the work and the products, and description of M & E indicator methods and data.
   (vii) An Indicative Work Plan for the next six months
   (viii) Recommendations for optimizing effective implementation, including suggested adjustment to the design and monitoring framework (DMF), project management protocols and collaboration

6. The report contains several Annexes produced as stand-alone documents including Annex 5 – Further Institutional information on key SPCR ministries, Annex 8 - Capacity Needs Assessment for key SPCR ministries, Annex 9 - Knowledge Management and Stakeholder Engagement Plan, and Annex 10 Climate change projections for Cambodia.

2 THE PROJECT

2.1 OUTCOME AND OBJECTIVES

7. The expected impact of the TA is that Cambodia has increased resilience to climate variability and climate change, which will lead to improved livelihoods, especially for vulnerable groups such as women and children. The expected outcome of the TA is that there will be sustained institutional and technical capacity to integrate adaptation concerns into development planning. Specifically, by the end of the TA it is expected that:

   (i) Risk screening tools will be routinely applied for projects in irrigation, flood prevention, agriculture, biodiversity, roads, water supply and sanitation, and urban development; and
   (ii) Vulnerability assessments (VAs) incorporating climate information will be performed for projects determined to be at risk in key sectors.

8. Package 1 of the overall TA – 8179-CAM, which is the focus of this report, has three outputs (illustrated in Figure 2-1 below). Each output comprises a number of activities, described below and discussed in detail in Annex 1).

Output 1 - SPCR coordination, technical support, and capacity to mainstream climate resilience into development planning strengthened.

9. Output 1 includes eleven activities and focuses on building the capacity of national and provincial policy makers, technical staff and civil society organisations (CSOs) in climate resilience for development planning. It will accomplish this through directed training and workshops, as well as on-the-job training and providing coordination and technical support for SPCR infrastructure investment projects. It will also include updating planning guidelines and technical design standards integrating climate resilience and adaptation considerations.

Output 2 - Detailed feasibility studies for selected NAPA projects[1] conducted and development of NAP.

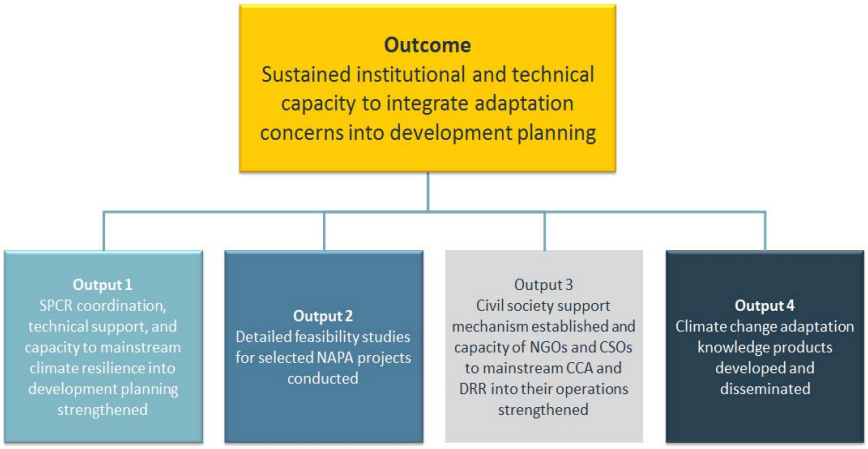
10. Output 2 will result in at least 6 feasibility studies of high priority adaptation projects with at least 2 of these to directly address vulnerable groups such as women and children, as well as unfunded SPCR priorities. This output will also require at least 2 of the feasibility studies to be developed into funding proposals to be submitted to selected global adaptation funds by the relevant government agency. An important addition since Package 1 was first issued for tender is the inclusion of activities to develop Cambodia's National Adaptation Plan (NAP) as part of the UNFCCC NAP process for identifying medium- and long-term adaptation needs and strategies.

Output 4[2] - Climate change adaptation knowledge products developed and disseminated.

11. Output 4 will utilise the activities from Outputs 1 and 2 as well as other sources to develop knowledge products and disseminate information about project approaches and results. Approaches will build on and reinforce MOE and key Ministry communication mechanisms for outreach to stakeholders. It will also develop systems of compiling, storing and disseminating knowledge products. It will develop case studies and knowledge products that show-case climate resilience practices that are gender-responsive and inclusive of indigenous and traditional knowledge. This output will support initiatives to update secondary and tertiary curriculum in relation to climate resilience that creates synergies with other climate change programs and builds on knowledge generated by the project.

[1] Through the inception phase consultations it was agreed that "NAPA" should be replaced by "adaptation" given that national and sector climate change strategies and action plans have been developed since the NAPA was prepared some ten years ago.
[2] Output 3 is being implemented by Plan International and focuses on CBA capacity building and a small grant program.

Figure 2-1: TA 8179 Target outcomes and outputs

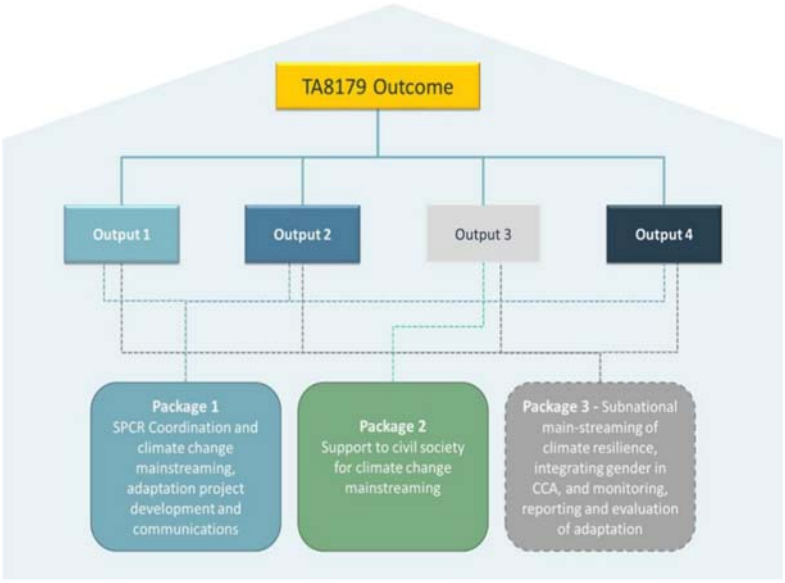


12. The TA includes another Output that is being implemented by Plan International under Package 2 of the TA: Output 3 - Civil society support mechanism established and capacity of NGOs and CSOs to mainstream CCA and DRR into their operations strengthened.

13. An additional package (Package 3) of activities on Sub-national mainstreaming, Gender and Climate Change and Monitoring and Evaluation is under development and will be implemented in parallel with Packages 1 and 2. Close operational and technical coordination and collaboration will be needed between the teams for packages 1, 2 and 3.

14. An overview of the relationship between these three packages of activity is provided in Figure 2-2.

Figure 2-2: Package 1 linkages to other TA 8179 packages, outcome and outputs



15. Thus the three packages include:

    a) Package 1 which focuses on SPCR coordination and mainstreaming climate resilience into development planning in the five SPCR ministries, development of adaptation projects as NAPA/NAP follow-up and development of knowledge products and communications, including university curriculum development.

    b) Package 2 consists of support to civil society and NGOs. It aims to help create a national framework for engaging CSOs, development partners and the public in a participatory process for responding to climate change to support Sustainable Development. Its goal is to build safe and resilient communities in which women, men, boys and girls are active participants in managing the risk of a changing climate. Its specific objective is strengthen the capacity of CSOs and NGOs (particularly in the most climate vulnerable areas of Cambodia) to implement community-based climate change adaptation (CCA) and DRR activities, and to mainstream CCA and DRR into their operations. The project will have two main results in training NGOs and CBOs in climate change impacts and vulnerabilities, policies and adaptation options, participatory CBA tools, as well as project development and project cycle management, and the implementation of an inclusive small grants CBA scheme. It will also develop and disseminate knowledge products on community-based CCA and DRR.

    c) Package 3 is to consist of mainstreaming climate resilience at sub-national levels (MOI/NCDD); integrating gender in CCA (MOWA), and monitoring, reporting and evaluation of climate change investments (MOP/NIS). The project is expected to begin in Quarter 1, 2016.

16. Areas for collaboration among the three TA packages include:

    a) VAs conducted for projects at risk. Using both top-down and bottom-up approaches in conducting VAs, collaboration with civil society and NGOs (Package 2) and sub-national governments (Package 3) is necessary.

    b) Mainstreaming gender in CCA projects. Collaboration with Package 3 to ensure that gender concerns are fully integrated in feasibility studies

    c) Monitoring and evaluation. Package 1 focuses on M&E of the TA DMF indicators, and assists in i) developing and managing a comprehensive database to monitor indicators and results of the seven SPCR projects and ii) identifying performance targets and indicators, including gender disaggregated indicators for the seven SPCR investments, in collaboration with the respective SPCR project teams and Package 3.

17. The MOE has overall facilitation and coordination functions for climate change across government, with responsibility for implementation lying within the CCD. The role of the ICEM consultant team is to support MOE in implementing Package 1 and to help build the capacity and authority of CCD. Whilst there are some anomalies in the institutional reporting lines for this project, it is clear that the SPCR TA is an integral part of the CCD and its program of work. Establishing arrangements for day-to-day collaboration with the "sister" initiative within CCD, the Cambodia Climate Change Alliance (CCCA), is of special importance.

18. The SPCR program identifies three key "sectors" of focus:

    - water resources
    - agriculture
    - infrastructure, with a focus on transport (roads) and urban infrastructure.

19. With the Ministry of Environment as project host agency, four key ministries are identified as the main partners for mainstreaming activities:

    - Ministry of Water Resources and Meteorology (MOWRAM)
    - Ministry of Agriculture, Forests and Fisheries (MAFF)
    - Ministry of Public Works and Transport (MWPT)
    - Ministry of Rural Development (MRD)

20. Other implementing agencies of the TA include Ministry of Economy and Finance (MEF), Ministry of Planning (MOP), Ministry of Interior (MOI), especially the National Committee for sub-national Democratic Development (NCDD) and National Committee for Disaster Management (NCDM). The TA will work under the guidance of the new National Council for Sustainable Development (NCSD), which has incorporated the earlier National Climate Change Committee (NCCC).
21. The main focus for building of climate resilience in each of those sectors and agencies is on inclusive infrastructure. Infrastructure is considered in its widest sense including the hard structures, bioengineering and ecosystem-based adaptation, but also soft interventions, i.e. management and other forms of development such as agricultural cropping patterns and practices, or water conservation and watershed management measures. These will be considered where appropriate or required by the key ministries. The overall direction of the TA is towards mainstreaming climate resilience and DRR in planning and development design.
22. This project focuses on support to national ministries and their departments and how their development plans and projects play out in the field with climate change. The project is not focused on community-based adaptation, although this will be important to the national sector agencies in pursuing their mandates. Vulnerability assessments and adaptation planning (VA&AP) conducted as part of the agencies' work at the national level will engage with local government and communities and will require methods for doing so. This project is concerned with building capacity in national agencies and, through them, to sub-national agencies and other stakeholders.
23. Capacity building is not just about training and developing the skills of the technical staff. It should address a much wider range of challenges and opportunities for climate proofing in development planning. Challenges may relate to institutional or policy barriers, a lack of economic and financial justifications for adaptation measures, absence of mechanisms and incentives to motivate staff to take adaptation initiatives, and a lack of information and tools for carrying out vulnerability and adaptation assessments. Training is an important strategy for capacity building. So too is policy and structural innovations, introduction of new tools, procedures and standards, and the creation of budget and economic incentives. All those forms of capacity building are part of this TA.
24. There are two key capacity building opportunities within the SPCR portfolio of work, and both will provide a foundation for learning, case studies and innovation. These include the seven SPCR projects, which are at different stages of implementation, using different methods of climate change VA&AP. The TA would work with these projects, and use them as examples for trainings and field exercises involving the host ministry and the other SPCR line agencies.
25. The other opportunity is provided through the need to prepare adaptation project feasibility studies and proposals (i.e. the NAPA and NAP projects). The development of these proposals will be undertaken with the host ministries, and provide the opportunity for worked examples of VA&AP with exploration of all the supporting policy and procedural frameworks required at national level.

2.2 BACKGROUND TO PPCR IN CAMBODIA

26. The Climate Investment Funds' (CIFs) Pilot Program for Climate Resilience (PPCR) provided resources to develop a global SPCR. The SPCR for Cambodia identifies large-scale investment opportunities as well as capacity strengthening that will bolster the country's resilience. This Technical Assistance (TA 8179-CAM Package 1) is part of the SPCR in Cambodia. The TA builds on lessons learned during the first phase of the PPCR in Cambodia, which was implemented between 2010 and 2013.

2.2.1 PPCR Phase 1

27. In Phase 1, the PPCR supported establishment of the cross sector SPCR coordination team and a PPCR technical backstopping unit (based at MOE). It examined institutional readiness to mainstream climate concerns at national and sub-national levels and identified opportunities for effective involvement of civil society and the private sector, and for integrating gender consideration in

adaptation planning. It conducted VAs in selected provinces as a basis for effective adaptation planning.

28. The main products and achievement of PPCR Phase 1 are summarized in Box 2.1. Phase 2 will maintain and build on those achievements as appropriate.

Box 2.1: Major products and achievements under the PPCR Phase 1

- Guideline on Mainstreaming Climate Resilience and Disaster Risk Reduction into National Investment Planning (MEF)
- Guideline on Mainstreaming Climate Resilience and Disaster Risk Reduction into National Development Planning (Ministry of Planning)
- Discussion paper on Climate Change Implications for National Planning (Ministry of Planning)
- Climate Screening Toolkit (Ministry of Planning)
- SPCR Strengthening CSO Engagement in Mainstreaming Climate Resilience in SPCR
- Outline of Master Plan on Gender and Climate Change Adaptation (Ministry of Women's Affairs)
- Private Sector Scoping Study: Engaging Private Sector in Climate Change Adaptation Investments
- Synthesis Report on the Cambodia Hydro-Meteorological Information System (HMIS): Focus on Disaster Risk Management (DRM) and Climate Change Adaptation
- 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 Including Strategic and Operational Recommendations
- 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;
- Concept note for preparation of M&E Framework for PPCR Phase II, in terms of institutional requirements, terms of reference and technical guidance; and
- Rapid End-User Assessment of the PPCR Website

2.3 THE STRATEGIC PROGRAM FOR CLIMATE RESILIENCE

2.3.1 SPCR investment projects

29. Recognizing Cambodia's high vulnerability to impacts of climate change due to its economic dependence on climate-sensitive sectors and the low adaptive capacity of populations and ecosystems, the PPCR subcommittee endorsed Cambodia's SPCR in June 2011. The allocations of grant and credit to PPCR along with additional sources of funds for SPCR investment projects are presented in Table 2-1. The total PPCR support to Cambodia has an indicative allocation of 101 million (55 million in grant, 36 million in concessional credit, and 10 million in private sector projects). SPCR investment projects have mobilized an additional 463.31 million, including 53 million from government, for a total portfolio of 564.31 million.

30. The grant component of PPCR is intended for soft interventions such policy and advisory support and capacity strengthening, while the concessional credit is mainly intended to enhance resilience of infrastructure.

31. In a revision of the SPCR in December 2013[3], it was proposed that one of the climate resilient water resources projects (Climate risk management and rehabilitation of irrigation schemes for Kampong Thom, Banteay Meanchey and Siem Reap) be excluded from the SPCR, and be replaced by an additional climate proofing of infrastructure – Project 4, Climate resilience of rural infrastructure in Kampong Cham Province as part of the Rural Roads Improvement Project (RRIP II) under the MRD.

[3] Royal Government of Cambodia, Pilot Program for Climate Resilience, Revised Strategic Program for Climate Resilience (SPCR) for Cambodia, December 2013.

Five out of eight SPCR projects have been approved by the PPCR Subcommittee and the ADB Board. More detail on the funding and implementation arrangements of the approved SPCR projects is presented in Table 2-1, while their objectives and key activities are outlined in Annex 2.

32. Two Cambodian private sector investment projects are being developed by ADB for funding through the CIF "PPCR competitive set aside" fund. These are *Cambodia: Integrated Climate Resilient Rice Value Chain Community project* and *Rainwater Harvesting and Drip Irrigation for High-Value Crop Production in Cambodia*. The TA 8179 team would draw upon the private sector project experience in a similar way to other SPCR investment projects, and involve them in the project activities as appropriate. These are described in Annex 2.

Table 2-1 Funding and implementation arrangements of SPCR investment projects

No	Name of SPCR Project	Ministry	Location	Financing sources ($ million)					
				PPCR					
				Grant	Credit	ADB	Gov't	Other co-financing	Total
Component I: Climate Resilient Water Resources									
I-1(W)	Enhancement of flood and drought management in Pursat province (as part of the Greater Mekong Sub-region (GMS) Flood and Drought Management Project)	MOWRAM	Pursat	6.0	4.0	35.0	3.0		48.0
Component II: Climate Resilient Agriculture									
II-1(A)	Promoting climate resilient agriculture in Koh Kong and Mondulkiri provinces (as part of the GMS Biodiversity Conservation Corridors Project)	MAFF & MOE	Koh Kong and Mondulkiri	8.0		19.0	1.4	0.5	28.9
II-2(A)	Climate proofing of agricultural infrastructure and business-focused adaptation (as part of Climate Resilient Rice Commercialization Project)	MEF & MAFF	Banteay Meanchey, Kampong Cham, Kampong Thom, Siem Reap, Prey Veng, Battambang	5.0	5.0	55.0	8.3	14.6	87.9
Component III: Climate Proofing of Infrastructure									
III-1(I)	Climate Proofing of Roads in Prey Veng, SvayRieng, Kampong Chhnang and Kampong Speu	MPWT	Prey Veng, SvayRieng, Kampong Chhnang and Kampong Speu	7.0	10.0	52.0	9.8		78.8
III-2(I)	Climate Proofing of Infrastructure in the Southern Economic Corridor (SEC) towns	MPWT	Battamba ng, Bovet, Neak Loeung and Popet	5.0	5.0	37.0	6.9	1.5	55.4
III-3(I)	Flood resilient infrastructure development in Pursat and Kampong	MPWT	Pursat and Kampong Chhnang	5.0	5.0	37.0	5.4	0.2	52.6
III-4(I)	Climate proofing of rural roads	MRD	Kampong Cham,	9.0	7.0	54.0	17. 8	104.9	192.7

No	Name of SPCR Project	Ministry	Location	Financing sources ($ million)					
				PPCR					
				Grant	Credit	ADB	Gov't	Other co-financing	Total
			Tbong Khmom						
Component IV: Technical Assistance									
IV-1 TA	Package 1: Mainstreaming climate resilience into development planning (MCRDP)	MOE	National	10.0					10.0
IV-2 TA	Package 2: NGO and CSO support	MOE	National						0.0
IV-3 TA	Package 3: M&E. Gender and sub-national	MOE	National						0.0
									554.3
Private Sector Projects									
SP1	Cambodia Integrated climate resilience rice value chain community project	Baltang	Battambang and Pursat	5.0					5.0
SP2	Rainwater harvesting and drip irrigation for high value drop production in Cambodia	Akay Cambodia Ltd.	Battambang	5.0					5.0

2.3.2 SPCR Coordination

33. The SPCR Coordination Team was established in 2013 for management and implementation of the SPCR program. This bi-annual committee has so far met on three occasions – on 27 May 2014, 2 March 2015 and 14 December 2015. The SPCR Coordination Team membership appears as Annex 3.

34. It is an inter-ministerial body, composed of members from the line ministries working on SPCR program. Its key tasks include: i) control and support communication and capacity building plans; ii) lead the project implementation and control the technical support of PPCR to conduct the consultation and communicating the information of relevant stakeholders at national, regional and international levels like public, private sector, NGOs, development partners, and particularly social service provider NGOs; iii) carry out the CBNA of national and sub-national policy makers, specialists, and CSOs in preparing action plan, budget plan and implementing the measures of climate change mitigation and agreeing on work program, capacity building plan, stakeholder engagement and communication plan; iv) review the progress reports, guidelines, and technical reports for mainstreaming climate adaptation into development planning, and adjust the relevant plans; and v) review and agree upon the priority adaptation projects proposed under the NAPA, and facilitate the agreements on implementation of SPCR for government ministries, NGOs and private sectors.

2.4 PHASE 2 – SPCR ACTIVITIES TO END 2014

35. Implementation of the project commenced in September 2013. Implementation was suspended in April 2014 due to contract termination of the previous consulting firm due to breach of contract. The TA was readvertised in 2014 and ICEM was appointed to lead implementation in February 2015. The project team then submitted a 6-month work programme and cost estimate (1 February – 31 July 2015).

36. A draft inception report was produced by the previous consulting firm, but was never approved. ICEM was requested to produce a new inception report, building on the earlier draft but which addresses its limitations and was shaped to meet the current situation and requirements. This new inception report is the result of 4.5 months work and consultations from mid-February to December

2015. It establishes the framework in which the project is to be implemented and clearly identifies the focus for the work to 15 April 2019.

2.5 ICEM'S INCEPTION PHASE

2.5.1 Inception Phase Planning

37. The original period stipulated for delivering this new inception report was 10 weeks from project commencement in February 2015. However, following a series of initial discussions with MOE, other government stakeholders and with ADB it was clear that additional time was required to allow for adequate consultation, and to ensure that the inception report is acceptable to RGC and provides the best possible blueprint for the successful implementation of the project. With the support of MOE, the project team submitted a detailed work plan proposal for an extended 22 week inception phase on 10 April 2015. This proposal was approved by ADB.

2.5.2 Inception Phase Objectives and Activities

38. The specific objectives of the inception phase were:
    (i) To conduct wide consultation with target RGC ministries and stakeholders and develop agreed implementation modalities for the project;
    (ii) To establish baseline indicators and information to more effectively monitor project progress throughout its lifetime;
    (iii) To establish the foundation for regular sector-focused capacity development activities based on a systematic assessment of capacity needs;
    (iv) To prepare an implementation plan and methodology for the development of CCA feasibility studies and projects; and
    (v) To prepare stakeholder engagement, communications and knowledge management plans that are harmonized with corresponding activities on climate change by other RGC agencies and projects.

The inception phase activities were divided into five 'streams', each with a series of activities and sub-activities.

39. Project management and stakeholder engagement: Activities related to project management and stakeholder engagement aim to build commitment and interest in the project, to establish mechanisms and modes of working to ensure that the project activities are consistent with the requirements of MOE and ADB and are harmonized with existing climate change activities already underway in target ministries. Key sub-activities under this stream of activity included regular meetings with MOE, CCD and ADB, regular progress reporting, a program of stakeholder consultations, and roundtable meetings with target and supporting ministries (illustrated in Figure 2-3 below).

Figure 2-3: Target and supporting ministries for roundtable meetings

40. The objectives of round table meetings were:
    (i) To establish and develop a working relationship with each SPCR ministry
    (ii) To present the scope of TA 8179-CAM and its links with SPCR ministries

(iii) To define the capacity needs for each ministry and key departments to implement their climate change action plan (CCAP)
(iv) To discuss potential adaptation projects for climate resilience funding

41. Output 1 – Activities: During the inception phase, a number of activities focused on laying the foundation for future activities under Output 1; particularly to strengthen SPCR coordination and to build capacity for climate change VA&AP for inclusive infrastructure in the project's target ministries. The inception phase has included a program of full-day round table meetings with the Climate Change Working Group (CCWG) of each SPCR ministry. It also included a full-day round table meeting with the SPCR investment project PMUs and teams, which led to a collaborative agreement for regular meetings and working arrangements.

42. During 2011 and 2012, various groups assessed the training needs of the target ministries with respect to climate change, including the previous TA consultants and the SPCR sister project (the CCCA). These assessments highlighted the lack of capacity and emphasized the needs for developing the skills for incorporating VA&AP and for developing relevant guidance and standard procedures. The capacity needs assessment conducted during this inception phase focused on specific capacities required for incorporating climate change into development investments within the target ministries.

43. Output 2 – Activities: In the inception phase, Output 2 activities have been focused on establishing a solid implementation plan dedicated to the development of CCA feasibility studies and project proposal development. Key activities under this stream included a review of the NAPA, NAP and target ministries' CCAPs to identify adaptation project ideas, development of criteria to prioritize adaptation projects, describing the feasibility study methodology and a review of potential funding sources to support such projects. It included the establishment of a CCD task force with members from CCCA, CCD and the SPCR team. The group has already met several times and is working collaboratively to prepare briefs on key climate change funds and ways to access them as a project knowledge product and basis for future training workshops.

44. Output 4 – Activities: In the inception phase, Output 3 activities prepared the foundations for the range of knowledge management and communications functions that will be implemented under the project. In addition to developing plans for stakeholder engagement, communications and knowledge management, the project team started producing a range of GIS resources (e.g. maps for the discussion on geographic focus) and knowledge products including project brochures and posters for distribution and use at workshops and events. The team formulated a plan for implementation of curriculum development at key tertiary institutions linked to the project's target sectors following consultations with the participating organisations, and is also contributing towards secondary curriculum development.

45. The results of these activities have been developed into this new inception report. The report draws on the version prepared by the initial TA consultants, and incorporates changes in the institutional structures and more detailed assessment and capacity building plans for mainstreaming climate resilience into the development of the target sectors – water resources, agriculture, transport and urban infrastructure. A draft version of the report was presented at the July 2015 Inception Workshop and received detailed comments from ADB. The report was then circulated among key RGC line ministries for further consultation and comment. This final version addresses comments received from ADB and RGC.

2.6 PACKAGE 1 TEAM STRUCTURE AND MOBILIZATION

2.6.1 Package 1 Project Team Structure

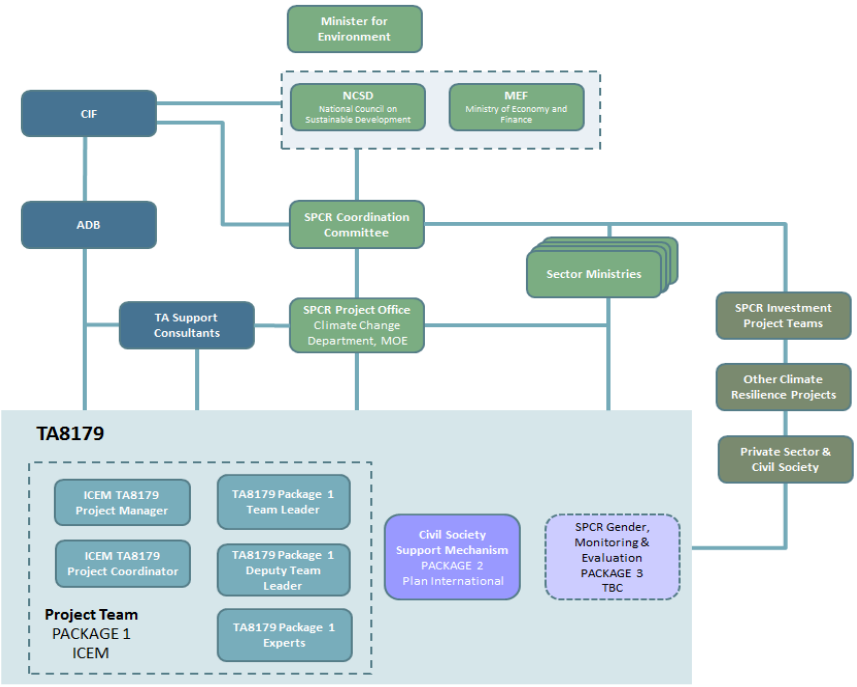
46. Package 1 will be implemented by a team of 14 experts including five part-time international experts and nine national experts. To ensure effective management and efficient delivery of the TA services, the Team Leader will take overall responsibility for management and coordination of the TA team scheduling and delivery of tasks and outputs. The Team Leader will be supported directly by the full-

time Deputy Team Leader. The Deputy Team Leader will be responsible for the day-to-day management of the national expert team and interaction with the various TA stakeholders.

47. Additional technical support and overall management of the expert input to the TA will be provided through the ICEM Country Office in Phnom Penh. The ICEM Project Manager will be based in Phnom Penh and Hanoi, where ICEM has its regional headquarters and main finance and administrative departments. Additional technical, operational and logistical support will be provided by the ICEM Project Director, ICEM Project Coordinator and finance support staff located in Hanoi. This support will include review and quality control by the ICEM Director, accounting and capacity building support from the ICEM Chief Finance Manager, and operational and logistical backup from the ICEM Project Coordinator.

48. The project team will support the MOE SPCR Program Office located within the MOE's CCD and the National SPCR Coordinator, as illustrated in Figure 2-4 below. Secretary of State H.E. Prof. Dr. Sabo Ojano has been assigned as the National SPCR Coordinator to supervise the PPCR implementation and report to the Minister of Environment and Chair of NCCC. The SPCR Program Office in the CCD is headed by the SPCR Project Director, Mr. Meas Sophal. Mr. Sophal is supported by Mr. Ou Chanthearith, the CCD's SPCR Program Manager. The project team will support the SPCR Project Director in the implementation of Package 1 activities and assist in the coordination of activities with other SPCR packages, projects and stakeholders.

Figure 2-4: TA 8179 Package 1 Team Structure and relationship to Cambodia's SPCR program



49. The project team will support the PPCR Project Office in coordinating with the members of the SPCR Coordination Committee, including supporting the organization of regular meetings of the Committee. This Committee is chaired by the National SPCR Coordinator and brings together

representatives from each of the SPCR sector ministries, SPCR investment projects and related packages of technical support. The Committee guides SPCR implementation and oversees the operations of the SPCR technical backstopping unit established at MOE. The Committee, through the PPCR Program Director, is also responsible for submitting relevant M&E reports to CIF and ADB.

50. The project team will be guided by the ADB Principal Climate Change Specialist for Southeast Asia and work closely with a supporting network of ADB consultants managing the overall implementation of the SPCR program in Cambodia.

2.6.2 Team Mobilization

51. Mobilization of the team was staggered over the Inception Phase of the project to coincide with their respective availabilities and rollout of specific inception phase activities. A record of when each team member was mobilized is provided in Table 2-2.

Table 2-2: Project Team and their mobilization status

Name	National/ International	Position	Nature of Inputs	Inputs (Months)	Mobilization Date
Peter-John Meynell	International	Team Leader and and International Water and Climate Change Adaptation Specialist	Intermittent	18	16-Feb-15
Ian Hancock	International	International Agriculture and Climate Change Specialist	Intermittent	16	2-May-15
Tarek Ketelsen	International	International Infrastructure and Climate Change Specialist	Intermittent	16	11-May-15
Kathleen McLaughlin	International	International Knowledge Management and Communication Specialist	Intermittent	16	1-Jun-15
Jeremy Carew-Reid	International	International NAPA Project Development Expert	Intermittent	16	16-Feb-15
Seak Sophat	National	Senior SPCR Management Specialist (DTL)	Full Time	50	15-Mar-15
Mak Sithirith	National	Agriculture, Water Resources and Climate Change Specialist	Full Time	50	27-Apr-15
Hak You	National	Infrastructure and Climate Change Specialist	Full Time	50	2-Mar-15
Porny You	National	Knowledge Management & Communications Specialist	Full Time	50	1-Apr-15
Lay Chanthay	National	NAPA Project Development Expert 1	Intermittent	30	9-Mar-15
Nom Sophearith	National	NAPA Project Development Expert 2	Intermittent	30	18-May-15
Chhun Bunlong	National	GIS Specialist	ntermittent	25	2-Mar-15
Kong Somvannda	National	Multi-media specialist	Intermittent	25	4-May-15
Pheak Young	National	Monitoring & Evaluation Specialist	Intermittent	10	18-May-15

3 INSTITUTIONAL CONTEXT

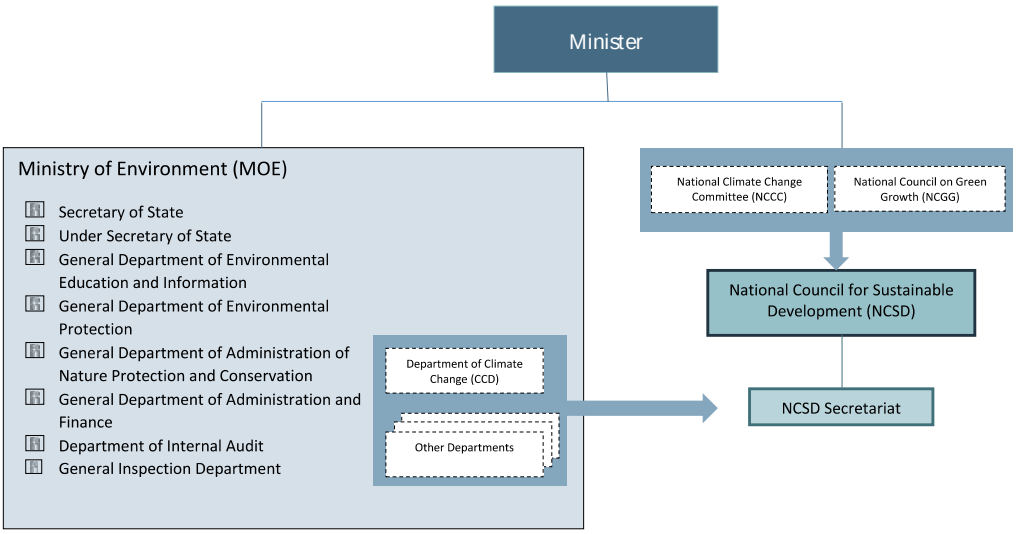
52. Successful climate change mainstreaming involves action within and between a diverse range of governance, political, technical and cultural institutions. A strong understanding of the institutional context that has been established by the RGC to tackle the issue of climate change is essential for successful implementation of the TA. The following section outlines the national and sub-national institutions to be engaged by the TA team during the implementation of Package 1.

3.1 NATIONAL INSTITUTIONAL STRUCTURES

3.1.1 Changes to the structure of MOE and institutions for tackling climate change

53. The institutional structures for addressing climate change in the RGC are under reorganization. The RGC had set up two main bodies to coordinate climate change strategic directions and activities: (i) the National Committee for Climate Change (NCCC) and (ii) the National Council on Green Growth (NCGG). However, the RGC has recently established a new institution, the NCSD, which will replace the latter two structures (Figure 3-1).

Figure 3-1 New structure of MOE and NCSD under the Minister for Environment



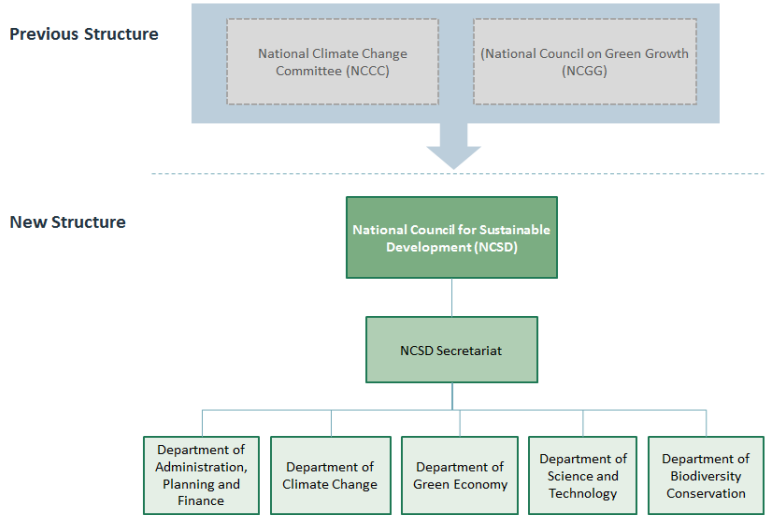
3.1.2 National Council for Sustainable Development

54. The NCSD was established in May 2015, and its structure and mandate are based on examples from other countries of setting up such a council. The Prime Minister is the Honorary Chair and the Minister of Environment serves as the regular Chair. The daily operations of the council are administered by the General Secretariat. The council will pursue the goals set for the NCCC and the National Council on Green Growth, but clarifies and adds other important points such as enhancing the sustainable development that primarily leads to balance the four pillars of development (economy, environment, society and culture). This new council has similar composition of members from cross-sectoral ministries.

55. The creation of the NCSD will have an important impact on the institutional set up of MOE and the institutional arrangements for this TA. Previously, the CCD of the MOE served under the NCCC to coordinate activities and develop necessary support policies/rules and guidelines for addressing

climate change issues in Cambodia. Under the new structure, CCD along with four other Departments will move from MOE to support the NSCD Secretariat directly (Figure 3-2). MOE will now operate in parallel to the NCSD and, by extension, CCD.

Figure 3-2 Structure of the NCSD



56. In 2010, a Climate Change Technical Team (CCTT) was established in support of the National Climate Change Committee. It was an inter-ministerial body, comprising members from the technical staff of ministries and agencies whose works are pertinent to climate change and have obligation to implement the UNFCCC instruments. The major roles of CCTT were to provide technical support for developing ideas related to climate change and submit them to NCCC for appropriate consideration and action. It has been disbanded after the establishment of the NCSD and not yet reconstituted.

3.2 NATIONAL ACTIONS ON CLIMATE CHANGE

57. Cambodia has recently adopted a new National Climate Change Strategy. At a sector level, a number of line ministries and agencies, including MAFF, MOWRAM, MRD, MPWT, NCDM, NCDD have prepared sector climate change strategies and CCAPs and established CCWGs to support their implementation. The elements of this strategy are discussed in more detail below. Further information on the key ministries is provided in the separate Annex 5.

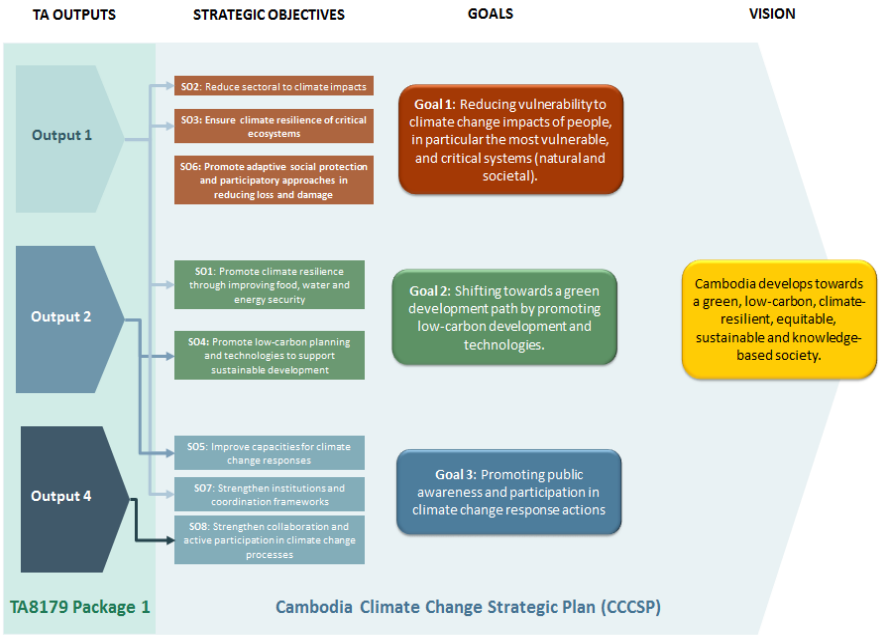
3.2.1 National Climate Change strategy

58. The Cambodia Climate Change Strategic Plan (CCCSP) came into effect on 5 November 2013 after the official launching by the Prime Minister in the 3rd national forum on Climate Change (5-7 November 2013). The CCCSP is an important, whole-of-government framework for tackling climate change that is designed to be a coherent and integrated strategy consistent with other policies and plans such as the NAPA, the Strategic National Action Plan (SNAP) for DRR, Cambodia's National Policy on Green Growth and sector development plans.

59. The goals of CCCSP are to 1) reduce vulnerability of critical (natural and societal) systems and of highly vulnerable groups to climate change impacts; 2) shift towards greener development by promoting low-carbon development and technologies; and 3) promoting public awareness and participation on climate change. Each goal is supported by number of strategic objectives.

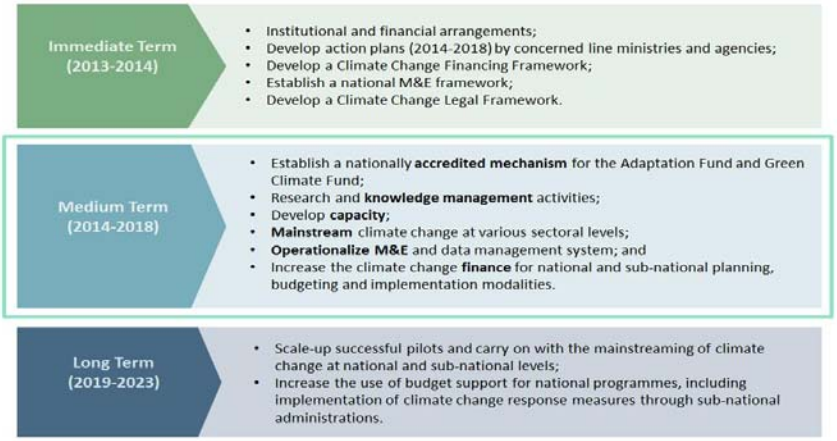
A key element of TA team's approach will be to work with MOE, NCSD and the sector agencies to strengthen efforts to implement the CCCSP. A number of the strategic objectives of the CCCSP closely align with the intent and activities of Package 1 (Figure 3-3).

Figure 3-3: Relationship between Package 1 Outputs and the CCCSP



60. The CCCSP will be implemented in three phases and emphasizes building institutional capacity and science-based knowledge for addressing climate change impacts and enhancing adaptation and DRR action. Package 1 activities will contribute to the CCCSP medium term plan of action from 2014-2018, particularly in relation to activities to develop capacity; mainstream climate change at the sector level based on SCCSPs; identify opportunities to finance further adaptation activities and operationalize an M&E framework for CCA and resilience (Figure 3-4).

Figure 3-4: Phases of the CCCSP and corresponding activities



3.2.2 Sector strategies and action plans

61. In parallel with the preparation of the CCCSP, the CCD with support from CCCA also coordinated line ministries to develop their respective sectoral climate change strategic plans (SCCSPs) and climate change action plans (CCAPs). These SCCSPs and CCAPs of line ministries were completed in the first quarter of 2014. The documents present the key issues of climate change for their sector and identify strategies to address them. They provide indications of each ministry's existing capacity and available resources to implement identified the strategies and actions. They also outline approaches, prioritize actions, address key constraints, and describe the financial support needed to move forward with the CCAPs.

62. The key sectors addressed by this TA all have produced climate change strategies and action plans, namely:

- Climate change priorities action plan for Agriculture, Forestry and Fisheries Sector (CCAP-AFF), 2014 – 2018, MAFF
- Climate Change action plan for Rural Development Sector, 2014 – 2018, MRD
- Climate Change action plan for Transport Sector, 2014 – 2018, MWPT
- Climate Change action plan for Water Resources and Meteorology Sector, 2014 – 2018, MOWRAM
- Climate Change Strategic Plan for Education (2013) and
- Climate Change Action Plan for Education (2014), Ministry of Education, Youth and Sports

63. The ministerial CCWGs coordinate action and monitor progress in support of their respective SCCSP. Members of the CCWGs are drawn from various departments that are the most concerned with climate change issues within each ministry or agency. The CCAPs of the respective line ministries cut across all departments, and each CCWG coordinates cross-department efforts to implement the climate change strategies, actions and projects in the ministry's sphere of activities.

64. CCWGs were created in key ministries whose works are affected by climate change, especially the ministries that have been working on SPCR projects. The working groups facilitated the development of SCCPs and sectoral CCAPs, supported by CCCA. In addition, CCWGs are the focal point of each ministry that assist and facilitate all the works and projects related to climate change activities with MOE and other development partners. The SPCR ministries with CCWGs are MOE, MAFF, MRD, MPWT, MOWRAM, MOP, MOWA, MEF (focal point), NCDD (MOI), and NCDM.

65. MOWA has reflected climate change in its Cambodian Gender Strategic Plan - Neary Rattanak 4 (2014-2018) under component 1 and a gender master work plan on climate change (2013-2022). Also in 2011, MOWA formed a gender and climate change committee within the ministry.

66. Under the Post Millennium Development Goals of the Royal Government of Cambodia (RGC), more targets and indicators are focused on climate resilience and natural resources management system. The TA can help the MOE seek funds from the Green Climate Fund (GCF) since the availability of funds in the GCF has been indicated in post MDG. The MOE's delegation participated in the 2015 Conference of Parties (COP 21) under the UNFCCC in Paris, which identified further funding opportunities.

3.2.3 Other relevant policies to tackle climate change in Cambodia

RGC Rectangular Strategy III

67. The Rectangular Strategy for Growth, Employment, Equity, and Efficiency Phase III (2013-2018) was approved by the National Assembly (5th Legislature) on September 24, 2013 and sets out Cambodia's long-term development vision. RSP III identifies climate change as a major challenge, due to the threat it poses to Cambodia's ecological systems and socio-economic development. Specifically, sustainable management of the environment and climate change are considered key overarching environment pre-conditions for development under RSP III.

National Strategic Development Plan (NSDP)

68. The National Strategic Development Plan (NSDP) 2014-2018 is a national guiding policy document on Cambodia's development, and is compiled from sectoral strategies of the different ministries. It has been finalized and put in place for implementation in July 2014. This emphasizes climate change issues to be addressed through developing and strengthening capacity, coordination, implementation of the climate change strategic plan, fund raising, education and awareness raising.

Cambodia National Adaptation Program of Action to Climate Change

69. The National Adaptation Programme of Action to Climate Change (NAPA), submitted to the UNFCCC in 2006, has been the primary policy framework for climate change actions. The NAPA is particularly important to the SPCR and identifies 20 high-priority projects across Cambodia to address the urgent and immediate adaptation needs and concerns of people at the national, sub-national and local level. The projects covered a wide range of key sectors and natural and social system components such as agriculture, water resources, coastal zone ecosystems and human health. Sixteen of these projects related to sectors relevant to this TA, including agriculture and water resources, coastal zone and cross-sectoral projects.

70. Other RGC policies relevant to climate change mainstreaming efforts in Cambodia are identified in Table 3-1.

Table 3-1: Other policies and initiatives relevant for climate change resilience and adaptation in Cambodia

Title	Description/ Relevance
Strategic National Action Plan (SNAP) 2008-2013 for Disaster Risk Reduction	Released in 2008; aims to mainstream Disaster Risk Management (DRM) into sector polices and investment planning
National Program for Sub-National Democratic Development (NP-SNDD) 2010-2019	A comprehensive and in-depth governance reform process of the sub-national administrations, which will also impact on other national institutions. NP-SNDD is designed to enhance and strengthen capacity and ownership of sub-national councillors in management and development of sub-national administration. These include development of human resources and capacity to support function of councillors, transfer of functions and resources from national to

Title	Description/ Relevance
	sub-national administration, and strengthening sub-national budget, financial and property management. The program is separated into three steps for implementation, 3 years Implementation Plan (IP3) phase I, IP3 phase 2 and last 4-year implementation plan (IP4) and each year implemented by annual work plan and budget (AWPB). The existing IP3 phase 2 and AWPB of the program have integrated climate change adaptation mainstreaming activities for implementation.
National Green Growth Roadmap	A policy focus that emphasizes ecologically sustainable economic progress to foster low-carbon, socially inclusive development.
GMS Economic Corridors	Major transport corridors (and the secondary corridor towns development as well) that will be a focus for economic development in Cambodia.
Gender and Climate Change Strategic Plan	Aims to mainstream gender considerations into climate change development activities.
National Action Plan for Disaster Risk Reduction (NAP-DRR) 2014-2018	The NAP-DRR was developed based on the implementation of SNAP 2008-2013 and is available beginning 2014. The NAP-DRR 2014-2018 aims at further enhancing the activities in mainstreaming disaster risk reduction into the policies and programmes of the ministries, institutions and increasing the food security for the resilience of communities. It further strengthens a mechanism by involvement and effective coordination of all stakeholders including Royal Government, development partners, private sector and civil society. The action plan emphasizes the continuation of capacity and human resource development to promote the disaster response by focusing on the support of victims during and after disasters through the strengthening of relevant institutions and mechanisms in implementation of the disaster risk reduction programmes in local communities.

3.2.4 Sector Policies, Guidelines, Standards and Working Groups relevant to climate change

71. Policies, guidelines, standards and sector-specific working groups are the key means available to sector ministries to strengthen resilience to climate change. A key element of the TA team's work will involve action to review relevant sector guidelines and design standards and recommend changes to mainstream climate resilience into sectoral planning.

72. Table 3-2 identifies the status of different policies, manuals, guidelines and standards that are relevant to Package 1 and will need to be considered as part of Package 1's mainstreaming activities.

Table 3-2 Ministry Climate Change Guidelines, Standards and Working Groups

Policies and strategies relevant for tackling climate change	Technical or Operational Guidelines and Standards to be reviewed to be reviewed for relevant climate change provisions	Climate change working group status
Ministry of Environment		
MOE finalized and put in place Cambodia Climate Change Strategic Plan (CCCSP)-2014-2023 since 2014. MoE Coordinated line ministries to developed and put in place sector climate change strategic plan and action plan. MoE is developing Climate Change Action Plan (CCAP) for Environmental Sector. This CCAP is targeted to finalize in July 2015. MOE are working with concerned provincial departments on the decentralization of MOE	Climate Screening Toolkit and Downscaling Climate Scenarios for Direct Application for Policy and Plan Making- are still in condition of condition of revisions. The existing climate resilience has been addressed mainly on a project basis. Guidance on Mainstream Climate Resilience and Disaster Risk Reduction into National and Sub-National Investment Planning- in condition of	CC working group has been established and chaired by Mr. Sum Thy, Director of Climate Change Department. And other two members, Mr. Chea Chan Tou, Deputy Director of Climate Change Department, and Mr. Hak Mao, Chief Office

Policies and strategies relevant for tackling climate change	Technical or Operational Guidelines and Standards to be reviewed to be reviewed for relevant climate change provisions	Climate change working group status
activities to sub-national level. The progress reports have been prepared between MoE and NCDD Other laws and regulations that mainly have climate change implications include: Law on Protected Areas; Law on environmental management and natural resource conservation; Sub-decree on environmental impact assessment (EIA); and Sub-decree on solid waste and wastewater management.	revision. Guidance paper on Climate Resilience Irrigation; and Guidelines for integrating climate change considerations into commune development planning in 2014.	
Ministry of Water Resources and Meteorology (MOWRAM):		
The National Water Resources Policy (2004); Law on Water Resources Management (2007); Strategic Plan on Agriculture and Water (SAW) for 2006-2010 (2007) and 2009-2013 (2010); National Policy on Water Resources Management (2004); Participatory Irrigation Management and Development (PIMD); Prakas (proclamation) No. 306 for establishing community-based water management - Circular No. 1 on the implementation of sustainable irrigation policy (2000); sub-decrees on the procedure for establishing a Farmer Water Use Community (FWUC); river basin management; Other pending policies and regulations include: (a) water allocation and water use permits, and (b) water quality and water licensing.	Under the technical support of CDTA7610-CAM project, several guidelines related to climate change have developed: 1) Guidelines and Procedures for Mainstreaming Climate Change Adaptation into Integrated Water Resources Management, and Vice-Versa, 2) Economics of Operation and Maintenance of Irrigation Systems, and 3) GIS Toolkit and procedure of Climate Change for Cambodia for MOWRAM and MOE to assess climate change vulnerability and adaptation for water resources management.	In response to climate change related works, MOWRAM established a Technical Working Group on Water and Climate Change that is responsible for the development of CCSP and CCAP for water sector which are available in 2012 and 2014, respectively. This working group was chaired by Mr. Oum Ryna, Director of Meteorology and it was dissolved following completion of CCSP and CCAP.
Ministry of Agriculture, Forestry and Fisheries (MAFF):		
MAFF has established two sector-level strategies: the Agricultural Sector Strategic Development Plan (ASSDP) 2006–2010 and the Strategy for Agriculture and Water II (SAW) 2010–2013. The ASSDP 2006–2010 is a specialized policy on agriculture, fisheries, and forestry that captures relevant elements from the RS and NSDP. Climate change has not been mainstreamed into legal framework, policy and planning process of MAFF.	No major guidelines and toolkits on climate change for agriculture have been established by TWG-CC of MAFF.	MAFF established the Technical Working Group on Climate Change in November 2011 and it now has 18 members from various Department and Administrations. Is newly established, and capacities remain limited but CCCA's financial support allows MAFF to carry out its activities outlined in the CCAP including building capacity of staff of MAFF.
Ministry of Public Works and Transport (MPWT):		
Law and policies include: (i) National Road Safety Policy (February 2014); (ii) Law on Road (April 2014); (iii) Law on Land Traffic (January 2007). National Strategic Development Plan (NSDP) MPWT's CCSP: Climate Change Strategic Plan For Climate Change Adaptation And Greenhouse Gas Mitigation In Transport Sector, December	Road Design Standard – Part Geometry, CAM PW 03.101.99, Year 2003; Road Design Standard – Part Pavement, CAM PW 03.102.99, Year 2003; Road Design Standard – Part Drainage,	Established by chaired by H.E. Pheng Sovicheano, under secretariat of State and leaded by department of Planning of General Department of Admin.

Policies and strategies relevant for tackling climate change	Technical or Operational Guidelines and Standards to be reviewed to be reviewed for relevant climate change provisions	Climate change working group status
2012 MPWT's CCAP: Climate Change Action Plan For Transport Sector 2014-2018, May 2014	CAM PW 03.103.99, Year 2003; Bridge Design Standard, CAM PW 04.102.99, Year 2003; Construction Specification, Year 2003; MPWT is developing i) Road Vulnerable maps and ii) Design Standard Changes of Geometry, Pavements, Drainage, Bridge and Construction Specification, under the ADB Loan No. 2839-CAM (SF) \ No. 8254-CAM.	
Ministry of Rural Development (MRD):		
The relevant laws and policies include: National Strategy for Rural Water Supply, Sanitation and Hygiene 2011-2025 (April 2011); Strategic Plan of Rural Development for Climate Change Adaptation in Cambodia (September 2012); Policy of Human Resource Development (December 2012). A series of policies have emerged as current mandates of the MRD, such as the Policy of Indigenous People, the Policy of Rural Road Improvement, the Policy of Rural Development and the Policy of Rural Water Supply. MRD's CCSP: Strategic Plan of Rural Development for Climate Change Adaptation in Cambodia (MRD's CCSP), September 2012 MRD's CCAP: Change Action Plan for Rural Development Sector 2014-2018 (MRD's CCAP), 2014	Technical Norm for rural road design exists but, needs to be improved; Rural road policy is drafted; Water quality guideline exists; Water user group guideline exists for rural water supply Concepts are incorporated into the design, but tools and guidelines are not yet developed.	Climate Change Working Group: MRD had established the Climate Change Working Group (CCWG) which H.E Lu Sim Eam (Undersecretary of State) is the Team Leader, Dr. Dok Doma (Department of Rural Water Supply) and Mr. Srun Pithou (Department of Planning and Public Relations) are the Deputy and other members from concerned departments of MRD. MRD had established the Social and Environmental safeguards office.
Ministry of Interior (MOI, NCDD):		
	NCDD implements annually implemented national program through annual workplan and budget (AWPB). Climate change actions have been reflected in existing AWPB. Project Implementation Manual (PIM) serves as a completed guiding document for development and implementation of sub-national development projects. NCDD also considers integration of climate change adaption into existing PIM. NCDD has put in place guidelines on mainstreaming climate change adaptation into sub-national planning. Training manual for these guidelines has also finished.	Climate Change Working Group established and members of this group are from Program Management and Support Division of National Committee for Sub-national Democratic Development Secretariat (NCDDS).

3.3 CAMBODIA CLIMATE CHANGE ALLIANCE (CCCA) – A KEY PARTNER

73. The CCCA, like the SPCR, works under the umbrella of CCD, but has a mandate distinct from SPCR. CCCA focuses on addressing climate change issues at policy and strategic levels, while SPCR focuses

on mainstreaming CCA into investment projects (with a focus on agriculture, water resources management, urban development and transport).

74. The CCCA is implemented by MOE, as chair of the National Climate Change Committee, through its CCD with technical and financial support from the United Nations Development Programme (UNDP), EU, and Sweden. The program is closely aligned with the national institutions in charge of climate change. The CCCA is a comprehensive and innovative approach to address climate change in Cambodia. The CCCA is governed by the CCCA Board chaired by the Minister for Environment. Phase 1 of this program has just finished and Phase 2 is starting up. The new phase of the programme aims to strengthen national systems and capacities to support the implementation and coordination of Cambodia's climate change response.

75. The CCCA includes a mix of technical and policy advisory support, and financial support through a grants program. Key areas of intervention include climate change legal framework, national and sectoral monitoring and evaluation (M&E) frameworks for climate change, testing and dissemination of adaptation/mitigation approaches, strengthening of planning and budgeting systems for the mainstreaming of climate change finance, and support to research, development and learning.

76. Thus far, the CCCA has focused on improved coordination with key line ministries in sectoral climate change strategic development. It has strengthened Cambodia's negotiation capacity on climate change matters and developed Climate Change Education and Awareness Strategies. A key activity has been the provision of grants to projects that align with national climate change priorities. The development of the CCAPs in different sector ministries has been funded through the CCCA.

3.4 INITIATIVES WITH OTHER DEVELOPMENT PARTNERS WORKING ON CLIMATE CHANGE

77. There are a number of other initiatives on CCA in Cambodia. These are outlined in an extensive table in Annex 4.

78. Some of the key initiatives include:

79. The CC Adaptive Initiative (CCAI) of MRC. Supported by the Australian Agency for International Development (AusAID), Danish International Development Agency (DANIDA), Swedish International Development Cooperation Agency (Sida), Luxemburg and Finnida, CCAI works with the Cambodia National Mekong Committee, national experts, national climate change focal points and core partners. Prey Veng has been selected for local demonstration activity, with a focus on IWRM approaches. TA 8179 may work through the SPCR ministries that are involved in the MRC's CCAI programme.

80. Climate Risk Management Fund, implemented through NCDM and MOE, and supported by UNDP. Target provinces are Prey Veng, Kratie, Siam Reap, Kampong Thom and Kampong Chhnang. This initiative is developing the loss and damage database in 5 provinces in support of CCCA work on sectoral climate change mainstreaming. TA 8179 may work through the concerned SPCR ministries and NCDM.

81. Coastal Adaptation and Resilience Planning in Coastal Areas implemented by MOE with support from the Global Environment Facility (GEF)/LDCF through the United Nations Environment Programme (UNEP). The project aims to increase resilience of coastal communities and ecosystems to climate change through AP, demonstrated targeted local interventions and provision of practical learning experience in AP to the National Climate Change Committee and CCD.

82. Consolidating capacities for DRR in Agriculture in South East Asia. This is a multi-country initiative (Cambodia, Laos, Philippines, DPRK) supported by the EU through FAO. In Cambodia it is implemented by General Department of Agriculture of MAFF in Kampong Speu & Otdar Meanchey. The main activities are to i) Develop Plan of Action for DRR in agriculture (all subsectors); ii) Advocacy and awareness raising on integration of DRR in agriculture sectors; iii) Testing, validating and application of good farming practices; iv) Improve the use of water resources for drought and

flood management. TA 8179 works with MAFF through the SPCR investment project in support to building capacity of relevant officials, and developing guideline, procedure and design standard with Climate Change smart agriculture. TA specialists on agriculture and water resources will provide necessary technical assistance to MAFF when needed.

83. *Developing multi-scale climate change adaptation strategies for farming communities in Cambodia, Laos, Bangladesh and India.* This multi-country initiative is supported by AusAID/ACIAR through the Commonwealth Scientific and Industrial Research Organisation (CSIRO), and implemented through Cambodian Agriculture Research and Development Institute, MAFF (Dept. of Agricultural Extension), IDE. It aims to bridge the gap in these countries between national scale climate change vulnerability and impact assessments, and adaptation interventions at the household and community level. The TA 8179 will essentially make use of the downscaled data from the project in VA&AP.

84. *National Adaption Plan (NAP) process and Climate Finance Readiness Programme* is implemented by CCD of the MOE with support from the CCCA, German Technical Cooperation (GIZ) and US Agency for International Development (USAID). It is focusing on the development of the NAP process and TA 8179 will be closely collaborating with this project in order to develop the adaptation proposals. Team members have already taken part in the workshop held in June in Siem Reap, and also in climate financing.

85. *HARVEST* is supported by USAID through Fintrac. It is working in Battambang, Kampong Thom, Pursat, and Siem Reap provinces. It aims to develop sound, agricultural-focused solutions to poor productivity, postharvest losses, malnutrition, lack of market access, environmental degradation, and the effects of climate change on vulnerable rural populations. The TA 8179 will seek the possibility to work jointly on the agricultural sector, especially the SPCR investment projects that are being implemented by MAFF.

86. *Promoting Climate Resilience in Agricultural Practices and Water Resource Management in the Rural Cambodia* (NAPA Follow Up) Phase 1 and Phase 2. This project is supported by GEF/LDCF, UNDP and CIDA, and is working with MAFF in Kratie and Preah Vihear. It organizes pilot demonstrations, mainstreaming local planning, lessons learned and awareness raising with major focus on agriculture and water resource management. TA 8179 can provide necessary technical assistance on climate smart agriculture, and climate resilient water resource development, above all policy recommendation, developing guideline, procedure and design standards for agriculture and water resources.

87. *Water Resources Management Project (WRMP)* supported by the Nordic Development Fund through ADB, and implemented by Ministry for Water Resources and Meteorology (MOWRAM). It aims to mainstream climate change concerns in water resource planning and management at both policy and operational levels by taking into account the projected changes in the climate. This project has developed a climate change database that TA 8179 will use MOWRAM for appropriate technical assistance that the project requires. Potential cooperation with TA will be in the area of policy recommendation, developing guideline, procedure and design standard pertinent to water resources.

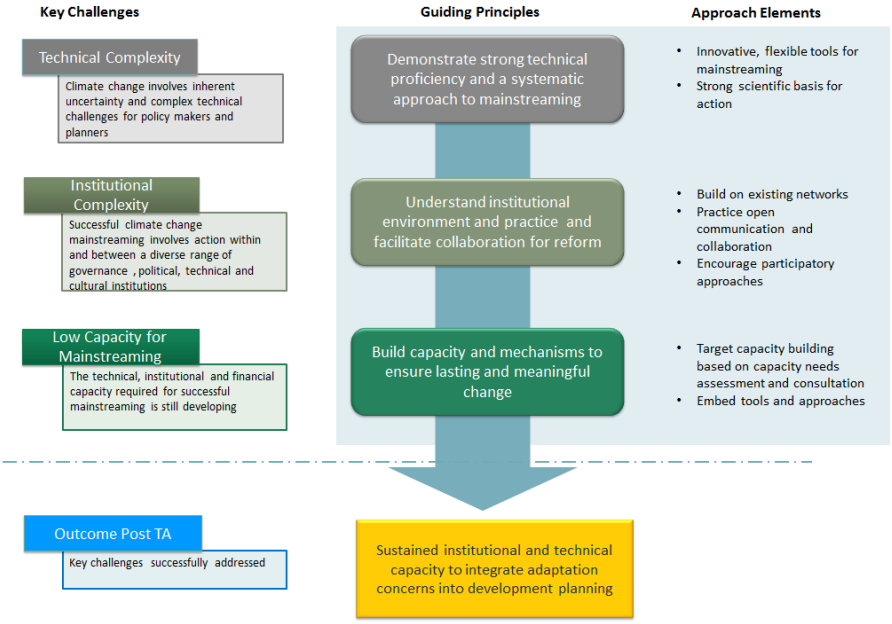
88. *Adaptation Approaches for the Transport Sector* supported by Nordic Development Fund through ADB and working with MPWT. Its objective is to assist Cambodia in responding to climate change in a way that is consistent with economic development objectives. The primary contribution of the project is to improve institutional and technical capacity to adapt to such change in the transport sector. The TA 8179 will work with the SPCR MPWT through SPCR TA initiatives.

4 APPROACH AND METHODOLOGY

4.1 OVERVIEW OF MAINSTREAMING METHODOLOGY

89. Mainstreaming climate resilience into development planning raises three main challenges that need to be addressed - technical complexity, institutional complexity and low capacity for mainstreaming, including human resources and finances. An overview of these challenges and the approach that will be adopted to address each is outlined in Figure 4-1.

Figure 4-1: Overview of implementation methodology



90. Demonstrate strong technical proficiency and systematic approach to mainstreaming - Climate change presents a range of significant technical challenges for policymakers, one of which is uncertainty. Mainstreaming climate change measures to enhance climate resilience into government reduces this uncertainty in a systematic way. Institutional reforms and building additional government capacity to address climate change related challenges requires evidence-based, proven technical responses.

91. The project team will implement a series of steps – including site visits, data gathering, and literature review - to document the latest available information on climate change impacts in target sectors. The project team will also use a flexible, context-specific and sector-oriented approach to knowledge development on mainstreaming climate resilience that builds on existing initiatives and the efforts of other development actors. Package 1 activities do not include the development of downscaled climate and hydrological modeling for Cambodia as a whole or for individual project sites. To address this issue, where possible, the team will organize activities at sites where such information is available to demonstrate the additional value of modeling information in preparing climate change VA&AP processes.

92. Understand the institutional environment and practice and facilitate collaboration for reform – The fact institutions tend to be organized around sector rather than integrated, cross-cutting themes can complicate efforts to mainstream climate change concerns into policy and planning processes. Climate change has impacts on a wide range of sectors and as result requires responsive and collaborative

institutional arrangements. Participatory approaches and open communication between project implementers, RGC and project stakeholders will guide the project team's activities. To ensure that government and civil society takes ownership over the project' activities and products, government counterparts as well as NGOs, CSOs, and private sector actors from target sectors will be drawn together in regular meetings and engage in project capacity building, adaptation project development and NAP planning activities.

93. The project team will work with sector agencies to integrate and implement the findings and recommendations of project activities into line ministries' sector policies, plans and guidance materials. The SCCSPs, which have been developed in support of 2014-2023 CCCSP, will be one of the guiding documents. Lessons will be drawn from reviews of sector guidelines and design standards along with assessments of existing sector assets or development approaches in the field. These lessons will be formulated into recommendations on how to mainstream climate resilience into sector planning. This approach will inform and be informed by SPCR investment and climate change project development activities in selected sites. The end result will be a strengthened, cohesive planning framework for key sectors that is consistent with the RGC's strategic objectives and management structures for tackling climate change.

94. Build capacity and mechanisms to ensure lasting and meaningful change – This TA aims to overcome technical and institutional capacity constraints so that project activities lead to changes on the ground. To achieve this aim, the project team will develop and implement tailored capacity building initiatives that contribute to a lasting and effective system for strengthening climate resilience.

95. As part of this process, the focus on a cross-sector Adaptation Working Group (AWG) will ensure that training activities result in long-lasting, improvements in capacity for climate resilient planning. In addition, CCA project feasibility studies will be developed into proposals to enhance future capacity to access financing for climate change action. In particular, the proposals will target the Adaptation Fund and GCF. In addition, the project team will generate a wide range of knowledge products, communications, and awareness raising interventions to strengthen understanding of climate change amongst the general public and support for the RGC's commitment to action on this topic.

96. There have been consistent efforts to build capacity for mainstreaming climate resilience over the past few years, led by MOE and its CCD, including the work of CCCA and PPCR Phase 1. In addition there have been specific sector projects, e.g. in MOWRAM and MAFF which have addressed climate mainstreaming. The TA will build on these earlier mainstreaming efforts. In particular, the development of the CCSP and CCAPs in each sector agency funded through CCCA provides an important basis for future work. These have identified areas where mainstreaming is required in each sector.

97. The products from PPCR Phase 1 include a number of guidelines on mainstreaming climate resilience and DRR into National Investment Planning, a climate screening toolkit, engaging and building capacity of CSOs and the private sector, and information on the Cambodia Hydro-Meteorological Information System (HMIS) and Multi-Model Downscaled Climate Scenarios for Cambodia. These guidelines and information will be reviewed and updated according to current requirements.

4.2 POLICY AND PROCEDURAL RECOMMENDATIONS

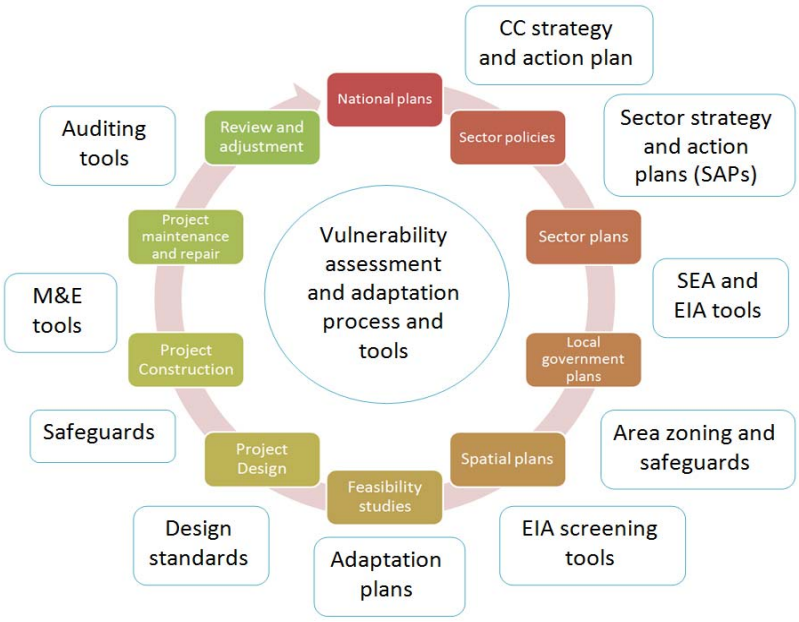
98. The project team will review sector guidelines and design standards, and recommend changes to mainstream climate resilience into sector planning based upon lessons learned from both the SPCR project experience and the integrated VAs in the field. A number of agencies have already implemented climate change VA&AP exercises in Cambodia. The project team will build on this ground work and use tools and methods that are already familiar to key sector and government stakeholders.

99. The project team will use ICEM's Sector Adaptation Planning Approach (SAPA) as the underlying framework to identify entry points and make recommendations for mainstreaming climate resilience in the sector. The SAPA is a flexible approach that will draw upon the specific demonstration activities to be undertaken by the project team. It will accommodate and benefit from inputs available from other

climate change activities such as RGC initiated climate change impact assessments or other donor supported climate change assessment activities.

100. There are a number of entry points for integrating climate change into the development planning cycle: (i) the policy review and master planning stage, (ii) the project design and implementation cycle, (iii) modifications to design standards, (iv) M&E phase and (v) the auditing of development assets. Figure 4-2 illustrates the different entry points in the planning and development cycle for inclusive infrastructure. Based on the various sector activities, the project team will work with key stakeholders from the target ministries to identify the most relevant entry points for their respective ministries. For example, the TA team would consult with EIA department on the VA and adaptation process and tools, and how to review EIAs for project development.

Figure 4-2 Entry points and tools for addressing climate resilience in the development planning and implementation cycle as part of the SAPA process



101. The SAPA concept has been developed by ICEM in support of ADB TA 7984: Mainstreaming climate change risk management in development in Nepal under Nepal's SPCR program and will be relevant for the mainstreaming efforts envisioned under TA 8179 Package 1. SAPA is based on a range of best practice materials for climate change risk management. To adapt this approach to Cambodia, the project team will work to ensure that the program of policy and procedural reform is:

- Tailored to the sectors, with identification of specific entry points and tools for each;
- An integral part of the agencies involved and their decision-making process
- A straightforward process that can be rapidly and easily applied;
- Uses existing tools and planning processes that can be adapted to consider climate change;
- Transparent, so that the rationale and assumptions for the adaptation options proposed are documented and clear for future reference;
- Based upon the most recent down-scaled projections for climate change and extreme events, so that more designs can more easily incorporate future conditions;

- Flexible and easily modified or updated based upon experience and improved climate data and change projections; and
- Combined with capacity building to develop the application of the framework at different levels for each sector.

102. The project team will develop a sector program of policy recommendations and procedural reform to enhance climate resilience that is tailored to the specific operating environment of each target ministry. The team will draw on approaches and lessons learned from other climate change impact assessment and AP exercises in Cambodia to supplement these efforts.

103. The PPCR Phase 1 developed guidelines for mainstreaming resilience into national planning processes for the MEF and MOP. As part of the review process, the TA team will consider these guidelines and their current applicability for such national planning processes as the NDSP, the National Green Growth Plan and Poverty Reduction plans. Such reviews and recommendations would be discussed at the SPCR Coordination committee.

104. Another set of entry points are screening tools that allow the climate-related risks of proposed development projects to be identified, so that the necessary adaptation measures may be incorporated into the design at an early stage. In PPCR Phase 1, guidelines for such screening tools were developed. Those guidelines have been reviewed and it is concluded they would be replaced by other better tailored to the specific needs of the ministries and the development investments that they are considering. One of the early activities of the TA will be to review all screening tools that are available in each sector and make proposals for their refinement. The tools would include straightforward questions that government staff can use quickly and simply to decide if a development needs further climate change vulnerability and adaptation work. The approach taken by global web-based tools, e.g. AWARE, could be used to tailor such screening methods to the Cambodian situation and needs of each sector.

105. Other measures coming out of the SAPA approach may include different forms of guidance and manuals on adaptation measures, adaptation changes in design standards, climate change requirements to be included in SEA and EIAs, and climate resilience M&E. Underpinning much of that advice will be guidance for the VA&AP methods.

4.3 ECONOMIC ASSESSMENT

106. The TA team does not include economics expertise at this stage. It needs to. This report includes recommendations for an international and national economist post. Those specialists would have two main functions:

(i) Conducting economic analysis and valuations as part of the six adaptation feasibility studies and two proposals
(ii) Establishing mechanisms and capacities to better integrate adaptation in sector and national budgets.

107. The TA will conduct six feasibility studies for adaptation projects and prepare at least two adaptation project proposals for submission by government to global climate change funds. Proof that an adaptation measure is economically feasible – and in fact would lead to significant savings through avoidance of damage and losses and through more efficient and effective allocation of resources – is an essential component of the feasibility studies.

108. The feasibility studies would draw from successful demonstrations of adaptation in the SPCR provinces of Cambodia. The demonstration would be of existing adaptation measures which the TA team have identified during their first major field missions aiming to record good practice for inclusion in sector guides. The studies would focus on the best and most promising cases for potential replication and up-scaling with support of a global climate fund. The economic analysis and valuations would be a key element in the justification for adaptation investment.

109. The other focus for the proposed economics team would be working with the SPCR ministries and agencies to integrate adaptation fully into sector and national budgets. The CCCA and GIZ teams

located within CCD will have budget integration as the main focus of their work. For example, CCCA now have economists scheduled to work with MAFF and MPWC on adaptation budgeting. The TA economists would collaborate closely with CCCA and GIZ in expanding the integration work to bring in MOWRAM and MRD with effort linked to the adaptation feasibility studies relating to the mandates of MAFF and MPWC. The valuations the TA would conduct, for example, are as much a justification for adequate government budgeting as for the climate fund submissions.

Under SPCR program, ADB has agreed with NCDD to provide US 1.2 million in grant funds to support CCA mainstreaming into sub-national development and investment plan of NCDD. The NCDD will use the funds to: (i) support to develop or review a technical manual for climate resilience infrastructure; (ii) build capacity on CCA concept and mainstreaming to sub-national government; and (iii) support PBCR grants investment to sub-national level at Battambang and Banteay Meanchey Province.

4.4 SPCR COORDINATION

110. The coordination of the overall SPCR is one of the most important aspects of this TA. The MOE is the executing agency of the SPCR and the CCD is the key department responsible. The TA's role is to support the MOE's coordination of the seven different SPCR projects as well as the other two TA packages.

111. This will be done through the facilitation of the SPCR Coordination Team meetings which are held twice yearly, and also through regular meetings of the SPCR investment project teams, which are to be held every three months. The purpose of the Coordination Team is a more formal coordination between the different ministries involved in the SPCR work; the second is at a more technical level for sharing experiences and addressing common issues in the implementation.

112. The SPCR Coordination Team consists of members drawn from the following ministries and agencies – MOWRAM, MAFF, MPWT, MRD, MEF, MoP, MOWA, NCDM and NCDD. The list of current members is shown in Annex 3. In view of the key role in the development of climate resilience it is suggested that there should also be representation from NCSD, and in the approval of resilience projects, the Council for Development of Cambodia (CDC) should also be represented. It is noted that further SPCR collaboration is expected with Ministry of Education, and their representation on the SPCR Coordination Team is also desirable.

113. By the end of 2015, the SPCR Coordination Team has met three times. Coordination requires regular updates on the status and progress of the different investment projects, but there have been delays in the implementation of these projects and in the appointment of the consulting teams, with two projects outstanding waiting to start implementation. As the work of these projects develops, their findings and achievements will be reported to the Coordination Team meetings, leading to technical discussions and sharing of experiences in developing climate resilience.

114. The SPCR Coordination Team is an important forum for sharing, receiving comments and endorsing technical papers and briefs that the TA and the other investment projects may develop. Such technical papers would be included in the agenda and be circulated before the meeting. This may include the work on screening tools, indicators of effectiveness of adaptation measures and the development of standards and guidelines.

115. The quarterly meetings with the SPCR AWG (for membership see Annex 3) will be used to discuss the detailed measures for supporting the CCAPs with technical staff at each of the ministries. The qquarterly meetings and working activities of AWG will be driven by field activities and training events and collaborative reform initiatives ensuring that coordination goes beyond meetings and on into the field.

116. An important engine for coordination will be the quarterly meetings with SPCR consultant teams to discuss joint activities and reforms, and these collaborative activities would be reported to biennial SPCR Coordination team meetings. The goal is to ensure that all coordination team members feel a part of the overall programme and not just an isolated project.

117. Regular meetings between the TA team and the consulting teams are anticipated, both to discuss technical issues and for communications. Where appropriate, the TA may provide examples of

infrastructure resilience measures, e.g. bioengineering, and the first of such exchanges is planned with the design team for the MOWRAM Flood and Drought Management Project in Pursat.

118. The different investment projects will provide first-hand experience and information that can feed into recommendations for refining policies and procedures to incorporate resilience into the work of each ministry. Those case studies, field exercises and observations, and consultation will help in the development of manuals and guidelines, and the application of standards.

119. The TA will also have a direct role in documenting the experiences and lessons learned in the implementation of the seven investment projects. The application of VAs for the different project infrastructure and other developments, and the adaptation measures proposed for greater resilience and disaster risk management, will be used as case studies for wider training in the different ministries.

120. An important way for illustrating the resilience work of the investment projects is through field visits for the SPCR Coordination Committee members. This has been requested by the Committee and the first such visit is anticipated in the second half of 2016 or early 2017, when the investment projects have something on the ground to show.

121. The TA's support to the MOE will also cover the regular development of work plans and budgets for implementing the Advance Payment Facility provided by ADB to support SPCR coordination functions.

4.5 SECTOR FOCUS – THE SPCR ADAPTATION WORKING GROUP APPROACH

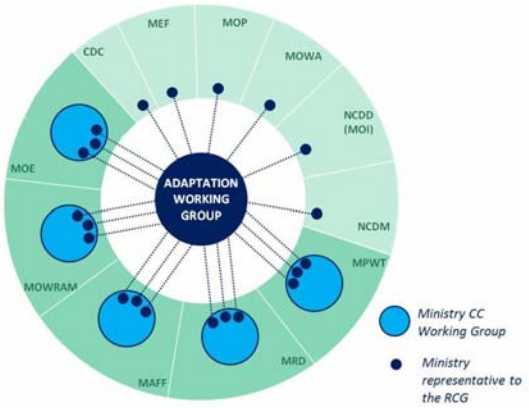
122. The TA is proposing to establish an SPCR Adaptation Working Group (AWG), drawn from the CCWGs in each ministry, to develop an effective partnership and coordination with the different agencies involved in each sector. The AWG will consist of three technical officers from each of the key ministries along with one representative each from the other SPCR coordination ministries – MEF, MEP and MOI. The make-up of the AWGis shown in Figure 4-3. The Terms of Reference for the AWG is found in Annex 6.

123. The AWG will have approximately 21 members and be supported by the TA team. Meetings will be at least quarterly and will focus on technical guidance on how the project should address capacity building and adaptation project proposal preparation.

124. The AWG's tasks are to lead in methodology development, case study VA&AP, and sector guideline recommendations. The representatives will contribute to designing on-the-job and special event training including field trips and round table working sessions. The members of the AWG are the 'champions for change' within their respective ministries. Draft Terms of Reference for the AWG have been prepared and appear as Annex 6.

125. The AWG would involve mid-level technical officers (chief officer level) who are linked to the CCWGs. The members would be at a lower level than those representing their ministries on the SPCR Coordination Committee. They would be the focus of day to day interactions between the TA and the different ministries.

Figure 4-3: Make-up of the Adaptation Working Group



4.6 GEOGRAPHIC FOCUS

126. The main target of support for this TA is the SPCR ministries – MAFF, MOWRAM, MRD, MPWT and MOE and their SPCR projects. The TA will address the policy, procedural and geographic environment in which they are working. Other key ministries such as MEF, MOP and MOI are also important partners for planning and direction. They provide incentives, frameworks and direction for the development activities of the others. The TA will involve the main target ministries and planning ministries in field based demonstration, training and learning. The demonstrations include VAs and adaptation project development, review and learning from the SPCR project experience and exploring the innovations and guidance needed for climate change mainstreaming. This work requires a geographic focus.

127. A geographic focus will allow the project to establish deep and effective working relations with selected provincial and district authorities. The field work requires the TA team to have a thorough knowledge and understanding of the development and climate change challenges the target provinces are facing. It requires the TA to have strong networks of technical staff in local line agencies and to engage with other stakeholders at local level. Most important, it requires an area-specific focus so that the vulnerabilities and adaptation options for specific infrastructure, natural and social systems can be thoroughly assessed. It is in those specific areas that the intensive learning and innovative thinking involving the ministries with local counterparts will take place.

4.6.1 The selection process

128. The TA followed a process which was transparent and consultative in reaching consensus among ministries and science evidence based in assessing the options. Through consultation with the project partners, a selection process and criteria were defined and an initial set of six provinces identified for the TA's field based work. The selection process described in this section and the list of provinces were shaped by the project objectives and required outputs. It is supported by a multi-criteria analysis based on scientific evidence. The process also incorporated views expressed during a program of full day round table meetings with all relevant ministries. The TA team then prepared a geographic focus briefing paper which was formally distributed to those ministries for review and comment. Follow-up round table meetings were held with each ministry to further discuss and receive their views and feedback. Finally, the results were presented and discussed at a national workshop of stakeholders in Phnom Penh on 7 July 2015.

129. The selection process involved the following steps:

(i) Defining selection criteria: Initial rounds of discussions with each of the five main ministries and drafting of selection criteria on the basis of those discussions;
(ii) Multi-criteria analysis;

(iii) **Ministerial round tables**: Presenting and discussing the initial set of target provinces at the full day round table meetings with the ministries;
(iv) **Geographic area briefing paper**: Adjusting and consolidating results into a briefing paper and sending it out to each Ministry for their review and commentary;
(v) **Follow up round table meetings** with each of the SPCR ministries
(vi) **Finalising provincial rankings**: Adjusting the list of provincial targets for the project based on ministerial feedback
(vii) **Inception workshop**: Presenting and discussing the final listing at the project's 7th July inception workshop.

130. The process is described in more detail the sections to follow.

4.6.2 Defining the selection criteria

131. The TA team defined the criteria for selecting provinces following initial discussions with ministries. There are three categories of criteria – the first are the essential criteria and were applied to arrive at a long list of potential target provinces. The second category of selection criteria were then applied to make a short list for discussion and completion with partner ministries.

Essential criteria:

(i) Provinces which are the focus of the current program of SPCR investment projects managed by MAFF, MPWT, MOWRAM, MRD and MOE.
(ii) Provinces representing the five main ecological zones of Cambodia (i.e. mountain, plateau, coast, delta and Tonle Sap)
(iii) Provinces which high poverty rankings (ADB 2014)
(iv) Provinces with high value terrestrial biodiversity (forest cover)
(v) Provinces with projected high climate change
(vi) Ministry preferences related to their existing program of work

Additional criteria:

132. Following the initial long list of provinces identified through application of the three essential criteria, the list was further refined by applying two additional criteria:

(i) A weighting given to provinces with two or more SPCR projects
(ii) A balance between east, west, north and south regions of the country
(iii) Priority identified in ministry's CCAP
(iv) Availability of information on climate change threats, socio-economic and biophysical baseline
(v) Strong local government support with experience in climate change response activities
(vi) Potential for demonstration and replication
Where there is potential for cross sector collaboration on CCA

4.6.3 Multi-criteria analysis

133. A multi-criteria analysis was conducted applying the following parameters:

- Poverty raking (ADB 2014)
- Terrestrial biodiversity value (forest cover - 2006)[4]
- Climate change projection ranking
- Government preferences
- SPCR provinces
- Ecozone representation

134. The formula for scoring the multi-criteria analysis is:

F1 = Poverty +

[4] www.Cambodiaopendevelopment.com

F2 = Terrestrial biodiversity +
F3 = Climate change overlays (4) +
F4 = Government preferences x
F5 = SPCR provinces (yes/no)
F6 = Ecozones (all represented)

Final Score = (F1 + F2 + F3) x F4 x F5 (F6 with all ecozones represented)

135. A detailed description of the multi-criteria analysis follows with an explanation of the scoring and ranking method.

1. Scoring poverty for 25 provinces

136. In the most recent poverty analysis for Cambodia conducted by ADB in 2014, provincial poverty rankings are provided for three data sets – (i) for communes, (ii) for poor households and (iii) a multidimensional poverty index (Table 4.1).

Table 4-1: Cambodia provincial poverty rankings 2014

	CDB2012		IDPoor 2009-2011		MPI 2010*	
Rank	Province	(%)	Province	(%)	Province	(%)
1	Preah Vihear	37	Koh Kong	44	Mondulkiri	44
2	Stung Treng	37	Kampong Chhnang	37	Rattanakiri	44
3	Rattanakiri	36	Kratie	36	Preah Vihear	39
4	Oddar Meanchey	34	Battambang	34	Stung Treng	39
5	Mondulkiri	33	Pursat	34	Kratie	29
6	Kratie	29	Preah Vihear	32	Pursat	25
7	Kampong Thom	28	Pailin	32	Kampong Thom	24
8	Siem Reap	29	Siem Reap	31	Kampong Chhnang	23
9	Pursat	28	Kampong Thom	31	Kampong Cham	20
10	Kampong Chhnang	28	Stung Treng	30	Siem Reap	19

Source: ADB, 2014, Cambodia: Country Poverty Analysis 2014, Phnom Penh, Cambodia

137. In the geographic area multi-criteria analysis the three rankings were considered with provinces gaining 3 points for each top ten ranking they appeared in. For example Kampong Thom appeared in all three rankings, therefore received a score of 9. Mondulkiri appeared in two rankings and received a score of 6.

2. Scoring terrestrial biodiversity for 25 provinces

138. Terrestrial biodiversity value was estimated using % forest cover as a proxy. Provinces were ranked by % forest cover from highest to lowest. The first 10 provinces were given a score of 9. The next 10 provinces (ranked from 11 to 20) were given a score of 6. The remaining provinces received a score of 3.

3. Scoring projected climate change for 25 provinces

139. Four parameters for climate change by 2050 were used to rank and score provinces – (i) % change in rainfall in the wet season, (ii) change of maximum temperature in the dry season, (iii) number of drought months and (iv) the change in number of drought months. All 25 provinces were be ranked by

each the 4 parameters from highest to lowest. The first 10 provinces for each parameter were given a score of 3. The next 10 provinces (ranked from 11 to 20) were given a score of 2. The remaining provinces were given a score of 1.

140. The scores were then added (i.e. F3 = F3a + F3b + F3c + F3d) given a potential maximum score for a province of 12 and a minimum score of 4.

4. Scoring partner ministry preferences

141. The geographic area focus was discussed with all relevant ministries during several rounds of meetings. The conclusions were documented in a geographic area briefing paper that covered the description of the process, and the supporting tables and maps. This document was circulated for review and comment to the chairs of the CCWGs in the five SPCR ministries. It was also copied to the technical focal points. The TA sector experts followed up with their respective ministries to help facilitate internal round table meetings on the briefing paper and to record the discussions and feedback.

142. Partner ministries were requested to review the process, criteria and results of the selection process and endorse or amend the short listed provinces as the target for the project. If any ministry had additional evidence which might justify the inclusion of alternative provinces in the priority listing, they were requested to propose those provinces with supporting commentary and information. The results of those follow-up discussions are summarised in Table 4-2. Six provinces were given high priority: (1) Prey Veng, (2) Battambong, (3) Kampong Cham, (4) Kampong Speu, (5) Kampong Thom and (6) Koh Kong. Another 2 provinces - Pursat and Mondulkiri – were identified but given lower priority.

143. In the multi-criteria scoring process, the six top ranked provinces received a score of 2 while the two lower priority provinces were given a score of 1. The remaining provinces were scored as 0. This factor was weighted as follows - (F1 + F2 + F3) x F4 – so that the cumulative total for F 1 to 3 was multiplied by the government preference score thereby eliminating some provinces from further consideration.

144. The ministry partners also requested the addition of more recent poverty rankings as reflected in the ADB 2014 study, and the inclusion of a terrestrial biodiversity factor.

Table 4-2: SPCR Ministry preferences for geographic focus[5][6]

Province	SPCR Project	Ecozone	MOW RAM	MPWT	MRD	MAFF	Ministry preference
Prey Veng	3	Delta	V	V	V	V	4
Battambang	2	TS	V	V		V	3
Kampong Cham	2	TS	V	V	V		3
Kampong Speu	1	Plat & M	V		v	V	3
Pursat	2	TS	V	V			2
Koh Kong	1	Coastal				V	1
Mondulkiri	1	Plat & M				v	1
Kampong Thom	1	TS	V		V	Reserve	2
Kandal	0	TS		V	V		2
Banteay Meanchey	2	TS			V	V	2
Tbong Khmom	1	TS			V		1

[5] MRD priority province rankings: Tboung Khmom (1st priority), Kampong Thom (1st priority), Kampong Speu (2nd priority), Prey Veng (2nd priority), Battambang (3rd priority), Banteay Mean Chey (3rd priority) and Kandal (reserved).

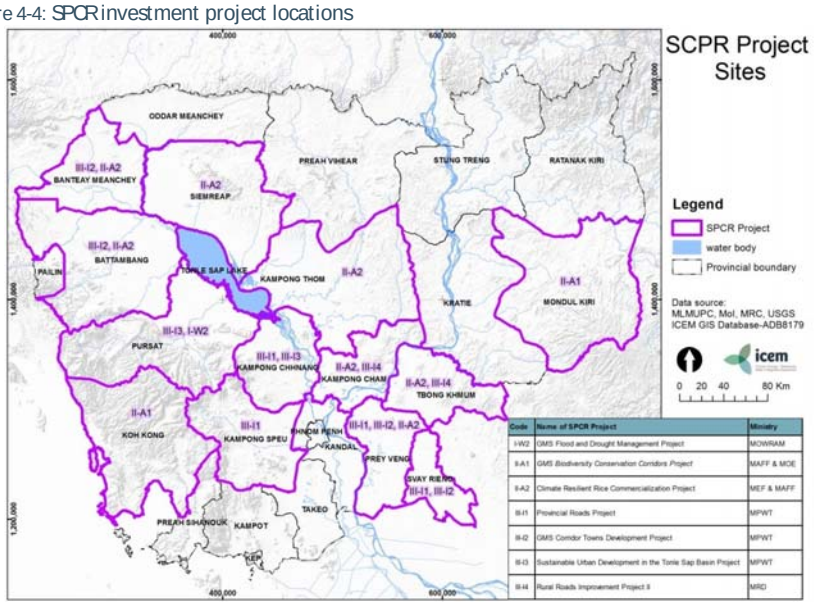
[6] MPWT wish to include Kampong Chhnang Province into the geographic selection as a target province for project activities because Kampong Leang and Chulkri Districts are impacted by floods every year.

Province	SPCR Project	Ecozone	MOWRAM	MPWT	MRD	MAFF	Ministry preference
Kampong Chhang	2	TS		V			1
Siem Reap	1	TS		V			1
Preah Sihanourk	0	Coastal	Reserve				0
Preah Vihea	0	Plat & M				Reserve	0

5. Scoring SPCR provinces

145. The scoring for SPCR provinces was straight forward – whether or not a province has one or more SPCR projects – i.e. yes or no (Figure 4-4). A "yes" received a score of 1 and a "no" 0. In the multi-criteria formula this factor was weighted so that the cumulative total for F1 to F4 was multiplied by the SPCR score - (F1 + F2 + F3) x F4 x F5 – resulting in the elimination of non-SPCR provinces.

Figure 4-4: SPCR investment project locations



146. The result of the multi-criteria analysis is summarised in Tables 4-3 and 4-4 and Figure 4-6. The final step was to ensure that each of the four main ecozones are represented in the final priority of six provinces (Figure 4-5).

Table 4-3: Selected provinces

Province name	Final score	Final Ranking	Ecozone representation (6)	Priority

Province name	Final score	Final Ranking	Ecozone representation (6)	Priority
Kampong Thom	52	1	Tonle Sap	1
Kampong Cham	44	2	Tonle Sap	1
Koh Kong	36	3	Coast	1
Kampong Speu	34	4	Plateaux & mountain	1
Battambang	30	5	Tonle Sap	1
Prey Veng	26	6	Delta	1
Mondolkiri	25	7	Plateaux & mountain	2
Pursat	24	8	Tonle Sap	2

Figure 4-5: Cambodia's ecological zones

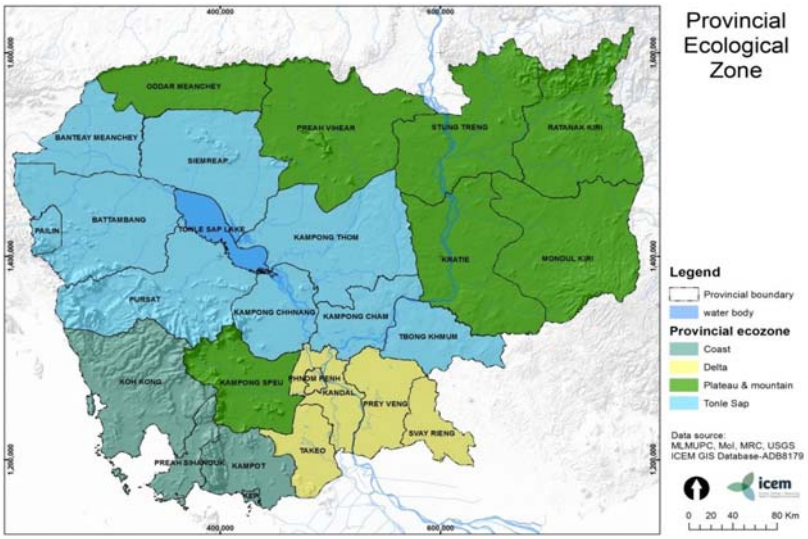


Figure 4-6: Selected provincial focus for the project

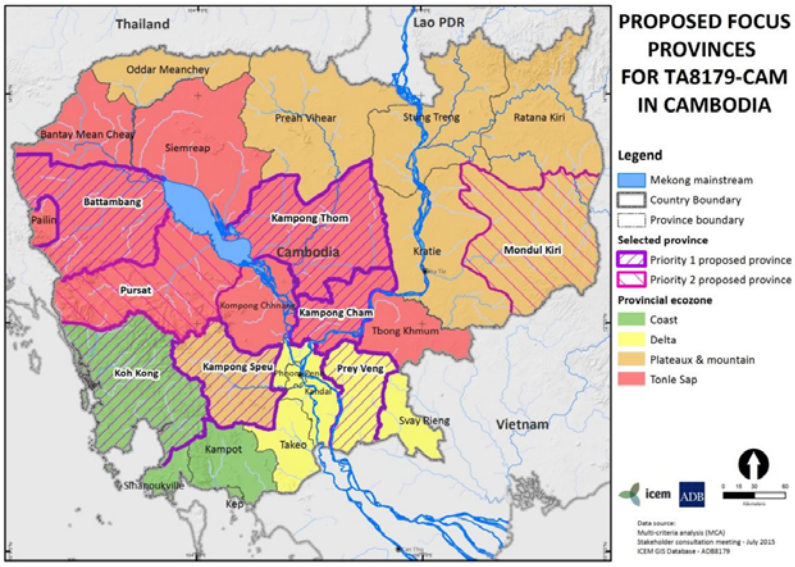

Thailand
Lao PDR
Vietnam
Cambodia
Oddar Meanchey
Bantay Mean Chey
Siemreap
Preah Vihear
Stung Treng
Ratana Kiri
Battambang
Pailin
Kampong Thom
Kratie
Mondul Kiri
Pursat
Kompong Chhnang
Kampong Cham
Tbong Khmum
Koh Kong
Kampong Speu
Prey Veng
Kandal
Svay Rieng
Takeo
Kampot
Sihanoukville
Kep
PROPOSED FOCUS PROVINCES FOR TA8179-CAM IN CAMBODIA
Legend
Mekong mainstream
Country Boundary
Province boundary
Selected province
Priority 1 proposed province
Priority 2 proposed province
Provincial ecozone
Coast
Delta
Plateaux & mountain
Tonle Sap
icem
ADB
Data source:
Multi-criteria analysis (MCA)
Stakeholder consultation meeting - July 2015
ICEM GIS Database - ADB8179

Table 4-4: Multi-Criteria Analysis for selecting the provincial focus of the project

Province name	Poverty (ADB 2014)				Terrestrial biodiversity		Climate change overlays (4)						Gov. preferences			SPCR project			Ecozones
	CBD 2012	ID poor	ADB poverty	Scoring Poverty (1)	Forest Cover (%)	Scoring Terrestrial biodiversity (2)	CC1 rain wet	CC2 Tmax dry	CC3 Drought Months	CC4 Drought change	Scoring Climate (3)	Administrative n1 (1) + (2) + (3)	GOV note	Scoring Government preferences (4)	Administrative n2 (1+2+3)x(4)	SPCR	SPCR Yes/ No (5)	Final calculation = Acum.2 x (5)	Final Ranking	Ecozone representation (6)
Banteay Meanchay				0	16.7	6	1	1	3	1	6	12			0	2	1	0		Tonle Sap
Battambang		34		3	44.1	6	1	1	2	2	6	15	2	2	30	2	1	30	5	Tonle Sap
Kampong Cham	28		20	6	11.4	6	3	3	1	3	10	22	3	2	44	2	1	44	2	Tonle Sap
Kampong Chhnang		37	23	6	38.4	6	2	3	1	3	9	21			0	2	1	0		Tonle Sap
Kampong Speu				0	58.2	9	2	2	2	2	8	17	4	2	34	1	1	34	4	Plateaux & mountain
Kampong Thom	28	31	24	9	48.2	6	3	3	2	3	11	26	5	2	52	1	1	52	1	Tonle Sap
Kampot				0	48.1	6	2	2	2	3	9	15			0		0	0		Coast
Kandal				0	5.3	3	2	3	3	1	9	12			0		0	0		Delta
Keb				0	19.5	6	2	2	2	3	9	15			0		0	0		Coast
Koh Kong		44		3	80.9	9	1	2	1	2	6	18	6	2	36	1	1	36	3	Coast
Kratie	29	36	29	9	77.9	9	3	3	3	3	12	30			0		0	0		Plateaux & mountain
Mondolkiri	33		44	6	90.5	9	3	3	2	2	10	25	8	1	25	1	1	25	7	Plateaux & mountain
Otdar Mean Chey	34			3	62.8	9	2	1	3	1	7	19			0		0	0		Plateaux & mountain
Pailin		32		3	48.9	6	1	1	3	2	7	16			0		0	0		Tonle Sap
Phnom Penh				0	0.0	3	3	3	3	1	10	13			0		0	0		Delta
Preah Sihanouk				0	53.4	9	2	2	1	3	8	17			0		0	0		Coast
Preah Vihear	37	32	39	9	93.3	9	3	2	3	3	11	29			0		0	0		Plateaux & mountain
Prey Veng				0	1.7	3	3	3	2	2	10	13	1	2	26	3	1	26	6	Delta
Pursat	28	34	25	9	71.2	9	1	2	1	2	6	24	7	1	24	2	1	24	8	Tonle Sap
Rattanakiri	36		44	6	78.9	9	2	3	2	2	9	24			0		0	0		Plateaux & mountain
Siem Reap	29	31	19	9	47.1	6	2	1	3	2	8	23			0	1	1	0		Tonle Sap
Stung Treng	37	30	39	9	86.9	9	3	3	3	3	12	30			0		0	0		Plateaux & mountain
Svay Rieng				0	4.2	3	3	2	2	2	9	12			0		0	0		Delta
Takeo				0	4.4	3	2	2	3	1	8	11			0		0	0		Delta
Tbong Khmum				0	20.9	6	3	3	2	3	11	17			0	1	1	0		Tonle Sap

4.7 GREEN INFRASTRUCTURE FOR ENHANCED RESILIENCE AND SUSTAINABILITY

147. This project focuses on achieving inclusive development. Inclusive development means reducing disadvantage, increasing social, civic and economic participation, and providing a greater voice to stakeholders combined with greater responsibility. Principles to approach inclusive development include:

- building upon individual and community strengths
- using evidence to inform policy
- building partnerships with key stakeholders
- developing tailored infrastructure and services
- giving a high priority to early intervention and prevention, and
- planning for resilience and sustainability.[7]

148. The project is working with ministries concerned with building roads, bridges and culverts. It is working with ministries concerned with water management and the construction of irrigation systems and measures to store, conserve and transport water. It is also concerned with broader spatial planning and the management and use of natural resources across landscapes. It includes addressing agricultural technologies and crop production methods as well as how farms and urban areas develop and are linked to surrounding forests and natural areas. Climate change influences all those elements of development.

149. An important theme of this project is the need to recognize natural systems as an essential foundation for development and to rehabilitate and promote nature as a key strategy for building sustainability and resilience in Cambodia. Those two imperatives – resilience and sustainability – are inextricably linked. The solutions to one satisfy the needs of the other. Resilience and sustainability are key attributes of inclusive development.

150. This project promotes green infrastructure as a foundation for achieving nature based solutions to climate change, for building better and more liveable towns and rural areas – and for achieving inclusive development. The project provides guidance for wide application of green infrastructure as an alternative, essential adjunct to conventional infrastructure and development planning and design.

151. In Cambodia, development is largely driven by project level design that fails to adequately consider extreme events, area-wide effects and sustainability, and the multiple uses around the affected sites. Climate change is rarely taken into account – a situation which is aggravated by gaps in understanding between hydro-metrological agencies and infrastructure developers. Information on climate change shared by hydro-metrological agencies is often of little practical use to design engineers and development planners. AP often tends to focus on site- or sector-specific assets; in contrast the approach that will be developed will assess infrastructure proposals as area-wide systems with appropriate spatial information on regular and extreme climate events,

152. Green infrastructure refers to a strategically planned and managed network of green spaces and other environmental features. It covers the technologies necessary for the sustainability of the infrastructure system and its surrounding area. Green infrastructure uses vegetation, soils, natural processes and innovative technologies to manage water, land, temperature and air quality to create healthier and resilient environments.

153. At the landscape scale, green infrastructure refers to the patchwork of natural areas that provides habitat, flood protection, clean air, clean water, food and recreation. At the local level, green infrastructure includes stormwater and drainage management systems that mimic nature by soaking up and storing water, and by improving its quality. For specific infrastructure systems such as roads,

[7] Adapted from Australian Government, 2008, 'Social Inclusion Principles for Social Inclusion in Australia' http://www.socialinclusion.gov.au/

bridges and irrigation, green infrastructure improves the strength and durability of conventional engineering by including natural components and bioengineering methods. For farming ecosystems, it improves soil and water management and enhances productivity. At all scales, green infrastructure emphasizes nature based solutions and use of local resources and materials to build community self-reliance and resilience.

154. Examples of "green" infrastructure include green technologies for adapting and complementing buildings and infrastructure (such as roads, irrigation systems, flood gates and canals) to be more efficient and to better cope with floods, storms and heat. It covers natural water management systems, slope stabilisation approaches, energy conservation measures and many natural materials and techniques. It includes agro-forestry measures, and green open spaces such as parks, wetlands and green drainage corridors. Green infrastructure applies or mimics nature to improve the performance and resilience of conventional "grey" infrastructure. It can often replace it entirely for much cheaper and stronger results which allow for local community monitoring, maintenance and multiple uses.

155. An early activity in the project, commencing during the inception phase is documenting for each of the SPCR ministries – MOWRAM, MAFF, MPWT, MRD and MOE – the green infrastructure measures most appropriate to their development mandate. Many of those measures have been tested and demonstrated in Cambodia and are already applied by the ministries on an ad hoc basis. Some are proposed in general terms as important elements in the SPCR projects. Still others are traditional approaches to agriculture, water and soil management that have proven effective in building resilience to floods and drought. The preparation of green infrastructure guides for each sector will provide an initial menu of adaptation measures appropriate for projects to be prepared for climate financing. The guides will also feature adaptation measures to be promoted and built into sector policies and design standards.

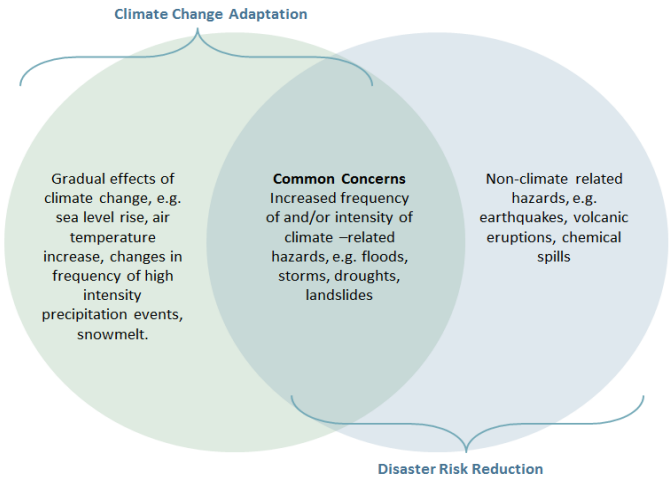
156. The resource kit prepared by ICEM through the ADB TA 8186-REG: Greater Mekong Subregion (GMS): Climate Resilience in Cities Project provides a foundation for this work. The project worked with climate change core groups formally established in Battambang and in Kaysone, Lao PDR and Dong Ha in Vietnam to develop the kit. The kit is now available in Khmer and English and will be used for training and guidance in this project.[8]

4.8 INTEGRATED APPROACH TO DISASTER RISK REDUCTION AND CLIMATE CHANGE ADAPTATION

157. DRR is an important component of climate resilience and complement to long-term measures to address climate change-related risks that are normally associated with CCA. Disasters refer to situations that involve a major and widespread disruption to life in a community or society, from which most people are not able to recover without assistance from others. DRR refers to action to reduce the risk of disasters and associated impacts through systematic efforts to analyze and manage the causal factors of such disasters. CCA refers to action to manage and reduce risks associated with changes in climate. Disaster risks and climate change risks overlap which means that DRR and CCA are often concerned with anticipating and managing a range of similar phenomena using a range of similar tools and approaches (Figure 4-7).

[8] The toolkit is available in English, Khmer and Vietnamese at http://icem.com.au/portfolio-items/resource-kit-for-building-resilience-and-sustainability-in-mekong-towns/.

Figure 4-7: Convergence of DRR and CCA



Source: Adapted from Turnbull, M. et al. 2013

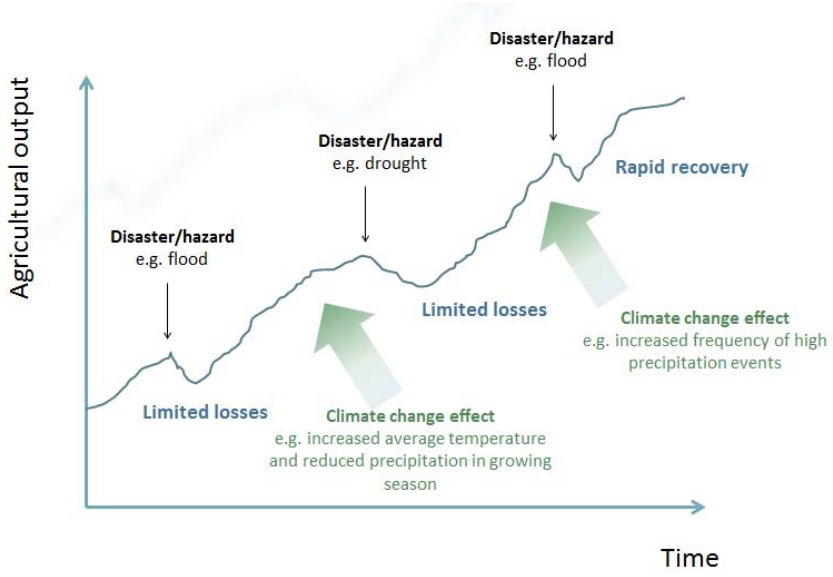
158. DRR and CCA are concerned with reducing disaster risk and climate change risk respectively where each type of risk is a product of exposure and vulnerability to a particular disaster or climate change impact. In light of the fundamental similarities and overlap between DRR and CCA the project team will advocate an approach to climate resilience that integrates the application of these two fields in the climate context. In practice this means that actions developed by the team to reduce a target sector's exposure and vulnerability to climate change risks over the long-term (CCA), will also integrate activities to enhance the capacity of project stakeholders to anticipate and respond to climate related disasters and return to the state of operation prior to the onset of the disaster (DRR).

159. An example of the integration of DRR and CCA at a conceptual level is provided in Figure 4-8. In this figure agricultural output is measured over time. As time progresses climate change effects may pose a risk to the sector. However, effective CCA policies and practices allow the sector to continue to grow. Periodically climate-related disasters may also strike the sector, which will lead to an immediate reduction in agricultural output. Effective DRR strategies reduce losses to the sector and allow for a rapid recovery of agricultural output.

160. From a practical perspective, the project team will promote an integrated approach to climate resilience by incorporating disaster risk and DRR concepts into the SPCR case studies and integrated infrastructure assessments described below. The SPCR MOWRAM Flood and Drought Management project in Pursat offers a very positive route for engagement in the development of Community-based Disaster Risk Management. In discussions with this project we have agreed to organise a joint meeting on DRM in 2017, at which the requirements for improving community preparedness for floods and droughts, the emergency responses and recovery will be discussed. This will draw upon experiences in other parts of the country, so that appropriate disaster resilience can be incorporated into the feasibility studies.

161. The NCDM is an active member of the AWG and their representatives are invited to trainings and workshops. While the focus of this TA is upon five key ministries, we will address specific requests on DRM in developing the feasibility studies, drawing upon the experience and knowledge of NCDM. NCDM would be invited to collaborate on the proposed joint meeting on DRM with the MOWRAM project.

Figure 4-8: Conceptual illustration of integrated DRR and CCA in the agriculture sector



Source: Adapted from Turnbull, M. et al. 2010

4.9 ENGAGING WITH THE SPCR PROJECTS

162. The SPCR investment projects are valuable test cases for how climate resilience can be built into the design and implementation of development projects (Annex 2). They include a dedicated CCA component that seeks to enhance the resilience of the main investment, and are considered as a critical part of the overall SPCR. This TA Package 1 has a coordinating and supporting role with the SPCR investment projects. However, the TA is not in a position to direct or guide the approaches to be taken in carrying out the VAs or adaptation measures that may be needed.

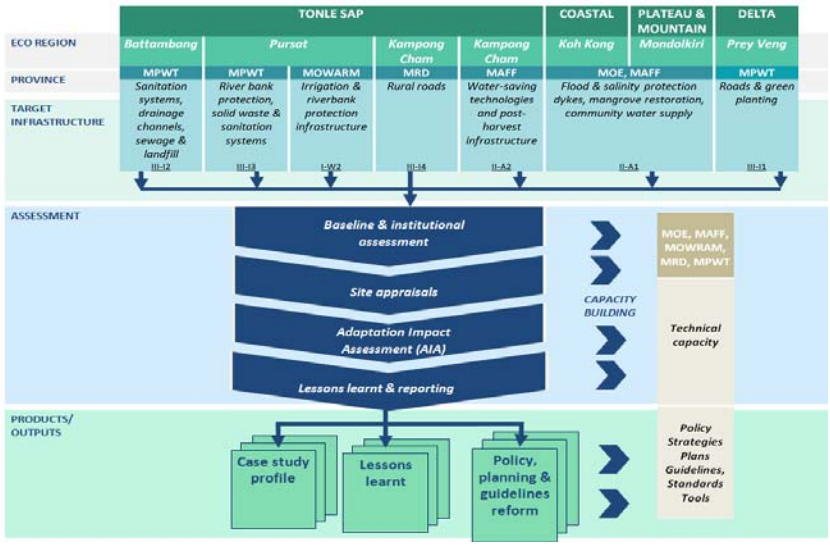
163. The varying examples of mainstreaming climate resilience into sector development featured in the SPCR investment projects are an asset for the TA. By supporting MOE and its line ministry partners to document and reflect on the diversity of methods, the TA will draw from a richer field of experience and lessons in shaping the sector and national system of climate change response.

164. The practices for mainstreaming climate resilience applied in the SPCR investment projects will be used by the TA as demonstrations for the purpose of training and skills development. The TA will record and write up these experiences and lessons learned into case studies as part of the learning process. Through regular interactions with the SPCR project staff – both within the ministries and the consultant teams - the TA will develop suggestions for needed innovations to policies, procedures and tools. Figure 4-9 illustrates the close working relationship with the SPCR investment projects, and the use of target systems to build capacity in each ministry.

165. A quarterly meeting of SPCR investment project teams has been agreed at the full day roundtable meeting of their representatives held in mid-May 2015. Such regular meetings will be used to discuss common issues and to make the necessary arrangements for visits to sites for development of case studies and for field trips for training purposes. In addition, the TA will develop field templates to structure the information gathering during site visits. The TA will also define the documentation

method to ensure lessons learnt from SPCR implementation capture the kind of information needed to address resilience-related reform measures.

Figure 4-9: Schematic of working with SPCR investment projects in 6 provinces



4.10 INTEGRATED INFRASTRUCTURE ASSESSMENTS IN SELECTED PROVINCES

166. Extensive field based activities will take place in six provinces in association with the seven SPCR projects. The field work will include training events, field assessments and case study preparations all linked to each SPCR project and involving the multi-sector AWG. The working group will have an opportunity to observe and help shape the VA and adaptation approaches adopted by each SPCR project. The AWG will also define the opportunities and obstacles which have arisen in implementation. This process will lead to the identification of lessons and needed innovations within each key ministry in terms of policy, structures and procedures.

167. In two provinces – Battambang and Prey Vang – the AWG will be supported in undertaking more comprehensive VA&AP from beginning to end as demonstration training exercises. They will focus on existing infrastructure and linked systems in need of rehabilitation and/or planned systems which would benefit from adaptation inputs from each of the ministries involved. Addressing the adaptation needs of existing infrastructure provides more practical ground for training and demonstration, and for engaging sector engineers in discussing options for rehabilitation. Then the trained AWG members will be able to replicate the assessment when planning similar systems. The infrastructure systems to be assessed would be identified by Battambang and Prey Vang local government, and their national sector counterparts, based on prioritized development interventions that integrate two or more sectors.

168. The focused and intensive assessment and planning exercises for well-defined sites and systems would serve a number of important functions:

(i) Form the main capacity building program of events, field activities and on-the-job training.
(ii) Provide assessment and planning information to prepare the six feasibility studies which are needed before developing project proposals for adaptation financing.

(iii) Create an opportunity for testing and demonstration of some of the VA&AP approaches which the group will recommend for adoption by government.
(iv) Build cross sector working linkages on integrated adaptation responses and area wide collaboration for greater resilience and sustainability in inclusive infrastructure design and development.

169. The AWG would apply a number of guiding criteria for screening development project ideas for VA&AP treatment in the two provinces.

General criteria

170. The potential adaptation projects would need to:

- Address a priority area identified in an SPCR ministry's CCAP
- Be a priority infrastructure or development category for one or more ministry
- Enhance adaptation skills in ministry technical staff
- Be suitable for global climate change fund support

Local area criteria

171. The potential adaptation projects would fall within a local area which has:

- potential as an accessible and representative demonstration for replication
- development needs identified as high priority by the provincial government
- a depth of existing information to feed the impact and VA
- allows for integrated AP and multiple contributions by all SPCR ministries

172. The VA&AP process will lead to integrated adaptation plans or "feasibility study" reports. The process of carrying out such VA&AP on selected development, whether existing systems or planned initiatives, will allow the identification of potential adaptation measures that can be developed into small pilots or feasibility studies. Using the results from such studies, more specific project proposals can be developed for funding. There will be 6 reports – at least one for each of the 5 SPCR ministries – although some might be combined into one integrated approach

173. The feasibility study reports will provide all the information needed to prepare up to 5 project concepts. Each SPCR ministry will be supported in submitting at least one concept to a target climate change fund. In the case of the GCF, a large multi-sector adaptation project proposal may be more appropriate than many smaller proposals.

174. For concepts approved by the target climate change funds, proposals will be prepared for submission by respective ministries. The TA team will seek to have all SPCR ministries involved in at least one adaptation proposal for submission. All documents will be prepared with the cross sector AWG and respective ministry CCWGs.

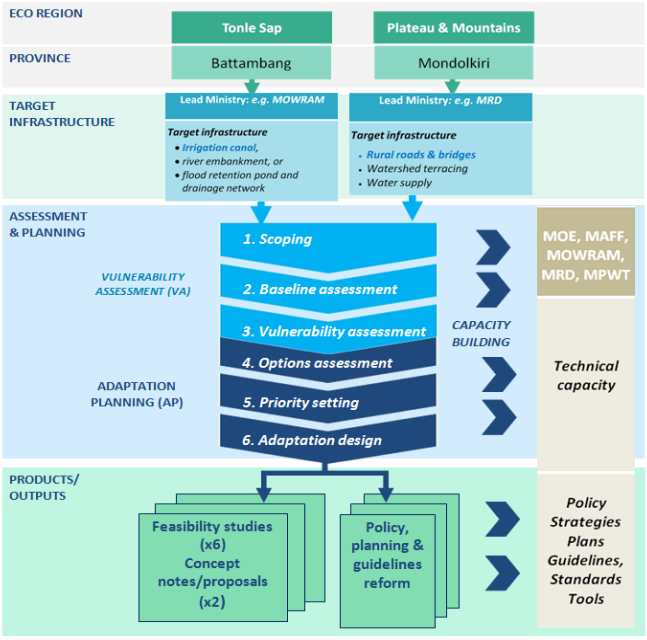
175. Through this deeper and comprehensive process, capacities will be built in ministry and local staff for conducting VAs, preparing adaptation plans and submitting proposals for support from climate change funds. This process is illustrated in Figure 4-10. The TA of MOE are working with development partners (like EU, FAO, UNDP, NGOs, etc.) on mainstreaming climate resilience into development planning.

176. The TA has 200,000 for studies and surveys linked to the development and demonstration of adaptation measures which would form part of the project proposals to be submitted to global climate change funds. During August-September 2015, the TA team is scheduled to conduct missions to the six target provinces to identify examples of good adaptation practices. That field assessment serves two purposed. First it is an opportunity to gather examples of good (and bad) adaptation measures in Cambodia to be compiled into a set of guide books for the partner ministries. Second it provides the basis for conducting in depth studies of promising measures and

potentially further demonstration as an input to the proposal preparations. The GCF, for example, requires evidence that the measures have been demonstrated and show promise if upscaled.

177. Those funds will also be used to conduct economic analysis and valuations of proposed adaptation measures as an important component of the justification for funding support and for government budget commitment.

Figure 4-10: Schematic for integrated assessments leading to project feasibility studies (the identification of Battambang and Mondolkiri are for illustrative purposes – the feasibility studies are not limited to those two provinces



4.11 ACCESSING CLIMATE FUNDS

178. Under Output 2 of the project, the team will work with the five SPCR ministries – MOE, MOWRAM, MRD, MPWT and MAFF – to prepare six feasibility studies and two proposals for submission to global climate funds. That target is specified in the Design Management Framework. This activity is an important outreach and technical support function of MOE as the climate change focal agency. The five ministries will not be in competition. Rather the approach will promote collaboration and integrated approaches where all five are involved in the six feasibility studies that will concern each of their mandates in some way.

179. The TA team will strive to support all five ministries in preparation and submission of full proposals. That might lead to five proposals – or fewer if a collaborative integrated adaptation approach is taken for some initiatives involving more than one ministry.

180. Collaboration with CCCA and GIZ: The proposal preparation will be undertaken in close collaboration with the MOE CCCA and with the GIZ team which is to commence a substantial support project for the MOE NAP preparations mid 2015. Both those projects emphasize the budgeting and funding of adaptation measures and the linked economic valuation of climate change response. Initial round table discussions have been held with CCCA and the GIZ team. A collaborative

agreement is in place including the establishment of a MOE/CCCA/SPCR task force to drive and conduct joint activities. GIZ will be brought into this collaborative framework once they are fielded. In addition, collaboration with USAID-ADAPT Asia will draw upon their experience of climate funding application.

181. Funds covered: The first activity of the task force is the preparation of an MOE knowledge product in the form of a set of briefs on climate change funds for distribution to line agencies and for use in training workshops. The template for those briefs appears as Annex 7. Funds to be covered include:

- GCF: small size project/program starts from 10 million and large project/program is up to 250million.
- CIF: small size project/program starts from less than 1 million and large project/program is up to 50 million.[9]
- Adaptation Fund: small size project/program is up to 1 million and regular size project/program is up to 10 million.
- Global Climate Change Alliance: A European Climate Fund contributes from EU member states, European Development Fund, and fast start funding.
- GEF: small size project/program starts from 1 million and large size project/program is up to 50 million.
- UN-REDD Fund: Others collaborative funds between bilaterals and multilaterals – e.g. USAID/NDF and ADB: fund sizes vary according to development partner.

182. For the adaptation project proposals, the TA will focus on the GCF with a project cost range of 30-50 million. GEF and the Adaptation Fund will also be considered.

183. Need for a strategic approach: A collaborative approach among government and development partners is especially important in seeking adaptation financing because of the need to support government to take a lead and coordinate efforts at a strategic level. To date accessing climate change funds has tended to be ad hoc and donor driven. The approach for the GEF, where MOE requested implementing agencies to submit project ideas and then put together a package, could be a strategic programming model to follow. For climate change, the largest potential source of funds will be the GCF which is likely to allocate an initial tranche of some 20-40 million to Cambodia. GIZ aims to prepare a national financing strategy and help MOE become the "National Designated Authority" for GCF. A final package for submission to GCF will be reviewed and approved by the new National Sustainable Development Council with MOE acting as the secretariat.

184. Accreditation and submission time: It can take up to two years to complete the GCF accreditation process so there is good lead time to support preparation of the GCF package. The Adaptation Fund also requires accreditation, which is a lengthy process without any associated support to government to fulfil the requirements. Since the GEF program is already set for 2016, the MOE will need to be supported in formulating the 2017 program. ADB manages funds for the Nordic Development Fund which may provide more specific and smaller scale opportunities.

185. The period for GCF accreditation and the various stages of submission may stretch over 3 years. The accreditation process will require levels of support not anticipated in MCRDP technical assistance design. The TA will not directly assist the accreditation process and will depend upon GIZ and CCCA to ensure accreditation across a number of funds.

186. Adaptation project feasibility studies: The SPCR TA will involve the ministries in a series of VA&AP exercises in target provinces as the foundation for the feasibility studies and adaptation project

[9] Since the CIF have already provided funds for PPCR, it is unlikely that additional funds will be forthcoming for Cambodia from this source.

proposal development. The six assessment and planning processes will build capacity at national and local levels and facilitate an integrated adaptation approach in project design.

187. **Economic valuation and assessment**: Initial discussions have been held with CCCA to collaborate in conducting economic valuations linked to the feasibility studies and to work the CCCA is initiating with MAFF and MPWT. More detailed discussions are needed to define the precise collaborative arrangements for those assessments. At this stage the TA team does not include economics expertise.

4.12 CAPACITY BUILDING

4.12.1 Principles for capacity development

188. A number of guiding strategies drive our approach for capacity development. These include:

(i) **Support implementation of the CCAPs developed for each ministry.** Each of the key ministries and some of the other SPCR ministries and agencies have developed CCAPs. The content is overall quite general and does tend to identify adaptation as something parallel to not integrated with the core sector development mandates. The CCAPs do provide detail on systems, skills and supporting documents that require climate proofing. The CCAPs are an appropriate starting point for identifying a focus for capacity development. They provide an agenda for activities, some of which can be supported through collaboration with TA. Activities would be identified through AWG members.

(ii) **Working with the CCWGs in each ministry.** The CCWGs in each ministry, established to develop the CCAPs, provide the natural focus for our work, and 3 representatives from each CCWG will join the SPCR AWG. As the awareness and skills of this group is expanded, they will be involved in the training and skills development of a wider group of staff in each ministry.

(iii) **Focus on the 5 key ministries, but include all ministries represented on the SPCR Coordination Committee.** While the main focus is on ministries responsible for the target sectors of water, agriculture and road and urban infrastructure, and the host ministry – MOE, other SPCR ministries have important contributions to make at different stages of the development process. Those ministries will be engaged in TA activities, for example, in the SPCR AWG, in field visits and VAs, and in training activities and awareness workshops. It will be necessary to hold specific round table meetings with those ministries to address climate resilience in their systems. In addition, agencies such as MOWA and NCDD already have guidelines, experience and institutional arrangements for climate change and much to share with other line agencies.

(iv) **Target and tailor the capacity development to the specific needs of each ministry and its departments.** There is not a one-approach-fits-all for integrating climate resilience into the different sectors. There are a number of tools that can be applied e.g. for screening, VA&AP, but these should fit the needs of each ministry and the distinct mandates of each department. This requires a detailed understanding of functions and programs of each administrative unit to ensure tailor made climate resilience strategies.

(v) **Trialing the different tools and learning by doing in field situations.** One of the best ways of developing capacity is through the practical experience of doing these tasks in a real development planning situation, e.g. through the integrated infrastructure assessments in selected provinces. These experiences will lead to a refinement of the tools to fit the needs of the sectors. It will also lead to recommendations for policies, systems and instruments, such as guidelines.

4.12.2 The 7S approach

189. This SPCR TA is focussed on mainstreaming climate resilience into three sectors in Cambodia – water resources, agriculture, infrastructure – transport (provincial and rural roads), and urban development (water supply and sanitation).

190. The usual response to capacity needs assessment is to identify the skills and technical support that the sector staff require – the gaps in their knowledge, attitudes and practice. These gaps are then addressed through guidance and manuals and through skills training exercises. The underlying assumption is that if the staff are provided with those skills, then building climate resilience into the development plans and projects will become normal practice throughout the sector.

191. However, strategies for mainstreaming climate resilience go beyond providing staff with training. Often each sector has institutional and policy obstacles to building climate resilience which may be as important as the limitations in individual capacities. As a key activity during the inception phase, a systematic analysis of the institutional capacities of national sector agencies was used to establish strong working relations with partner agencies, to raise awareness on issues and capacities required for adaptation, and to develop a well-focused and responsive plan for implementation of the TA.

192. The TA team developed a framework of analysis for assessing institutional capacities, known as the 7S framework[10], which considers 7 components of capacity. The Capacity Needs Assessment is provided in the separate Annex 8.

1. Strategy – The direction and scope of the agency over the long term
    a. Presence and implementation of approved climate change strategies and action plans for the sector
2. Structure – the basic relationships of the organisation to implement the CC strategies and action plans
    a. CC Coordination within the ministry
    b. Identification of CC roles and responsibilities within key departments
3. System – the formal and informal procedures that support the CC strategy and structure.
    a. The procedures, processes and routines that characterise how the CC work should be done, i.e. financial systems, recruiting, promotion and performance appraisal, information systems, budget systems
    b. Screening and checking of CC resilience
    c. M&E systems
4. Style – how key managers support the implementation of the CCAP
    a. The understanding of CC resilience and support by senior staff
5. Staff – the agency's human resources and how they are developed, trained and motivated
    a. Capacity of staff required to implement CCAPs
    b. Incoming professional staff
    c. Job descriptions
6. Skills – the capabilities and competencies for CC resilience within the ministry and its departments
    a. Skills needed to implement CCAPs
    b. Skills needed to develop CC resilient projects
7. Support – the knowledge management, data, guidelines and manuals provided to support the staff in implementing CCAPs
    (i) Manuals, guidelines and tools
    (ii) CC data, maps and sources of information

[10] Adapted from Stephen, P. and Triraganon, R. (2009) Strengthening Voices for Better Choices: A capacity needs assessment process. IUCN, Gland, Switzerland. Note that the 7th S was listed as "Shared values" - The TA team changed that capacity component to "Support".

193. This structure was used as a framework to guide the review of earlier capacity needs assessments for climate change in Cambodia and to conduct a fresh comprehensive capacity assessment targeting mainstreaming of climate resilience into the key SPCR ministries. We have structured the resulting capacity strengthening approach and plan for the SPCR TA to address the needs identified in the assessment.

4.12.3 Methods used for focused capacity needs assessments

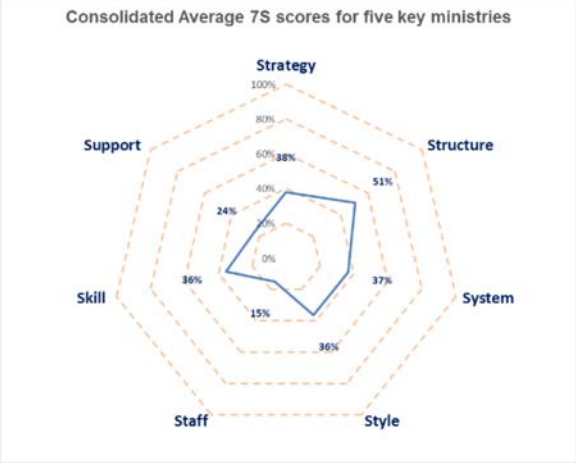
194. The methods used for the capacity needs assessment have drawn on earlier studies, including the Hatfield study in 2014 and other studies done for the CCD and CCCA. These earlier efforts have usually produced rather generalized statements about the lack of capacity to mainstream climate resilience, and have then focused on training needs.

195. For this TA, we have approached the wider institutional capacity to mainstream climate resilience using the 7S system of analysis. We developed a questionnaire with 30 questions covering each of these aspects, which are scored on a range of 0 – 10 (none – a little – some – a lot – full). A number of the questions were designed to cover similar indicators to those used in the CIF annual monitoring and reporting, so that capacity needs assessment and M & E efforts can be combined.

196. These questions have been applied in all of the five key ministries as well as the six SPCR supporting ministries as a process of self-assessment during the round table meetings. The dialogue within these meetings around the evidence for the self-assessed scores is important because it provides a rationale for the scores and identifies potential leads for addressing capacity needs. After the round tables, the score sheets and evidence were consolidated by the team and then reviewed by each ministry for validation.

197. The results of these scores are expressed in a spider-web diagram for each ministry. Figure 4-11 shows the average scores for the 5 key ministries. The scores for individual ministries are analysed in the capacity needs assessment report which forms Annex 8 of this inception report. The outcome of the MAFF CBNA conducted at the roundtable meeting is presented in Box 4-2.

Figure 4-8: Consolidated spider web-diagram of the average 7S scores for 5 key ministries



198. The 7S analysis serves several purposes:

(i) It allows the strengths and weaknesses in institutional capacity to be identified. Combining this framework with reviews of critical strategic documents such as the CCAPs for each

ministry results in a capacity building plan that addresses relevant competencies and institutional transformations.

(ii) It provides a self-assessed measure of capacity which can be used for monitoring the progress. For example, the use of the scores for the 7s questions provide a baseline. Using this same exercise at mid-term and end of project will provide a good M & E indicator for "institutional capacity strengthened".

(iii) The results can also be used to provide evidence for the CIF reporting requirements on an annual basis.

199. The CBNA report in Annex 8 identifies the approach and potential actions of the capacity building plan for each of the key ministries and where appropriate the interventions planned with the other six ministries or national committees. Box 4.2 summarises the results for one ministry (MAFF). The summary of the CBNA analysis using the 7S headings is shown in Table 4-5.

Box 4-2 : MAFF 7s questionnaire results

Strategy (34%) - The overall rating for the five questions on strategy was estimated to be "a little". The higher-than-average rating was due to the fact that MAFF had both a strategic plan and a CCAP. It is still 'a little' because of the lack of resources and manpower to take the plans forward. The ministry felt that TA 8179 could assist to further develop the various projects under the CCAP.

Structure (65%) - The overall rating for the two questions on structure was estimated to be "a lot" which was due to the fact that a coordination mechanism existed in the form of the technical working group on climate change (CCWG) which was deemed to be working well.

Note: Dark blue outline represents the scores for the Ministry; Green shape represents the average scores for five key

System (26%) - The overall rating for the five questions on system was estimated to be "a little". This result reflected insufficiency of the checks to ensure that climate change resilience was included in plans and that no proper M&E system existed. MAFF did have consultations with the general public through NGOs and the private sector. Some departments, in particular the department of planning and statistics, were involved formally in EIA or similar processes and integrated climate resilience assessments. Interestingly the department of agriculture did not do so.

Style (58%) - The overall rating for the four questions on style was estimated to be "some" which was a moderate ranking due to the fact that: (a) MAFF senior staff understand CCAPs; (b) agree that CC resilience is an essential element even if it is not set as a priority; (c) staff considered that they had enough time but that the necessary resources were lacking; and (d) sufficient policy drivers existed to promote climate change mainstreaming.

Staff (19%) - The overall rating for the four questions on staff was estimated to be "a little" because of so few staff dedicated to or experienced in climate change. Also, there was a limited capacity of newly recruited staff in terms of climate change awareness. Job descriptions do not include climate resilient aspects as it is considered a new concept for MAFF. Furthermore it is not recognised as an important part of staff performance assessments.

Skill (35%) - The overall rating for these four questions on skill was estimated to be "some". This rating was a result of the fact that the skills level was deemed to be low in areas such as crop variety breeding, crop modelling, agro-climate, soil, and water technologies. However, some short courses have in the past been provided in some aspects of climate resilience and adaptation. MAFF staff were aware of where to source information, but it was noted that while staff are able to prepare project concepts, they have generally been assisted by external consultants.

Support (15%) - The overall rating for the six questions on support was estimated to be "a little" which was a result of the fact that there was little in the way of manuals and that most support had been provided with

outside assistance. Very little in the way of tools and cc related data was available in MAFF, either for assessing climate resilience or for appropriate economic and financial analysis. MAFF has some communications platforms through the CCWG and farmers field days, but this is insufficient. A number of relevant case studies related to CC exist in all sectors.

Table 4-5: Summary of the CBNA analysis for each agency according to the 7S headings

Ministry	7S Topics						
	Strategies	Structures	Systems	Style	Staff	Skills	Support
MoE							
Approach	Support CCD in implementing CCCSP and CCAP for MoE Work with issues arising out of the CCAP for MOE	Support departments within the new structure of MoE to implement their responsibilities for CC		Assume that understanding and commitment to climate resilience is strong in MoE			
Action	Identify issues when for action when CCAP for MoE is released Work closely with CCD and CCCA on areas of mutual interest	In particular work with EIA, GIS, Environmental Education, Environmental Information and Communication and Nature Protection and Conservation Departments	Contribute to development of EIA law and environmental code	No specific action	No specific action	Skills training for EIA department staff in appraisal of climate resilience in EIAs from sector agencies Include CCD and other department staff in field work and sectoral vulnerability assessments and development of adaptation options	Assist in development of guidelines for climate resilience inclusion in EIAs of development projects Strengthen GIS approaches to manage climate data Strengthen climate resilience database and information systems in MoE
MoWRAM							
Approach	Use CCAP for MOWRAM to identify areas for collaboration	Work with CCWG and its coordination with existing departments within MOWRAM					
Action	Work directly with CCWG and SPCR project	Linking CCWG with Water and Agriculture working group – possible identification of CC project proposals	Identify internal systems where CC could be introduced – EIA and internal design checking and climate monitoring of water sector structures and projects	Working through the CCWG of MOWRAM to strengthen understanding and support for climate resilience	Work with CCWG to Identify which departments need staff with different CC related skills. Develop job descriptions and performance criteria for these positions and for new staff	Field vulnerability assessments with staff to tailor to needs of water sector Targeted trainings in vulnerability assessments specific to water sector Development of skills in climate	Develop manual of best practice adaptation options for water sector projects Guidelines for vulnerability assessments in water sector Support development of Climate Resilience Standard of Operation

Ministry	7S Topics						
	Strategies	Structures	Systems	Style	Staff	Skills	Support
						change proposal preparation	Increasing accessibility for climate and flood information systems
MAFF							
Approach	Use CCAP for MAFF to identify areas for collaboration. Focus on agriculture, though forestry and fisheries may also require collaboration	Work with CCWG and its coordination with existing departments within MAFF					
Action	Work directly with CCWG and SPCR projects Draw upon lessons learnt from SPC R projects, adaptation options and recommendations for policy instruments	Linking CCWG with Water and Agriculture Working Group – possible identification of joint CC project proposals	Recommend systems for considering CC in EIA procedures. Suggest internal checks for ensuring Climate resilience is included in project design	Working through the CCWG of MAFF to strengthen understanding and support for climate resilience within ministry	Work with CCWG to Identify which departments need staff with different CC related skills. Develop job descriptions and performance criteria for these positions and for new staff	Field vulnerability assessments with staff to tailor to needs of agriculture sector Targeted trainings in vulnerability assessments specific to agriculture sector Development of skills in climate change proposal preparation	Review guidelines and manuals for assessing climate vulnerability used by projects, and develop standard manuals Develop manual of best practice adaptation options for agriculture (forestry, fisheries) sector projects Strengthen access to agro-climatic data and link with other climatic databases
MPWT							
Approach	Use CCAP for MPWT to identify areas for collaboration	Work with CCWG and its coordination with existing departments within MPWT					
Action	Work directly with CCWG and SPCR projects Contribute to	Work directly with CCWG and SPCR projects. Focus on	Strengthen application of climate screening tools for assessing	Working through the CCWG of MPWT to strengthen understanding and	Work with CCWG to Identify which departments need staff with different	Field vulnerability assessments with staff to tailor to needs of roads and	Review guidelines and manuals for assessing climate vulnerability used by projects, and

Ministry	7S Topics						
	Strategies	Structures	Systems	Style	Staff	Skills	Support
	development of CCAP for urban infrastructure Draw upon lessons learnt from SPCR projects, adaptation options and recommendations for policy instruments	Department of Planning for climate resilience work	climate resilience of projects Recommend systems for considering CC in EIA procedures. Strengthen M & E systems for climate resilience in infrastructure Suggest internal checks for ensuring Climate resilience is included in infrastructure design Strengthen systems for maintenance of infrastructure as a climate resilience measure	support for climate resilience within ministry	CC related skills. Develop job descriptions and performance criteria for these positions and for new staff	urban infrastructure Targeted trainings in vulnerability assessments specific to roads and urban infrastructure sector Development of skills in climate change proposal preparation	contribute to drafting of standards and manuals Develop manual of best practice adaptation options for roads and urban infrastructure projects Strengthen access to relevant climate change and hydrological data and links with other climate databases
MRD							
Approach	Use CCAP for MRD to identify areas for collaboration	Work with CCWG and its coordination with existing departments within MRD					
Action	Work directly with CCWG and SPCR project Contribute to development of CCAP for rural infrastructure Draw upon lessons learnt from SPCR projects, adaptation options and recommendations for policy instruments	Work directly with CCWG and SPCR projects. CCWG to identify most relevant departments with which to work, e.g. Social and Environmental Office	Strengthen application of climate screening tools for assessing climate resilience of projects Recommend systems for considering CC in EIA procedures. Strengthen M & E systems to include climate resilience in infrastructure	Working through the CCWG of MRD to strengthen understanding and support for climate resilience within ministry	Work with CCWG to Identify which departments need staff with different CC related skills. Develop job descriptions and performance criteria for these positions and for new staff	Field vulnerability assessments with staff to tailor to needs of rural roads and water supply Targeted trainings in vulnerability assessments specific to roads and water supply sector Development of skills in climate change proposal preparation	CCAP identifies many guidelines, policies and manuals for review, and technical specifications Review guidelines and manuals for assessing climate vulnerability used by projects, and develop standard manuals Develop manual of best practice adaptation options for

Ministry	7S Topics						
	Strategies	Structures	Systems	Style	Staff	Skills	Support
			Suggest internal checks for ensuring Climate resilience is included in infrastructure design Strengthen systems for maintenance of infrastructure as a climate resilience measure				rural roads and water supply projects Strengthen access to relevant climate change data, hydrological data and links with other climatic databases
MEF							
Approach	Waiting for the start of the CCCA support agreement on climate strategy and action plan	CCCA agreement identifies 4 departments, though only 2 will be involved with the work. Most development partners work through the Department of International Cooperation	No systems in place as yet	No management for climate resilience in place	No staff with specific duties for climate resilience		SPCR Investment project on Rice commercialisation
Action	Provide advice through involvement of MEF in AWG	Work initially through AWG representative	Supporting the climate change finance framework	Increase understanding of senior staff through work with MEF representative on AWG	Support for staff involved with developing CC strategy and action plan Involvement of the Institute Economy and Finance (IEF) for developing trainings suited for MEF	Using the CPEIR results and methods for M & E indicators	Developing guidance materials for climate resilience in national economic planning Support and documentation of SPCR project with MEF and MAFF
MoP							
Approach	Work with CCWG						
Action	Clarify interpretation of 7S questions to identify actions	Work with CCWG focal person on best way to strengthen climate resilience in		Strengthen understanding of the requirements of climate resilience in		Involve CCWG focal person to take part in field trips and vulnerability	Make use of MoP's database on natural calamities

Ministry	7S Topics						
	Strategies	Structures	Systems	Style	Staff	Skills	Support
		their work		development projects and role of MoP in their planning and approval		assessments	
MOWA							
Approach	Build on strengths of MOWA in application of climate resilience planning	Work with MOWA's GCCC					
Action	Contribution to revision of master plan for mainstreaming gender impacts of climate change, e.g. how these relate to sectoral development planning	Learn and draw up case studies of integrating gender considerations into climate change adaptation and other projects			Involve representatives from MOWA staff in field visits and vulnerability assessments	Utilise TOT curriculum on Gender Impacts of Climate Change into Development Plans in work with other sector agencies	Contribute to guideline on mainstreaming gender impacts of climate change into multi-sectoral development plans Use MOWA's guidelines for gender-inclusive resilience planning in sector agencies
CDC							
Approach	Understanding the role of CDC in coordination and approval of sectoral development projects, and relating climate resilience in this						
Action	Ensure that sector CCAPs are reflected in the plans and projects put forward for approval by CDC		Developing criteria for assessing climate resilience in sectoral investment projects	Developing the understanding of senior staff about the importance of climate resilience in development projects	Identify the technical requirements for staff to coordinate and appraise climate resilience in projects	Developing skills for appraisal of climate resilience in investment projects	Contribute to work with CDC/MoE on guidelines for EIAs in investment projects
NCDD							
Approach	Build on projects and work already						

Ministry	7S Topics						
	Strategies	Structures	Systems	Style	Staff	Skills	Support
	carried out at sub-national level						
Action	Consider case studies and adaptation options that have arisen from these CC project implementation	Work through NCDD CC working Group and climate change advisor at national level, and PMSD	Draw upon and learn from VRA and other tools that have been used		Involve staff in the relevant SNAs during field visits and vulnerability assessments	Use training manual for guideline on mainstreaming CC into sub-national planning with other sectors	Work with Guideline on mainstreaming climate change into sub-national planning development. A training manual for this guideline is also completed.
NCDM							
Approach	Working through the NAP – DRR strategy 1	Using NCDM's mechanisms for sub-national work	Ensure use of MOWRAM/MoE data		Recognise coordination functions of NCDM and strengthen partners inclusion of DRR		
Action	Integration of CC into DRR and helping sector agencies to incorporate DRR into improved design and operation and rehabilitation after disasters	With working group for CC and Dept. of Training and Human Resource Development	Strengthen CC data and vulnerability assessment of MOWRAM and MoE Encourage application of DRR in screening tools and EIA processes	Demonstrate use of data & tools to strengthen management effectiveness		Provide training in use of CC data and application of CC vulnerability assessment to DRR	Development of specific guidance on incorporating CC into DRR planning for sector agencies

4.12.4 Developing the capacity building plan

200. The outline of the capacity building plan for each ministry needs to be fleshed-out through further discussions with the CCWGs and with key departments within each ministry. For example, sector teams from the TA will work with CCWGs to identify the key departments which have the most direct need to incorporate climate resilience in their activities. The teams will identify the tasks for which the key departments are responsible, and which are likely to require climate resilience considerations.

201. There are three levels of capacity building:

(i) First at SPCR Coordination Team Members. They will learn by doing, studying the implementation of SPCR activities.

(ii) The second level will work at the level of the AWG.

(iii) The third level provides a link with Plan International Cambodia and TA supporting NGOs and CSOs.

202. These tasks might cover elements of the full project cycle. For example, as shown in the SAPA diagram in Figure 4-2, some of the tasks may include:

(i) Screening to identify the climate threats and how these affect site selection for project development;
(ii) Applying climate change analysis to compare options for project development;
(iii) Stakeholder consultation processes that consider climate change impacts;
(iv) Environmental Impact Assessment of projects showing results of climate change vulnerability and adaptation.
(v) Preparation of project proposals with financial analysis justifying adaptation options, and presentation for approval to government agencies such as CDC and MEF.
(vi) Detailed engineering and hydrological designs incorporating CCA standards
(vii) Construction – quality control and compliance with adaptation standards
(viii) Operations and Maintenance – including emergency procedures for extreme events
(ix) M&E of the performance of adaptation measures applied.

203. In discussing these tasks with the key departments, the TA teams would identify the different types of tools and data requirements that may be used both for analysis of the climate threats and the identification of different adaptation options that may be considered. The menu of tools would be drawn from international best practice.

204. Some of these tools and data sets will be useable directly, but others would require tailoring to the specific set of tasks carried out by the departments.

4.12.5 Methods for building capacity

205. The development or tailoring of tools and application of climate data, and identification of adaptation options is considered to be an essential part of the capacity building process. Two main sources for this will be used, both experience-based:

(i) Working with the SPCR investment projects – drawing upon their experience, developing case studies and identifying areas for refinement of the guidelines and manuals.
(ii) Integrated infrastructure assessments in selected provinces where detailed multi-sectoral vulnerability assessments and adaptation options will be undertaken with staff from key departments from the different ministries.

206. Those sources will enable the tools and data requirements to be tailored to the needs of each ministry, so that appropriate manuals and guidelines can be prepared. Standards of design and operation may also be revised to include climate resilience.

207. Focused training and orientation sessions would be an important part of the development of the tools in the earlier stages. The reform process would also include formal trainings and orientation

workshops for the wider staff within each ministry. These trainings would draw on case studies and examples developed throughout the project.

4.13 KNOWLEDGE MANAGEMENT, COMMUNICATIONS & STAKEHOLDER ENGAGEMENT

208. Output 4, Climate change adaptation knowledge products developed and disseminated, will utilise the activities from outputs 1 and 2, including best adaptation practices from SPCR investment projects to develop knowledge products, and conduct sector-specific information dissemination and awareness-raising activity. The project team will periodically draw together lessons learned from the demonstration activities in the first work stream to develop knowledge communications products and systems to inform stakeholders and the broader public about the project's activities and the value of efforts to enhance climate change resilience.

209. The approach will emphasize engaging with ministries and key stakeholders involved in the TA's themes – agriculture, water resources management, urban and transport – and developing multi-media communication and knowledge products that address their information and capacity development needs. Sources of information and knowledge will include SPCR investment projects, MOE's and key ministries' CCWGs, the SPCR AWG, other TA 8179 packages, and other stakeholder groups.

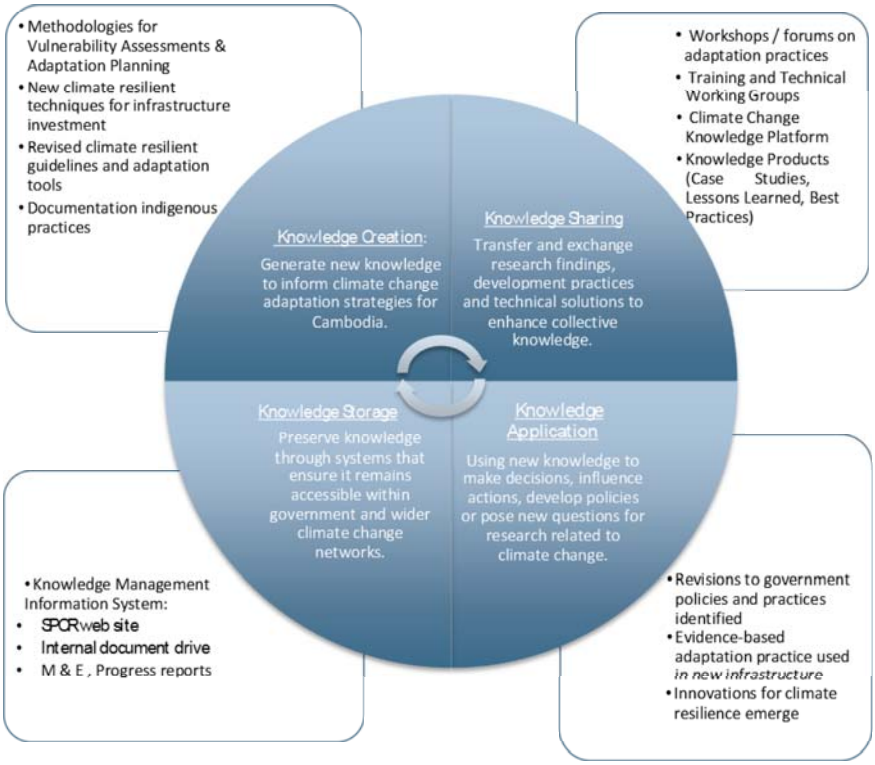
210. The detailed information on the implementation approach for knowledge management is outlined in the separate Annex 9 Knowledge Management, Communications and Stakeholder Engagement Strategy. The approach will also include distilling the project's learning and experience from the case analyses of SPCR investment projects into a resource kit on indigenous approaches to climate resilience. The project will engage with universities to build capacity for teaching climate change. The approach to integrating climate change into curriculum will build on knowledge generated by MCRDP, as well as curriculum materials developed by other climate change programs in Cambodia.

4.13.1 Knowledge Management and Communications

211. The TA MCRDP, and the SPCR investment projects, as they come into effect, will generate new knowledge on CCA and climate resilient planning approaches. The key objective of the knowledge management, communication and stakeholder engagement strategy is to store, share and support the application of knowledge products from TA MCRDP and some best adaptation practices from SPCR investment projects. An illustration of how key knowledge management definitions are applied under this TA is presented in Figure 4-12.

212. Within the framework of generating, storing, sharing and applying new knowledge, the overall result targeted by the Knowledge Management, Communication and Stakeholder Engagement Strategy is to ensure that Climate change adaptation knowledge products are developed and disseminated. The activity also includes working with universities to update curriculum on climate resilience.

Figure 4-12: Application of key knowledge management definitions



4.13.2 Generating knowledge products

213. The TA will develop knowledge products to share the results of the TA to stakeholders, users and the public. New knowledge will be created by the various activities under Output 1, by Activities 2.2, 2.4, 3.4, and 4.4 and 4.5. The TA will produce a series of knowledge products that document the MCRDP outputs and deliverables including guidelines, technical reports, policy recommendations, GIS maps, and feasibility studies.

214. For example under Output 2, the project team will produce a series of 14 technical reports on a range of topics related to specific Package 1 activities. These reports will constitute the key knowledge products to come from the project. Other knowledge products include a series of adaptation measures guides – one for each sector – and one on indigenous and traditional adaptation practices. The TA will identify ways to disseminate new knowledge and information from SCPR and MCRDP through multi-media formats both online and in hard copy with a strong focus on making information available in Khmer.

4.13.3 Storing knowledge - Knowledge Management Information System

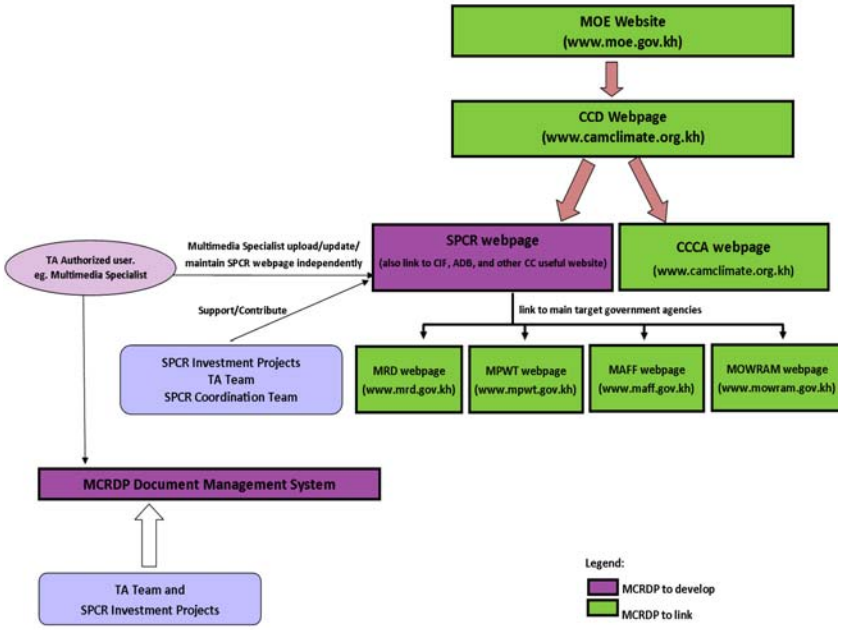
215. The MCRD/SPCR Knowledge Management and Information System (KMIS) is being developed as part of this TA to ensure effective storage and sharing of knowledge products and communication tools within the primary stakeholder group of MCRDP, across the SPCR program, and with other stakeholders in Cambodia concerned with CCA programs. The KMIS will support the creation,

collection/storage, and sharing of information and knowledge in keeping with the overall knowledge management strategy.

216. The KMIS is an online platform to manage and disseminate the project information, communication tools, and knowledge products that will be generated over this program's life time. It will have two key platforms: i) the SPCR website (English and Khmer) for internal and external access to MCRDP and SPCR information and publications and ii) a cloud-based drive (Google Drive) for managing documents, excel-based monitoring data and GIS data within the TA team, MOE and across ministries. The visual illustration of KMIS is provided in Figure 4-13.

217. The KMIS will focus on sector-specific CCA knowledge and will build on and feed into other knowledge management platforms being developed within and outside of MOE. By providing access to knowledge products and information, the KMIS will form an integral part of the project's capacity building efforts, providing sustainable access to tools and information sector stakeholders need to apply the project's approaches.

Figure 4-13: Diagram of Knowledge Management Information System



4.13.4 Sharing Knowledge - Communicating results and best practices

218. The TA has developed a Communication Action Plan to identify how it will disseminate knowledge and information to stakeholder groups through online, print and video formats. Communication and awareness-raising activities will be designed to develop a sense of legitimacy about climate resilience planning with key Ministry stakeholders involved in SPCR as well as with their stakeholder groups such as NGOs, private sector contractors, local government officials, agri-businesses, water user associations, farmers' associations, and other community groups. Communication and awareness activities will be designed to be practical, engage government officials in planning outreach to their stakeholder groups, and be within the bounds of the resources of this project.

219. The planning and implementation of dissemination activities in relation to best practices and policy recommendations will reinforce capacity-building with the government AWG and contribute to their taking ownership over project outputs by their direct engagement in disseminating these to their key stakeholders.

220. The SPCR web site will be one of the key platforms to share knowledge with all TA activities, and new updates, photos and knowledge products will be regularly featured on the site. Print and video series (newsletter, briefs and video case studies) will be developed to target key ministries primarily along with other stakeholders working in MCRDP sectors. Outreach to the general public will be through contact with print, TV and radio media officials to invite them to key activities and encourage coverage of MCRDP's main workshops and other events. The MCRDP Knowledge Management team will also identify major conferences, exhibits and national days related to environment and disseminate information about the TA through MOE hosting and/or participation in such events.

4.13.5 Curriculum development

221. The MCRDP Technical Assistance Report identifies the need to update secondary and tertiary curriculum to mainstream climate change. The curriculum activity will be a key element in ensuring the legacy of the project in embedding knowledge on climate change in the education system and developing a new crop of technical experts to support future climate change mainstreaming efforts. During the inception period, the TA has identified that a number of initiatives have been undertaken to integrate climate change curriculum in secondary level as well as in universities.

222. For secondary level, Plan International has supported the Ministry of Education, Youth and Sports Department of Curriculum Development to develop and pilot course materials on climate change as well as train teachers. The CCD through CCA's Phase I has supported the DCD in MEYS to prepare a framework for integrating climate change into curriculum. Phase II of CCCA will provide MEYS with support to implement this framework as the Curriculum Development Department undertakes a planned national curriculum revision. CCCA/CCD will support the MEYS to organize a working group to draw on various technical resources to integrate climate change into revised national curriculum. MCRDP will participate in the working group to provide advice and technical inputs. From the participation in this collaborative working group, the national Knowledge Management Specialist will identify specific activities where MCRDP's contribution will enrich the planned climate change secondary curriculum content and/or teaching tools.

223. As with secondary level, a number of climate change programs have already worked with universities to develop modules on climate change and CCA for integration into university curriculum. These modules include introductions to climate change, as well as a series of modules on CCA (with a focus on agriculture) and on climate change mitigation (with a focus on land-use planning and conservation).

224. At university level, the TA will seek ways to build on past curriculum initiatives and enhance learning on climate change. As illustrated in Figure 4-14, developing modules on climate change is one of a number of entry points for enhancing learning on climate change at university level. The activities to be undertaken to enhance initiatives to develop climate change curriculum will include:

    (i) Developing more specialized modules than what has already been developed, in particular at the master level; this may include adding on to the CCA modules developed by the Royal University of Agriculture to focus on specialized areas of agriculture, forestry or fishery science; it may also include supporting the Royal University of Phnom Penh to develop courses for its planned Master of Climate Change;

    (ii) Training lecturers to teach on climate change so that they are able to effectively transfer knowledge from newly developed modules;

    (iii) Produce student learning materials to accompany climate change curriculum modules, include learning materials developed through faculty-student field research projects;

(iv) Create climate change curriculum network/working group to enhance, update and share curriculum content across universities

Figure 4-9: Entry points to enhance learning on climate change

225. The specific initiatives to be supported will be developed in more detail through interaction with key university representatives. The MCRDP will develop an action plan with key institutions (Royal University of Agriculture, Royal University of Phnom Penh) outlining key results to be achieved in enriching student learning on climate resilience, specific activities to be undertaken and how these actions will be supported by the universities, MCRDP and other development partners.

5 CLIMATE CHANGE PROJECTIONS AND VULNERABILITY ASSESSMENT

5.1 EARLIER CLIMATE CHANGE STUDIES AND PROJECTIONS

226. There has been a series of important studies to understand the impacts of past and future climate change on Cambodia commencing in 2001 with the MOE study of climate change vulnerability[11] followed in 2002 by the First National Communication under the United Nations Framework Convention on Climate Change. Those studies over 15 years include regional downscaling and VAs and a number of national and provincial assessments in Cambodia which have drawn down on the regional projections and adjusted and interpreted the data against local historical patterns. A more detailed paper on Cambodia climate projections is provided in the separate Annex 10.

227. Each study has progressively improved the level of knowledge of anticipated climate changes in Cambodia and their potential impacts. They have also created uncertainties concerning the most appropriate methods, tools and projections to use in development planning across all arms of government. The reason for that increasing knowledge but uncertainty on the way forward is that each study has used different data sets, models, analytical methods and scenarios leading to different projections. This reflects the evolving nature of climate change science and improvements in understanding of how the global atmospheric system will respond to increasing C02 levels, but also changing assumptions of rates of increase in C02 emissions. Consequently, the models used have improved since the first downscaling work and data sharing in the region by SEA START in 2006. For example, projections for rainfall in the Mekong Delta during the dry season have changed substantially from increases to reductions.

228. The key challenge across climate change projections generated for Cambodia are that most of the initiatives tend to be project based and do not make data and methods easily accessible on an all of government basis and also do not undertake comparative analysis with other projections to explain variation in results.

229. The progression of studies and their key characteristics and implications for Cambodia and this MOE project is described in the next section. They have involved the Mekong River Commission working with SEA START and then CSIRO during 2008 to 2010 on regional projections. UNDP with support from Oxford University conducted CC projections for Cambodia in 2008. More recently, CSIRO has worked with the Vietnamese Institute for Meteorology, Hydrology and Environment (IMHEN) on national and Mekong region downscaling. The 2014 CSIRO-IMHEN work is the latest raw data sets available for the Mekong region and represents the only dataset consistent with the latest Intergovernmental Panel on Climate Change (IPCC) global climate change scenarios.

230. Aalto University (Finland) has also generated an important set of statistical downscaled data from 1980 to the end of the 21st century. This data set has informed a wide range of studies in the Mekong.

231. ICEM has worked with Aalto University and MRC in 2011 and then on the USAID funded ARCC study in 2013 in extending this downscaled data through the use of hydrological and hydraulic models that also allow for quantification of other climate-threat parameters such as flooding, drought, landslide risk, soil moisture and river discharge. These efforts greatly extend the scope and utility of the threat projections to parameters that are more relevant to sector engineers than simple temperature and rainfall changes. VAs arising from the ICEM-Aalto collaboration are amongst the most robust VAs for the Lower Mekong and have been cited in the latest IPCC reports (Assessment Report 5).

[11] Ministry of Environment, 2001: Vulnerability and Adaptation Assessment to Climate Change. Ministry of Environment, Phnom Penh, Cambodia.

232. There have been other earlier initiatives to extend climate change projections through the use of hydrological models since 2011including those by University College London, Otago University and University of Canterbury amongst others.

233. In 2014, some original climate change and hydrological modeling work was done for Cambodia as part of the ADB supported Rural Roads Project in the MRD. Also, provincial level assessments for Cambodia have been conducted by CSIRO, Hatfield, ICEM and others with similar variations in results.

234. The main lessons from all this work is that the modeling and projections are improving and, most important, it is the trends and ranges in change that need to be considered for development planning – and not only the specific projections.

235. Another important lesson is that most of the studies are not particularly sensitive to the end user – i.e. the development agencies that need to accommodate climate change in the design and management of their investments. There have been few links between the climate change study groups and the design engineers to work through what is needed to decide, for example, how high the bridge, what materials for the slopes, how large the drainage pipes, and how large the sediment trap in the irrigation system. In this project we have an opportunity to change that – both through the SPCR investment project and in developing the portfolio of adaptation projects.

236. The other lesson is that regional and even national and provincial climate change assessments are not necessarily of immediate use to the site-specific requirements of a road construction team or a bridge builder. To properly inform project design and implementation, that requires more focussed area-specific assessment, especially hydrological modelling so engineers can see how the projected climate change plays out in their location of interest. Ideally, climate change and hydrological assessments need to proceed in an integrated way at the regional, national, provincial and local levels so adequate and consistent information is available for planners dealing with any scale of project.

237. That system is going to take some time to establish – although many of the components are beginning to take shape. In the meantime Cambodia needs to move ahead in setting up a national system while more specific provincial and local assessments happen on an ad hoc basis, driven by TORs which require it to be done – as is the case for the SPCR projects. That kind of trial and error and learning will lead to a stronger and better informed system in the long run.

5.2 CLIMATE CHANGE AND HYDROLOGICAL MODELLING AND GIS TOOLS

238. This project is founded on the need to provide infrastructure and development agencies with consistent and up to date information on climate change and associated hydrological effects so they can build that into their VA&AP, their policies and procedures and into their design standards and development priorities.

239. Meeting that need involves building an understanding of: (i) how historic climate variability has affected the systems and sectors of Cambodia, and (ii) likely future trends in climate and hydrological conditions and their impacts.

240. Understanding future hydro-climatic conditions requires the use of models to project forward atmospheric and hydrological processes that govern watershed condition. The aim is to quantify what changes mean for key parameters that either enable or constrain development – for example, seasonal water availability, flooding, salinity concentrations, drought, tropical storms and soil fertility. Often the enabling and constraining hydroclimatic factors can have positive and negative influences, separated by the timing and quantity of their presence. For example, surface water in the wet season is a blessing for farmers practicing rain-fed agriculture, but too much surface water results in flooding and damages to crops and life. Sediment transport from the mountains to the floodplains plays a critical role in fertilizing farmland in the floodplains; too little and soil fertility is reduced, compromising agricultural yield.

241. The connection between a benefit and a risk for sectors and communities places quantification of threats (how much, and when) at the centre of CCA planning. Our past experience provides an understanding of what is too much or too little, and through climate change modelling we can get an indication of how likely it is that those thresholds will be breached during the development planning horizon.

242. Climate change modelling can significantly sharpen the focus and scope of adaptation and development planning. That is especially the case at the project level where tangible design decisions with economic implications need detailed information on climate change to guide adaptation measures and adjustment. Also it applies to sector or area wide planning where for example, revisions to design standards can require detailed quantitative information on projected changes, and where planners need to set priorities among many legitimate adaptation needs.

243. This combination of past stakeholder experience with climate variability and quantification of future climate change is fast emerging as international best-practice for climate change assessments but has only been applied in a select few VAs for Cambodia.

244. In Annex 3 to this report, an initial review is provided of past modelling and downscaling initiatives that have been applied for Cambodia over the past 20 years, drawing out the strengths and weaknesses of the most important efforts and mapping out what progress has been made and where the most critical gaps remain. This review was undertaken to shape the approach to be taken in this TA in defining the climate changes as an input to the VAs and adaptation planning which we will conduct with relevant ministries and provinces. It is also to help define the appropriate datasets and tools which we will test for wider application across government.

245. Annex 10 is the first step in a comprehensive review of climate change modelling and downscaling for Cambodia, which will be undertaken as part of the TA activities. The findings of the review will provide the Government of Cambodia with guidance on what are the critical next steps for climate change assessments in Cambodia.

5.3 CHARACTERISING CLIMATE THREATS FOR VULNERABILITY ASSESSMENTS

246. The starting point for any science-based VA is the characterization of the projected climate changes or threats and opportunities. This TA considers resilience as allied with sustainability. Both concepts are linked by the motivation to establish a long-term perspective to development planning that ensures decisions made in today's dynamic world remain good decisions during their full life-cycle. Achieving this long term perspective requires an approach to threat analysis which is bi-directional – i.e. it requires both hindsight and foresight. It involves understanding past trends and past experience with change as well as projections and quantification of the range of future conditions.

247. The TA's approach to characterising threat will build on and draw upon existing information developed by government through previous projects. The TA team will not undertake new climate change downscaling or new hydrological simulations of the geographical areas targeted in the SPCR or integrated assessment provinces. Drawing on the findings of a review of previous efforts (Annex 3), the study will use meteorological data from the Climate Change Knowledge Portal (CCKP) and the Mekong ARCC project as well as hydrological information from the Mekong ARCC. The future projections data will be centred on the middle of the 21st century (2045-2065) as there is overlap in time period between both of the primary data sets. If the data is available, the team would also seek to integrate the important CSIRO climate change projections into the study, where this information is made available to the TA team. The CSIRO initiative represents the latest information on climate change in Cambodia utilising the IPCC's new Resource Concentration Pathways (RCPs).

248. Drawing on past experience: The TA will work with SPCR and provincial stakeholders to document experience with past extremes and historic trends in hydroclimatic parameters based on experience, official records and expert judgment. Innovative techniques like participatory community-risk mapping will be considered and utilized where appropriate and findings of the past-extremes analysis will be consolidated into spatial layers which can be overlaid on top of other information

sources such as baseline biophysical and socio-economic information as well as future CC projections. Understanding past extremes informs two important aspects of the ICEM's climate change adaptation and mitigation methodology (CAM) assessment. First it identifies the kinds of hydro-climate change that are most significant for a specific system (i.e. the scope of the threat analysis). Second it identifies how the functioning and the integrity of the system will respond when exposed to these threats (i.e. characterizing the sensitivity of the system)

249. Quantifying future change: The TA will draw on a wealth of existing meteorological and hydrological modelling information to characterize future conditions in the target provinces and watersheds. The TA team will draw upon two primary data sets. For projections of meteorological parameters the study will draw on the CCKP and Mekong ARCC data sets. The Mekong ARCC data sets will also provide projections for key hydro-climatic parameters[12]. Where data is available the study will also attempt to integrate the most recent climate change projections for the basin which were developed by CSIRO and applied in Koh Kong and Mondulkiri.

250. Integrating threat information through a GIS-based toolkit: The proposed approach requires working and processing large amounts of information and data. For this information to be useful the various layers of information; historical/future hydro-climatic data needs to be overlaid and analysed with the baseline data characterizing biophysical and socio-economic conditions; and this process of integrated spatial analysis needs to be repeated for each of the target geographical areas.

251. The TA team will systematize this process building on the GIS tool developed by MOWRAM. The strength of the MOWRAM GIS toolkit is that is takes the wealth of hydro-climatic information and outputs a set of defined climate change parameters which have been selected for the water and agriculture sectors of Cambodia. The TA will therefore use this tool, updating and modifying as needed, to develop the climate change threat profiles which will inform the exposure and sensitivity analysis of the CAM process in the two demonstration provinces.

252. The MOE have clearly expressed the need for an all of government GIS-based climate change decision support tool building on the MOWRAM kit, but bringing in the latest raw data for regional downscaling from CSIRO. This would lift the current project-by-project approach to seeking climate change data and GIS products on an ad hoc basis to provide a standardised all-government tool to be used by all sectors in their development planning and management. Whilst this is not currently in the DMF of the TA, the approach to threat quantification and consolidation proposed above lays the foundation for this more comprehensive and up-to-dat national GIS-based climate change decision support tool.

253. In addition, as requested by MOE, ICEM will prepare a proposal to ADB for developing this national GIS-based climate change decision support tool on behalf of MOE, in close consultation with the CCD. MOE has also requested assistance in purchasing printers for national GIS-based climate change decision support tool.

5.4 EARLIER VULNERABILITY ASSESSMENTS IN CAMBODIA

254. In 2013, Phase I of the PPCR conducted a comprehensive review of climate change vulnerability and adaptation studies in Cambodia. The Phase 1 "Synthesis Report on Vulnerability and Adaptation Assessment for Key Sectors" also set out the results of its own VAs for four provinces. This section summarises that review and provides updates of relevant VAs conducted since the Phase 1 report.

255. Assessments of climate-related vulnerability were conducted by the Government for its Initial National Communication (INC 2002) and for the Second National Communication (SNC – still in preparation) to the UNFCCC, as well as under the NAPA (MOE 2006). The National Communications to the UNFCCC (MOE 2002 and 2010) used various Global Circulation Models (GCMs) and different

[12] The Mekong ARCC data sets represents the most comprehensive and systematic approach to hydrological modelling but is limited only to the Mekong River Basin. Some parts of Cambodia's coastal provinces are not covered by this modelling.

climate change impact models to assess effects of projected climate change on agriculture, forestry, coastal resources, and health. At the time of the Phase 1 review they were the only studies conducted in Cambodia that focused on longer-term climate change impacts and related vulnerabilities.

256. Other studies assessed vulnerabilities to past and current climate extremes. They did not have access to reliable climate change projections.13 That limitation includes the Phase 1 VAs of four target provinces which examined current not projected vulnerabilities. Climate change projections covering Cambodia in part or whole were available from regional studies conducted with the Mekong River Commission but that information was not used or referred to in most Cambodia based assessments. Generally, the studies defined vulnerability according to exposure and sensitivity to climate change and the adaptive capacity of a system. Yet, they use different qualitative and quantitative methods.

257. Vulnerability index studies: Some studies assessed vulnerability using indicators and composite vulnerability indices. Their findings differ according to the indicators and indices selected to characterize vulnerability.

258. Yusuf and Francisco (2009) mapped overall vulnerability levels for South-East Asia, as measured by the same overall vulnerability index, drawing on various data bases, and using provinces as the primary unit of analysis in Cambodia. The Second National Communication process (MOE 2010) used the commune as the basic unit of analysis and 63 indicators from the MOP commune data base combined into a vulnerability index. It focused on adaptive capacity and human sensitivity and did not integrate exposure to climate hazards or ecological sensitivity in the analysis as did the SE Asian assessment.

259. Other index based assessments focused on particular risks or vulnerabilities. A study by the NCDM (2003) mapped vulnerability to natural disasters in Cambodia in terms of exposure to floods and droughts, rice dependency and food security. The Asian Disaster Preparedness Centre and Hatfield (2007) similarly combined exposure to floods and droughts and poverty and rice dependency (i.e. aspects of adaptive capacity) to assess and map vulnerability. The Cambodian Human Development Report (MOE and UNDP 2011) presents the Human Development Index (HDI) as an index measuring vulnerability, emphasising aspects of adaptive capacity relating to level of income, education and health. The HDI is used to map vulnerability at the provincial level as the primary unit of analysis, aggregating commune-level data.

260. A number of climate vulnerability studies focussed on particular provinces or regions of the country. IOM (2010) undertook several qualitative assessments of vulnerabilities to floods, droughts and storms in specific provinces. Other assessments were undertaken at the village level in specific provinces, districts, and communes. These local-level studies were aimed at understanding household or village-level climate impacts and vulnerabilities. They used primary data generated through household-level surveys to understand impacts of current climate hazards on physical infrastructure, economic activities, livelihoods and food security. Examples include studies undertaken through the NAPA process (MOE 2005; 2006), by the ADPC and the Mekong Wetlands Biodiversity Conservation and Sustainable Use Programme (ADPC and MWBCSUP 2005), the Comprehensive Food Security and Vulnerability Analysis Study (UNWFP 2008), the Climate Change Vulnerability in Cambodia Initiative (UNDP 2012) and by the NGO Forum (2012).

[13] The Phase 1 team reviewed final reports of over 30 studies conducted to evaluate climate-related V&A issues in some sectors, provinces, districts, communes and villages in Cambodia including (i) the Cambodia Human Development Report (MOE and UNDP 2011); (ii) Climate Change Vulnerability Mapping for Southeast Asia (Yusuf and Francisco 2009); (iii) Mapping Vulnerability to Natural Disasters in Cambodia (NCDM and WFP 2003); (iv) Development of a Flood Vulnerability Geographic Information System (GIS) Application (ADPC and Hatfield 2007); (v) Comprehensive Food Security and Vulnerability Analysis (UNWFP 2008); (vi) Climate Change Vulnerability in Cambodia (UNDP 2012); and, (vii) Understanding Public Perceptions of Climate Change in Cambodia (MOE 2011).

261. Those studies conducted in various locations around Cambodia were used for gathering socio-economic information related to vulnerability and to explore public perceptions, knowledge and attitudes related to climate risks and impacts (MOE 2011 and SCW 2011). Phase 1 concluded that those initiatives constitute a valuable information base for understanding adaptation needs and designing adaptation options – particularly by shedding light on how people perceive climate risks, vulnerabilities to such risks, and related adaptation needs, and how adaptive capacities and barriers to adaptation were assessed.

262. Phase 1 VAs: In Phase 1, four target provinces were selected according to a combination of factors; level of vulnerability to floods and drought, vulnerability to climate change and for their rating on the Human Development Index (HDI). The priority provinces were Battambang and Kampong Thom from the Tonle Sap region, Prey Veng from Cambodia's Delta region, and Stung Treng from the Plateau/Mountainous region. The VAs focused on: exposure to impacts of current climate hazards and climate change risks; the climate sensitivity and adaptive capacity of the "systems" and sectors under consideration; and long-term vulnerability of systems and sectors to climate change risks based on projections of future socio-economic scenarios. Projected climate changes were not considered.

263. Adaptation options proposed were based on identified climate-related vulnerabilities of environmental and socio-economic systems. Efforts were made to capture local climate risks and vulnerabilities and related adaptation needs, but the V&A assessments remained generic, focused broadly on vulnerable provinces and priority sectors. The V&As included estimates of adaptation costs based on a review of existing adaptation cost estimates developed by the Joint Climate Change Initiative (JCCI) in Cambodia in 2010.

264. VAs conducted from 2013: The Australian research agency – CSIRO – undertook a study as an input to a larger project funded by the ADB, the GMS Biodiversity Conservation Corridors Project (ADB-TA7459 40253-012) in Koh Kong and Mondulkiri Provinces which is being carried out over 8 years (2011 – 2018). The study focused on understanding the impacts of climate change on agriculture and natural resources and identifying appropriate adaptation measures. It had two parts:

- High-resolution projections of future climate using the most current emissions scenarios and modelling techniques;
- Climate change VAs for Koh Kong and Mondulkiri taking a participatory approach.

265. This was the first time modelling based on new simulations have produced such high resolution climate change information at 10 km. The coarse horizontal resolution of previous simulations (about 200 km between data points) have not been adequate to capture the details of climate necessary for area-specific VA&AP (for example, IPCC 2007). The CISRO VA&A presented results for mid- and end-of-century, with detailed analysis of projected changes for 2025 that have been requested as inputs for infrastructure projects. The high-resolution climate simulations can be used to identify the most effective CCA options and priorities (Katzfey 2013).

266. Another important VA for the Lower Mekong Basin was conducted by ICEM in 2013. The Mekong Adaptation and Resilience to Climate Change (ARCC) project was carried out by ICEM in partnership with DAI and SEA START for USAID to generate new data, new VA approaches and to spur adaptive change in the Mekong River Basin. A review of climate change projections for Cambodia which draws from the ARCC study appears as Annex 3 to this report.

267. Also, as a lead up to the other SPCR infrastructure investment projects, ADB synthesised available climate change and vulnerability information for submissions to CIF, seeking support for VA&A components of the SPCR projects. That initiative resulted in a package of CIF funding covering all seven of the SPCR projects - a key focus for learning and capacity building of this TA.

5.5 PHASE 2 VULNERABILITY ASSESSMENTS

268. The TA will use four approaches to VAs:

269. **Documenting adaptation field trials from non-SPCR projects of MAFF, MOWRAM and MOE**: Many of the SPCR projects have not yet started, which means the establishment of field demonstrations and so the TA team's ability to document and learn for them will be limited in the early phases of implementation. However, the TAs target ministries are moving forward with other innovative adaptation field trials with support from other donors such as GIZ, USAID amongst others. The TA team will work with target ministries to identify other adaptation field trials in target provinces and select a number of demonstrations for documentation and review as a complement to the documentation of SPCR projects.

270. **Documenting SPCR investment project methodologies and experience**: First, as a mainstreaming project across the SPCR program, the TA team will work with each SPCR project team in reviewing and documenting the various project-level approaches. We will embrace the diversity in methodologies and data adopted by each of the SPCR projects and by documenting that experience, distill lessons for the Government of Cambodia on how best to implement climate change assessments as well provide guidance on how to resolve issues of resolution and scale. It will also extend the SPCR VA work by using findings to provide guidance on the policy and procedural changes needed at national level in each sector.

271. **Documenting adaptation field trials from non-SPCR projects of MAFF, MOWRAM and MOE**: Many of the SPCR projects have not yet started, which means the establishment of field demonstrations and so the TA team's ability to document and learn for them will be limited in the early phases of implementation. However, the TAs target ministries are moving forward with other innovative adaptation field trials with support from other donors such as GIZ, USAID amongst others. The TA team will work with target ministries to identify other adaptation field trials in target provinces and select a number of demonstrations for documentation and review as a complement to the documentation of SPCR projects.

272. **Demonstration VA&AP**: Lastly, but most importantly, the ICEM team will demonstrate an integrated approach to VAs in two target provinces – Battambang and Prey Veng – the two top ranking SPCR provinces for vulnerability. This demonstration will build on the best available climate change data for the two provinces and upgrade and test the GIS-based climate change tool developed by MOWRAM as part of an integrated climate risk and vulnerability assessment (CRVA) as described above.

273. For these integrated vulnerability and adaptation assessments, the TA will employ ICEM's CAM methodology to undertake the threat, baseline and VA&APs which provide the evidence base for robust and resilient development planning.

274. The CAM method is a flexible process and set of tools that can be applied to sectors, areas and communities down to a specific level of asset. It is applicable to varying assessment scales from localized projects to settlements up to city size, and to larger spatial planning units such as watersheds and provinces. In this project, the method will be applied by the multi-sector AWG with representatives from the SPCR ministry climate change groups and from other key ministries. The AWG will conduct six assessment and planning exercises relating to existing and proposed inclusive infrastructure systems. The AWG will take an area-wide approach which allows the process to show the integrated nature of adaptation in which each ministry will have a distinct role in an overall adaptation plan.

275. The methodology combines international best-practice in climate change science and modelling with a number of proven rapid assessment methodologies such as Strategic Environmental Assessment, life-cycle analysis, socio-economic analysis, energy and water efficiency audits, risk management and participatory planning. In this project the ICEM approach will be integrated with existing methods in use in Cambodia and shaped and adjusted by national teams and stakeholders to suit local conditions. The CAM method illustrated in Figure 5-1 comprises a number of steps for VA and then adaptation planning.

Figure 5-1: ICEM's climate change adaptation and mitigation methodology (CAM)

(i) Determine the scope of the adaptation planning,

276. The first step in the CAM method is to identify the geographic and sector focus of the assessment and the systems (natural, social, economic, institutional and built) that will be impacted. The methodology recognises the importance of distinguishing between these systems and addressing their specific sensitivities and tolerances, while maintaining a broader integrated ecosystems approach that captures the interactions between them. Planning and action is also filtered through area, sector and project levels to sharpen the scope and targets of the VA&AP.

(ii) Conduct a baseline assessment

277. The baseline step is used to describe the past and existing situation, trends and drivers across each of the identified systems, projecting the changes to these systems which will occur irrespective of climate change. An important part of the baseline assessment is to determine the climate change threats to project, community or sector asset through an analysis of past extreme events and trends and through climate modelling and downscaling of future climate and hydrology against various scenarios (Box 6.1).

278. Major challenges at the baseline stage are gaining access to data required on past, existing and future plans and experience and in projecting forward past trends taking key drivers into account. For example, there are capacity limitations in Cambodia in conducting modelling and making projections and then in linking them with adaptation and development planning at local and sector level. There will likely be a need for baseline and projected climate scenarios to assess the climate risk and vulnerability for the adaptation feasibility studies. This TA will draw on existing climate change modelling work completed for the region and for Cambodia as the basis for VAs. Discussions are continuing with MOE and ADB to see if project resources could be used to conduct fresh modelling of specific application to the target provinces.

279. The baseline also includes a review of existing management and system initiatives, which may provide the basis for adaptation measures. Developing an effective response to climate change does not necessarily mean starting from scratch as many elements in existing policies, institutional arrangements and programs will be consistent with needed adaptation. They may relate, for example, to poverty reduction or disaster management.

Box 6.1: The four main steps in the threat analysis.

(i) Data collection and review of the MOWRAM GIS toolkit: The TA team have begun this process of collecting and reviewing available data sets for Cambodia. In addition the TA's GIS Specialist together with the Water and Infrastructure specialists will review the MOWRAM GIS toolkit assessing the compatibility of collected data, as well as the toolkits set up and resolution/accuracy of outputs.

(ii) Scoping of highest priority hydromet parameters for inclusion in the demonstration VA&AP: The MOWRAM GIS toolkit outputs data for ~15 meteorological parameters (see section 3). The team will

(i) river discharge, flood depth, duration and extent, soil moisture, an agricultural drought index, landslide potential, sediment transport amongst others. From the updated list the team will work with GOC stakeholders at both the national and provincial level to identify the key parameters of highest priority.

(ii) Integration of hydrological modelling projections into the MOWRAM GIS toolkit: For the selected parameters the TA team will then integrate spatio-temporal data on these parameters into the MOWRAM GIS toolkit.

(iii) Development of provincial threat profile: The team will then utilise the toolkit to provide maps and information that form the core of a climate change threat profile. The profile will be a visual document with findings illustrated in map or graph formats. The profiles will also include analysis of the information specifically for the asset/system under analysis to ensure the threat profile informs the exposure and sensitivity analysis of the wider vulnerability assessment.

(iii) Conduct an impact and vulnerability assessment

280. There are two distinctive components in this phase of the CAM method: (a) impact assessment and (b) defining the final level of vulnerability of the target assets and systems to the projected impacts.

281. The potential impact is a function of the level of exposure to climate change induced threats, and the sensitivity of the target assets or system to that exposure. Exposure is the degree of climate stress on a particular asset. It is influenced by long-term changes in climate conditions and by changes in climate variability, including the magnitude and frequency of extreme events. The nature and extent of the exposure is a key concern. With regard to a flooding event, for example, the exposure of assets may be determined by the depth, duration and velocity of floodwaters. For drought, the exposure of a crop will be influenced by duration and severity.

282. Sensitivity is the degree to which a system will be affected by, or responsive to climate change exposure. With regard to a flood event, for example, sensitivity may be understood in terms of the level of disruption such as the value of the damage and/or length of time it takes to return to the pre-flood state – a wooden house may be more severely damaged by flood exposure than a cement dwelling. For infrastructure, sensitivity is the degree to which the exposure to a threat will negatively affect the integrity or operation of the asset. Sensitivity in environmental and natural systems is influenced by, for example, the biological response to temperature change, tolerance of drought conditions, capacity for regeneration, the degree of connectivity and diversity and size of habitats.

283. In the CAM process this information is used to inform a VA matrix. The CAM VA matrix involves stakeholders in defining: (i) the main assets/system components at risk and (ii) the main climate change threats. A simple impact matrix is then used as a guide in deciding on (iii) the level of exposure, and (iv) the level of sensitivity. The level is set using science-based information and supplemented through expert judgement.

284. The next step in applying the CAM methodology is to determine the adaptive capacity of the system or assets to the impact. Adaptive capacity is understood in terms of the ability to prepare for a future threat and in the process increase resilience and the ability to recover from the impact. Adaptive capacity can be determined by cross-cutting factors such as access to financial resources, the availability of infrastructure, social factors such as the strength of local support networks and factors related to natural systems.

285. Finally the information on the impact of climate change as it relates to a particular project, community or asset and accompanying adaptive capacity is combined to determine its level of vulnerability. This indicator is used to prioritize adaptation responses.

(iv) Define adaptation response

286. This step involves developing a range of options for integrated adaptation interventions and then working with stakeholders to determine priorities – with limited resources it is not possible or necessary to do everything at once. The priorities are then expressed in the form of an adaptation plan or projects. An overview of broad potential adaptation options is included in Box 6.2.

Box 6.2 – Potential adaptation options

- **Engineering options** (e.g. flood protection dykes, effective drainage systems)
- **Traditional local strategies** (e.g. terracing and selection of crops)
- **Social responses** (e.g. resettlement and migration)
- **Land use planning** (e.g. zoning and development controls)
- **Economic instruments** (e.g. subsidies and tax incentives)
- **Natural systems management** (e.g. rehabilitation, conservation, watershed management)
- **Sector specific adaptation practices** (e.g. agriculture species, cropping patterns)
- **Institutional options**: associated policy, institutional and administrative innovations

287. Adaptation builds climate change resilience in communities, sectors and areas. Opportunities for increasing resilience (i.e. for reducing vulnerability) through adaptation can be found in natural, built, social, economic and institutional systems. Listing adaptation options requires the involvement of a cross-sectoral group of specialists as well as other affected stakeholders. Often it is a matter of identifying what has worked best in the past as well as learning from international experience. However, it is not possible or necessary to do everything at once. Some investments will need to be made immediately or soon, while others can be left for future financing. Clear priority setting is required based on available funds and the relative vulnerabilities of assets and systems of strategic importance to the target area, sector or community.

288. Priority setting requires that some measures should lay the foundation for future adaptation investments and facilitate future additions and modifications as climate continues to change. Actions could be identified for implementation in different time periods such as short, medium or even long–term depending on the nature of vulnerability and the feasibility of the adaptation option given available resources. An adaptation measure should not make future adaptation difficult or expensive. In most cases upfront design and planning for a phased approach to adaptation over the lifetime of a project is the most effective approach. There are various ways to facilitate the identification of sharp priorities for action endorsed by key stakeholders. A simple method is based on group consensus guided by criteria, expert opinion and the results of the VA. Criteria for priority setting may include:

- Government commitment through:
  - Policy, e.g. national or sector climate change policy;
  - National or local government strategies and plans; and
  - Government guidelines and procedures e.g. road and drainage design code.
- Effectiveness of measures in addressing the adaptation deficit.
- Urgency for action in addressing the impact of climate change.
- Number of people benefiting.
- Strong community support.
- Available resources for implementation.

- Commitment of local government and relevant sector agencies.

289. These priority setting processes will be particularly relevant in the context of this TA; particularly in the development of the NAPA feasibility studies and identifying priority adaptation projects for funding proposals.

(v) Provide feedback on adaptation implementation.

290. During this final step of the CAM, the measures adopted are monitored and adjusted over time based on experience and new information. This feedback mechanism can involve the establishment of new M&E mechanisms or efforts to build on or adapt existing monitoring frameworks. In the context of this TA there is a number of existing M&E frameworks such as those being developed for the CCCSP that could benefit from the feedback provided by project-specific or sector-oriented CAM processes.

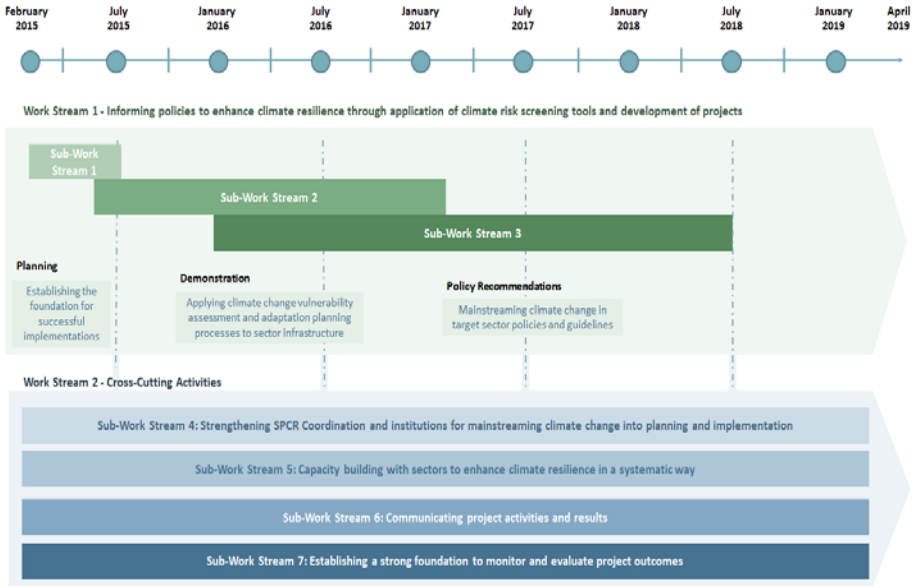
6 IMPLEMENTATION

291. TA 8179 Package 1 will be implemented over four and a half year period from February 2015 to April 2019. Based on the project team's interpretation of the DMF and the lessons learned from the inception phase of the project the guiding principles for the project's implementation and the detailed methodology for implementing Package 1 activities is outlined in the previous section.

6.1 LINKAGES BETWEEN OUTPUTS AND ACTIVITIES

292. In keeping with the key challenges and guiding principles for implementation identified by the project team, the implementation methodology proposed by the team has required adjustment of the allocation and sequencing of the package outputs and activities as identified in the DMF. For the purpose of implementation, the project team has grouped the DMF activities into streams of related and reinforcing action that encourage gradual reform and enhance resilience in a systematic way (Figure 6-1).

Figure 6-1: Overview of TA8179 Package 1 work streams and activities



293. The first work stream, Informing policies to enhance climate resilience through application of climate risk screening tools and development of projects, will be implemented over approximately three and a half years and form the foundation of the package's mainstreaming activities. This work stream will be implemented in three sub-work streams:

(i) Establishing the foundation for successful implementation – During this sub-work stream the project team has undertaken a series of activities to establish a blueprint for the successful implementation of the project including a capacity needs assessment and a series of roundtable discussions to establish strong working relationships with key stakeholders for the duration of the project.

(ii) Applying climate change vulnerability assessment and adaptation planning processes to sector infrastructure – During this sub-work stream the project team will demonstrate the application of proven climate change VA&AP approaches to key infrastructure assets at provincial and local levels. These demonstration activities will be integrated with capacity

building and project feasibility activities for sector counterparts in target ministries to encourage applied and holistic learning and enhanced capability to transform on-the-ground assessment into successful initiatives to tackle climate change.

(iii) Mainstreaming climate change in target sector policies and guidelines – During the sub-work stream the experience garnered from the demonstration activities will be used to inform policy reform and climate change mainstreaming at the sector level. As part of this process the project feasibility studies developed from the project team's demonstration activities will be used to form the basis of project concepts to support further action to mainstream climate change resilience in infrastructure investment decisions.

294. The second work stream, Cross-Cutting Activities, will be implemented over the full life of the project and focus on communicating the project's activities and monitoring project implementation. This work stream will involve four sub-work streams.

(i) Strengthening SPCR Coordination and institutions for mainstreaming climate change into planning and implementation – This sub-work stream aims to facilitate improved coordination of the different SPCR elements through the organization of regular meetings of the SPCR Coordination Committee, Committee fields visits to familiarize themselves with the SPCR activities and support for climate change activities at a national level linked to the SPCR.

(ii) Capacity building with sectors to enhance climate resilience in a systematic way – Capacity building underpins each Package 1 activity. During the inception phase the project team has complemented earlier capacity needs assessments by focusing on the organizational capacity of target ministries for incorporating climate change into infrastructure investment decisions. This assessment will be updated periodically to better inform training and capacity building activities with the core group of project stakeholders and the implementation of demonstration and mainstreaming activities. Such periodic assessments will also be used for monitoring mainstreaming progress in these ministries.

(iii) Communicating project activities and results – With these activities the project team will periodically draw together lessons learned from the demonstration activities in the first work stream to develop knowledge and communications products and systems to inform stakeholders and the broader public about the project's activities and the value of efforts to enhance climate change resilience. These activities contribute to the result Output 4 'Climate change adaptation knowledge products developed and disseminated'. Activities will involve (i) coordinating knowledge management and communications with MOE, key ministries, and other stakeholders including SPCR investment projects and other TA 8179 packages; (ii) distilling the project team's learning and experience from the case analyses of SPCR investment projects into a resource kit on indigenous approaches to climate resilience; and (iii) the integration of new and / or updated curriculum for selected technical universities on CCA and resilience.

(iv) Establishing a strong foundation to monitor and evaluate project outcomes – This work will draw together activities across outputs for the development of tools, methods, systems and resources to monitor and evaluate the implementation of Package 1 activities. Building climate resilience monitoring processes into the work of the departments of each ministry will also be used as part of the mainstreaming process.

295. The detailed allocation and sequencing of DMF activities according to the work streams and activity phases outlined above is included in Table 6-1. While the reconceptualization of the DMF activities described here will not result in any significant change to the substance of the project activities, it implies changes to the sequencing of certain activities that will have an impact on the delivery schedule for the various technical reports to be produced by the project team. It also implies some adjustments to the way that the project team will organize itself. These issues are discussed in more detail below.

Table 6-1: Detailed allocation and sequencing of DMF activities according to the work stream

Sub-Work Stream	DMF Activity Number	Work Stream Descriptions & Activities
		Informing policies to enhance climate resilience through application of climate risk screening tools and development of projects
1		Establishing the foundation for successful implementation
	1.1	Revise Inception Report, including assessment of capacity needs and gaps
2		Applying climate change vulnerability assessment and adaptation planning processes to sector infrastructure
	1.8	Review, test, and apply risk screening tools
	2.1	Organize workshops on feasibility study development
	1.6	Develop sector-specific case analysis on climate resilience Water sector Agriculture sector Transport sector Urban sector
	2.2	Conduct at least 6 feasibility studies for NAPA priority projects in 3 key sectors
	1.9	Strengthen capacity to assess current and future vulnerabilities for selected investment projects
3		Mainstreaming climate change in target sector policies and guidelines
	2.4	Identify NAPA projects that can enhance the climate resilience of vulnerable groups, including women, and that have high potential to receive international funds, such as from the LDC Fund, the Adaptation Fund, and the Green Climate Fund
	2.6	Assist government staff in preparing necessary documents and submit at least two proposals for funding
	1.10	Review and incorporate climate risk management into sector guidelines, manuals, and infrastructure design standards
	1.5	Conduct sector-specific training events and workshops on integrating climate resilience into sector plans, programs, projects at national and subnational level
	2.5	Provide training on guidelines for securing adaptation funds
	1.3	Revise PPCR Phase 1 guidelines on mainstreaming CC into national development planning
	2.7	Assist government staff in developing the NAP for Cambodia
	1.11	Conduct theme specific workshops on Impact and vulnerability assessment Community-based adaptation Ecosystem-based adaptation Disaster risk management
		Cross Cutting Activities
4		Strengthening SPCR Coordination and institutions for mainstreaming climate change into planning and implementation
	1.2	Assist in organizing regular meetings of the SPCR coordination team
5		Capacity building with sectors to enhance climate resilience in a systematic way
6		Communicating project activities and results
	4.4	Document traditional and/or indigenous adaptation and DRR practices
	4.3	Conduct public awareness campaigns on gender inclusive adaptation and DRR
	4.5	Update educational curriculum on climate resilience and DRR
	4.6	Develop appropriate media and content with the assistance of CSOs and NGOs to communicate information effectively
	4.7	Develop knowledge products for effective dissemination of project results
7		Establishing a strong foundation to monitor and evaluate project outcomes
	1.4	Collect baseline data relevant to DMF of the TA
	4.1	Establish a knowledge management information system

Sub-Work Stream	DMF Activity Number	Work Stream Descriptions & Activities
	1.7	Develop and test a data support infrastructure for the implementation of climate change risk management, including training relevant staff
	2.3	Identify indicators for monitoring the effectiveness of adaptation
	4.2	Compile and manage information from SPCR investment projects

6.2 INFORMING POLICIES TO ENHANCE CLIMATE RESILIENCE

6.2.1 Sub-Work Stream 1 - Establishing the foundation for successful implementation

296. During the first sub-work stream, the project team has worked to build a strong institutional and technical foundation to help facilitate the implementation of subsequent activities. This sub-work stream encompasses the inception phase program of work that has been undertaken by the project team from February to June 2015 (Annex 3).

297. A particular challenge associated with this phase of the project has been that certain institutional arrangements were already established during the earlier implementation of TA 8179 Package 1. As a result, the project team has invested considerable time in understanding this history and the pre-existing institutional frameworks or structures within MOE and RGC to support the project's implementation.

Activity 1.1: Revise Inception Report, including assessment of capacity needs and gaps

298. The inception phase activities were divided into five 'streams', each with a series of activities and sub-activities. The inception phase activities were designed to link with the project's DMF.

Table 6-2: Overview of Inception Phase work streams and activities

Inception Phase Activity and Sub-Activities	Related DMF Activities
Project management and stakeholder engagement activities	
Establish engagement mechanisms for SPCR focal points and key stakeholders	1.2, 3.2
Consult with climate change workings groups in five target Ministries	1.1, 2.1
Output 1 Activities	
Establish inception baseline information	1.4
Identify and document capacity needs in a systematic way	1.1, 1.5, 1.9, 1.11
Output 2 – Activities	
Develop implementation plan for adaptation project feasibility studies and project proposals	2.1 – 2.7
Output 4 – Activities	
Prepare knowledge management, communications and stakeholder engagement strategy	1.2, 3.3, 3.6, 1.8, 3.1, 3.2, 3.4
Develop curriculum activity implementation plan	3.5
Identify GIS data sources and prepare GIS materials	3.7
Prepare inception phase knowledge products	3.7
Finalize inception report	
Organize Inception (Scoping) Workshop	All
Draft Inception Report	All

299. The overall objective of the inception phase has been to produce an inception report that will provide a comprehensive blueprint for the successful implementation of the project. Key supporting activities that have been undertaken during the inception phase have included:

- Organization of a series of full day roundtable meetings with target ministries to discuss modalities and requirements for project activities;

- Organisation of a full day round table meeting with SPCR investment project PMUs and Teams
- Development of the Package 1 capacity needs assessment methodology and initial assessment in target ministries;
- Regular meetings with MOE, CCD and ADB;
- Reviews of previous RGC experience with climate change VA&AP;
- Review of the NAPA, NAP and target ministries' CCAPs to identify adaptation project ideas;
- Development of criteria to prioritize adaptation projects;
- Definition of the feasibility study methodology and a review of potential funding sources to support such projects;
- Development of plans for stakeholder engagement, communications and knowledge management;
- Development of a plan for implementation of curriculum development at key tertiary institutions linked to the project's target sectors;
- Preparation of GIS resources and knowledge products including project brochures and posters;
- Organization of an inception workshop; and
- Preparation of a zero draft, draft and final draft inception report.

300. The inception activities will result in a number of products that will be used to guide the future implementation of the project..

Table 6-3: Overview of Activity 1.1 events, products and contracted technical reports

Activity 1.1	Revise Inception Report, including assessment of capacity needs and gaps		Expected Start February 2015
Events		Team Responsibility	Expected Delivery
E1.1-1	Project Team meeting	TL	Monthly from February to July 2015
E1.1-2	Roundtable Meetings with target ministries	DTL	May and June 2015
E1.1-3	Roundtable Meeting with universities	KMCS & IKMCS	July 2015
E1.1-4	Scoping/Inception Workshop	TL	July 2015
Products			
P1.1-1	Inception Report Zero Draft	TL	June 2015
P1.1-2	Roundtable Meeting Summaries	DTL	July 2015
P1.1-3	Inception Meeting Summary Report	TL	July 2015
Contracted Operational Reports			
OR1.1-1	Draft Inception Report	TL	July 2015
OR1.1-2	Final Draft Inception Report	TL	August 2015
OR1.1-3	Project brochures, posters, newsletter	KMCS	July 2015

Table 6-4 Detailed work plan Sub-Work Stream 1 - Establishing the foundation for successful implementation

Work Stream		Activity		2015												2016												2017												2018												2019											
		Project Month	Team	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
		Year Month		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
VS1	**1**	**Establishing the foundation for successful implementation**																																																																
	1.1	Revise Inception Report, including assessment of capacity needs and gaps																																																														
	Events																																																																		
	E 1.1-1	Project Team meeting	TL																																																													
	E 1.1-2	Roundtable Meetings with target ministries	DTL																																																													
	E 1.1-3	Roundtable Meeting with universities	KMCS & IKMCS																																																												
	E 1.1-4	Scoping/Inception Workshop	TL																																																												
	Products																																																																
	P 1.1-1	Inception Report Zero Draft	TL																																																												
	P 1.1-2	Roundtable Meeting Summaries	DTL																																																												
	P 1.1-3	Inception Meeting Summary Report	TL																																																											
	COR																																																														
	OR 1.1-1	Draft Inception Report	TL																																																										
	OR 1.1-2	Final Draft Inception Report	TL																																																										
	OR 1.1-3	Project brochures, posters, newsletter	KMCS																																																										

6.2.2 Sub-Work Stream 2 - Applying climate change vulnerability assessment and adaptation planning processes to sector infrastructure

301. During this sub-work stream, the project team will develop, test and apply a set of climate risk screening tools to selected priority infrastructure assets for the purpose of 1) preparing specific sector-oriented case studies and climate change project feasibility studies and 2) building the capacity of local and national stakeholders to apply these tools. This sub-work stream will overlap with the inception phase program of work and Phase 3 activities. It expected that this phase will be implemented by the project team over the period from June 2015 to September 2016 (Annex 3).

302. The project team's approach to risk management and mainstreaming will be informed by the range of proven tools and approaches and will build on existing efforts by other development actors.

303. The findings from the assessments will subsequently be used to inform a process of sector adaptation planning and mainstreaming in sub-work stream 3. These specific approaches for climate change mainstreaming are described in more detail in Sections 5 and 6.

Activity 1.8: Review, test, and apply risk screening tools

304. This is a key foundation activity of Package 1 that will be implemented over the full duration of Phase 1. The activity will be implemented in three stages:

(i) The project team will undertake a review of climate change risk screening tools that have been applied in key sectors, identify successful risk screening tools and use lessons learned to identify relevant findings and promising tools.

(ii) The application of risk screening tools identified will be considered at SPCR Coordination Team meetings, and suitable systems will be trialed and put forward to decision makers for each sector.

(iii) Once suitable tools have been identified they will be tested at selected target sites for development of the project's sector case study development and project feasibility study development activities.

(iv) Finally, local stakeholders at the target sites will be encouraged to apply the risk screening tools in the development of the sector case and project feasibility studies.

305. Implementation of this activity will be carefully integrated with other Phase 1 activities to ensure that the various activities are consistent and mutually reinforcing. Approaching the implementation of the activities in this way aims to ensure that stakeholders in the target communities and target ministries become familiar with the stepwise nature of climate change assessment, preparedness and action.

306. Stage 1 of the activity to review appropriate risk screening tools will commence during the Inception phase of the project. The project team will build on the analysis of the common tools and approaches used in or appropriate to Cambodia conducted as part of PPCR Phase 1 and update this work with more recent experience. The project team will also use ICEM's CAM and SAPA approaches to identify the most appropriate climate change VA&AP approaches and entry points for climate change risk management screening in existing policy and planning processes.

307. Stage 2 will commence shortly following the finalization of the process to select case study and project feasibility sites that will be incorporated into Activity 2.1. The tools chosen for risk screening and VA should be simple, flexible and relevant. Tools and approaches should also be able to be replicated by MOE and RGC sector agencies and easily transferable through training and capacity building activities connected to the project.

308. In Stage 3 the application of the risk screening tools will be closely linked to Activities 1.6, 2.2 and 1.9. As part of activity 1.6 the risk screening tools will be used to develop the case studies and project feasibility studies for Activities 1.6 and 2.2. Concurrently, the project team will conduct capacity building and training with the selected risk screening tools under Activity 1.9. The risk

screening and VA of the seven SPCR investment projects will be used to inform the capacity building exercises and on-the-job training and capacity building activities to be incorporated under Activity 1.9.

309. Because the seven SPCR investment projects have already been selected and scoped, there is expected to be limited opportunity to influence the specific risk screening processes applied for these projects. However, there may be opportunities to improve key aspects and project implementation processes and modify risk-mitigation approaches. The project team will explore the phasing of adaptation activities for these projects and explore additional measures as appropriate, including retrofitting new design components, such as bioengineering; and a system for monitoring and adjustment as the project unfolds.

310. This activity will result in a contractual technical report that will summarize the project team's experience and identify climate risk screening tools and approaches relevant for sector infrastructure assets in Cambodia (Table 6-5).

Table 6-5: Overview of Activity 1.8 events, products and contracted technical reports

Activity 1.8	Review, test, and apply risk screening tools		Expected Start May 2015
Contracted Technical Reports		Team Responsibility	Expected Delivery
TR 1.8-1 (T3)	Report on climate risk screening tools applicable to Cambodian circumstances	TL	October 2015

Activity 2.1 Organize workshops on feasibility study development

311. In preparation for the work to develop the AP project feasibility studies under Activity 2.2, a series of consultation workshops will be held by the project team sector experts to define criteria to select AP project feasibility studies. Once the project team has refined the criteria it will be submitted to the SPCR Coordination Committee for review and comment. Using this process to establish agreed criteria to select the AP project feasibility studies will improve the transparency of the selection process and ensure that the studies chosen reflect the preferences and priorities of RGC. The number of workshops and/or consultations required will be decided in consultation with MOE, CCD and the SPCR Coordination Committee during the Activity 1.1.

Table 6-6: Overview of Activity 2.1 and corresponding Results/ Products

Activity 2.1	Organize workshops on feasibility study development		Expected Start May 2015
Events		Team Responsibility	Expected Delivery
E1.1-1	Round table workshops with key ministries to identify feasibility study project criteria	IAPDE, APDE1 & APDE2	May and June 2015
Products			
P1.1-1	Feasibility study roundtable Meeting Summaries	IAPDE, APDE1 & APDE2	June 2015
P1.1-2	Report on criteria to select AP project feasibility studies	IAPDE, APDE1 & APDE2	June 2015

Activity 1.6: Develop sector-specific case analysis on climate resilience

312. These case studies will focus on priority sector infrastructure assets that will be identified in close collaboration with MOE and other target ministries. These case study assessments will be used to showcase the project team's climate change VA&AP approach for new infrastructure investment projects.

313. The project team's approach to the case studies will include the following steps:

(i) Identify priority infrastructure assets for case study development;
(ii) Review any existing climate change VA&AP processes that have been conducted for the sector or key sector assets in conjunction with Activity 1.8;
(iii) Undertake baseline assessments for each asset;
(iv) Develop climate threat profiles for each asset based on a synthesis of available climate risk information at the case study sites;
(v) Undertake climate change VA&AP exercises on each asset using the ICEM CAM where practical or other appropriate approaches; and
(vi) Document the case studies.

314. The case studies are an important foundation activity for the project and will aim to 1) develop detailed climate change risk assessments of priority assets for each target sector; 2) create opportunities for capacity building and training with appropriate climate risk management tools (Activity 1.9); 3) develop evidence and materials to inform adaptation project feasibility studies (Activity 2.2); and 4) inform sector ministries efforts to mainstream climate change resilience by identifying specific policies, plans processes and standards that need to be reviewed and adjusted to better account for climate change (Phase 3).

315. In addition the case analyses will be supported by a range of knowledge products, GIS materials and visual media that will contribute to cross-cutting activities on communicating project activities and results. As par the case study process the project team will also identify traditional and indigenous adaptation practices that may be relevant for Activity 4.4.

316. This activity will require the organization of a series of field level visits and meetings at the selected case study sites. It will also result in a number of products including climate threat profiles, summary reports on the project team's assessment of each infrastructure asset and a technical report on climate risk screening tools applicable to Cambodian circumstances (Table 6-7).

Table 6-7: Overview of Activity 1.6 events, products and contracted technical reports

Activity 1.6	Develop sector-specific case analysis on climate resilience		Expected Start August 2015
Events		Team Responsibility	Expected Delivery
E1.6-1	Scoping field visits to identify priority infrastructure assets for case study analysis	TL, IICCS, IACCS, IAPDE, DTL, ICCS, AWRCCS, APDE1 & APDE2	August to December 2015
E1.6-2	Baseline assessment field visits to priority infrastructure assets	DTL, ICCS, AWRCCS, APDE1 & APDE2	January to April 2016
E1.6-3	Vulnerability assessment and adaptation planning site visits for priority infrastructure assets	DTL, ICCS, AWRCCS, APDE1 & APDE2	May to August 2016
Products			
P1.6-1	Climate threat profile for key infrastructure assets in four target sectors	TL & IAPDE	May 2016
P1.7-2	Climate change baseline, vulnerability assessment and adaptation planning case study reports for key infrastructure assets in four target sectors	TL, IICCS, IACCS, IAPDE	September 2016
Contracted Technical Reports			
TR1.6-1 (T14)	Report on climate-resilient infrastructure development	TL,	April 2016

Activity 2.2: Conduct at least 6 feasibility studies for Adaptation Project (AP) priority projects in 3 sectors, particularly unfunded ones related to the SPCR investments

317. Based on the discussions and findings of the AP project feasibility study workshops implemented under Activity 2.1 in phase 1 of the project, at least 6 feasibility studies for AP priority projects in 3 sectors will be undertaken (Table 6-8).

318. The project feasibility studies and funding proposals will play a central role in this project, for both on-ground project results as well as for capacity building. The development of feasibility studies is an ideal process for training RGC focal points and other relevant staff, particularly the SPCR AWG, on vulnerability and climate change assessments, and adaptation planning processes, as well as sector-specific case analyses.

319. Additional investments for adaptation that are linked to the SPCR projects may be a priority, for example, additional stabilization interventions using bioengineering methods; enhancing community management and benefits; broader based adaptation such as watershed management and soil stabilization. Some of the feasibility studies may seek to add to the SPCR projects, other will seek to address neglected AP issues and other priorities the sectors have identified. CIF's project selection criteria (Activity 2.6) will be considered to ensure projects can be developed consistently with these criteria.

320. The following is a list of tasks that will be carried out to complete this activity:

(i) Review AP priority projects and other relevant policies, strategies and reports to map key considerations for project selection. Other policies, strategies and reports will include:
(ii) CCCSP; Rectangular Strategy Phase III; SPCR Phase 1 priority provinces (Hatfield report); the National Green Growth Roadmap; NSDP; GMS Economic Corridors; Cambodia UNDP Climate Change Projections; First and Second National Communications; the Strategic National Action Plan for Disaster Reduction (SNAP).
(iii) Consultation with key stakeholders to decide on priority provinces, districts, sectors and activities; ensure there is a focus on identifying geographic areas and activities that impact vulnerable groups such as women, children and poor communities.
(iv) Select shortlist of AP projects and apply risk screening tools and assess vulnerability and conduct adaptation concept planning (see CAM methodology in Section 6.4).
(v) Investigate funding opportunities and assess projects' suitability for various funding avenues
(vii) Select 6 or more AP projects, and conduct feasibility studies

321. The feasibility studies will include: a project scope and initial concept drawings; climate risk assessment and VA; adaptation options analysis and prioritisation; assessment and technical feasibility of the infrastructure required; indicative budget and schedule; risk assessment; and considerations for concept and detailed design.

Table 6-8: Overview of Activity 2.2 and corresponding results/ products

Activity 2.2	Conduct at least 6 feasibility studies for Adaptation Project (AP) priority projects in 3 sectors, particularly unfunded ones related to the SPCR investments		Expected Start August 2015
Events		Team Responsibility	Expected Delivery
E2.2-1	Undertake priority project feasibility studies for water sector	IAPDE, APDE1 & APDE2	January to August 2016
E2.2-2	Undertake priority project feasibility studies for agriculture sector	IAPDE, APDE1 & APDE2	January to August 2016
E2.2-3	Undertake priority project feasibility studies for infrastructure sector	IAPDE, APDE1 & APDE2	January to August 2016
Products			
P2.2-1	Report on project feasibility studies for water sector	IAPDE, APDE1 & APDE2	September 2016
P2.2-2	Report on project feasibility studies for agriculture sector	IAPDE, APDE1 & APDE2	September 2016

Activity 2.2	Conduct at least 6 feasibility studies for Adaptation Project (AP) priority projects in 3 sectors, particularly unfunded ones related to the SPCR investments		Expected Start August 2015
P2.2-3	Report on project feasibility studies for infrastructure sector	IAPDE, APDE1 & APDE2	September 2016
Contracted Technical Reports			
TR2.2-1 (T9)	Report on Adaptation (NAPA/NAPA) project feasibility studies	IAPDE, APDE1 & APDE2	October 2016

Activity 1.9: Strengthen capacity to assess current and future vulnerabilities for selected investment projects

322. This activity will focus on building capacity with the risk screening tools and methods identified and tested in Activity 1.8. Specifically the activity will involve a series of capacity building workshops at target project sites that will be timed to occur with the VA&AP and project development exercises to be undertaken as part of Activity 1.6 and Activity 2.2.

323. The aim of this activity is to build capacity at local and national levels to apply climate risk screening tools for the purpose of developing the case studies to inform future infrastructure planning and investment processes at the local and sector levels. The capacity building efforts will be focused at core group of local and national level government focal points responsible for infrastructure planning and investment proposals. Other stakeholders will be invited to attend the capacity building workshops where practical including counterpart teams from the SPCR investment projects.

324. This activity will require the organization of a series of field level capacity building workshops near at the project case study sites. It will result in a number of capacity building workshop summaries including instruction materials (Table 6-9).

Table 6-9: Overview of Activity 1.9 events, products and contracted technical reports

Activity 1.9	Strengthen capacity to assess current and future vulnerabilities for selected investment projects		Expected Start January 2016
Events		Team Responsibility	Expected Delivery
E1.9-1	Capacity building workshops on vulnerability assessment and adaptation planning for priority infrastructure assets	TL, IICCS, IACCS, IAPDE, DTL, ICCS, AWRCCS, APDE1 & APDE2	May to August 2016
Products			
P1.9-1	Capacity building workshop summaries	TL & DTL	August 2016

Table 6-10 Detailed work plan Sub-Work Stream 2 - Applying climate change vulnerability assessment and adaptation planning processes to sector infrastructure

Work Stream		Activity		2015												2016												2017												2018												2019											
		Project Month	Team	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
		Year Month		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
	2	**Applying climate change vulnerability assessment and adaptation planning processes to sector infrastructure**																																																															
	1.8	Review, test, and apply risk screening tools																																																														
		Contracted Technical Reports																																																														
	TR 1.8-1 (T3)	Report on climate risk screening tools applicable to Cambodian circumstances	TL																																																												
	2.1	Organize workshops on feasibility study development																																																														
	Events																																																																
	E 1.1-1	Round table workshops with key ministries to identify feasibility study project criteria	IAPDE, APDE1 & APDE2																																																													
	Products																																																															
	P 1.1-1	Feasibility study roundtable Meeting Summaries	IAPDE, APDE1 &																																																												
	P 1.1-2	Report on criteria to select AP project feasibility studies	IAPDE, APDE1 & APDE2																																																											
	1.6	Develop sector-specific case analysis on climate resilience																																																														
	Events																																																															
	E 1.6-1	Scoping field visits to identify priority infrastructure assets for case study analysis	TL, IICCS, IACCS, IAPDE, DTL, ICCS, AWRCCS, APDE1 &																																																											
	E 1.6-2	Baseline assessment field visits to priority infrastructure assets	DTL, ICCS, AWRCCS, APDE1 & APDE2																																																											
	E 1.6-3	Vulnerability assessment and adaptation planning site visits for priority infrastructure	DTL, ICCS, AWRCCS, APDE1 & APDE2																																																											
	Products																																																															
	P 1.6-1	Climate threat profile for key infrastructure assets in four target sectors	TL & IAPDE																																																											
	P 1.7-2	Climate change baseline, vulnerability assessment and adaptation planning case study reports for key infrastructure assets in four	TL, IICCS, IACCS, IAPDE																																																										
	CTR																																																															
	TR 1.6-1 (T14)	Report on climate-resilient infrastructure development	TL,																																																										
	2.2	Conduct at least 6 feasibility studies for NAPA priority projects in 3 key sectors																																																												
	Events																																																															
	E 2.2-1	Undertake priority project feasibility studies for water sector	IAPDE, APDE1 & APDE2																																																											
	E 2.2-2	Undertake priority project feasibility studies for agriculture sector	IAPDE, APDE1 & APDE2																																																											
	E 2.2-3	Undertake priority project feasibility studies for infrastructure sector	IAPDE, APDE1 & APDE2																																																											
	Products																																																															
	P 2.2-1	Report on project feasibility studies for water	IAPDE, APDE1 &																																																											
	P 2.2-2	Report on project feasibility studies for agriculture sector	IAPDE, APDE1 & APDE2																																																											
	P 2.2-3	Report on project feasibility studies for infrastructure sector	IAPDE, APDE1 & APDE2																																																											
	CTR																																																														
	TR 2.2-1 (T9)	Report on Adaptation (NAPA/NAPA) project feasibility studies	IAPDE, APDE1 & APDE2																																																											
	1.9	Strengthen capacity to assess current and future vulnerabilities for selected investment																																																												
	Events																																																															
	E 1.9-1	Capacity building workshops on vulnerability assessment and adaptation planning for priority infrastructure assets	TL, IICCS, IACCS, IAPDE, DTL, ICCS, AWRCCS, APDE1 &																																																										
	Products																																																															
	P 1.9-1	Capacity building workshop summaries	TL & DTL																																																											

6.2.3 Sub-Work Stream 3 - Mainstreaming climate change in target sector policies and guidelines

325. As noted above, during Sub-Work Stream 2, the project team will apply climate VA&AP tools to priority infrastructure assets for each target sector. While Sub-Work Stream 2 is geared toward building an evidence base for action to enhance climate resilience, Sub-Work Stream 3 will aim to draw upon the lessons learned from the SPCR investment projects to mainstream climate change into sector infrastructure investment planning decisions.

326. This phase will overlap with the end of the Sub-Work Stream 2 program of work and is expected to be implemented by the project team from July 2016 to July 2017 (Annex 3).

327. The project team's approach to mainstreaming will emphasize the following complementary rules:

(i) Plan adaptation action despite scientific uncertainty;

(ii) Target action to address existing "adaptation deficits" in acknowledgement that tackling rudimentary environmental and development challenges will enhance resilience to future climate change; and

(iii) Implement adaptation on a phased basis so that lessons can be learned, adjustments made and one step prepares the ground for the next if required.

328. By adhering to this approach, the project team aims to ensure that climate change risk management actions contribute to the coping capacity of institutions and communities and enhance their capacity to respond to climate change in the face of technical complexity and uncertainty.

329. As in Phase 2, the project team will draw upon ICEM's experience with the CAM and SAPA. The SAPA is particularly relevant for Sub-Work Stream 3 activities. The SAPA process is designed to increase the climate resilience of key sector assets and enable sector agencies to plan, design, construct, operate and maintain the assets for which they are responsible so that they function effectively and continue to provide the relevant services despite changing climatic conditions and extreme events.

330. There are three main steps in the development and implementation of SAPA:

(iv) STEP 1: Setting up the Sector Adaptation Plan

- Setting up a sector climate change working group
- Establishing links with other agencies
- Consultation with stakeholders and user groups

(v) STEP 2: Developing the Sector Adaptation Plan

- Identifying the sector-specific entry points for climate resilience
- Sector vulnerability and adaptation prioritization
- Drafting and approval of the SAPA

(vi) STEP 3: Implementing the Sector Adaptation Plan

- Implementation
- M&E

(i) Regular review and revision of the SAPA

331. Based on consultations conducted during the inception phase of the project and the institutional context described earlier in this report, in the case of Cambodia, much of Step 1 has already been addressed as part of the SCCSP process. In undertaking Step 2 of the SAPA process, the TA team will work with sector agencies to identify the entry points for climate change mainstreaming and

conduct targeted VAs and prioritize adaptation actions for infrastructure investment policies and planning processes.

Activity 2.4: Identify AP projects that can enhance the climate resilience of vulnerable groups, including women, and that have high potential to receive international funds, such as from the LDC Fund, the Adaptation Fund, and the Green Climate Fund

332. One of intentions for the feasibility studies is to improve the climate resilience of vulnerable groups. To meet this intension, one of the criteria for screening and selection for six priority adaptation projects for feasibility studies will be the "projects that potentially contribute to improve climate resilience of vulnerable groups". The requirement of climate funds regarding improvement of climate resilience/CCA of vulnerable groups will be identified.

333. All 6+ feasibility studies will show how the projects address the needs of vulnerable groups so that any can be selected for further development into funding proposals. Global Climate Funds criteria for project selection will be reviewed so that the criteria that relate to vulnerable groups and other key criteria can be satisfied in the feasibility studies. We will also identify how vulnerable groups can be involved and engaged in project implementation, e.g. through user groups or management structures.

Table 6-11: Overview of Activity 2.4 and corresponding Results/ Products

Activity 2.4	Identify AP projects that can enhance the climate resilience of vulnerable groups, including women, and that have high potential to receive international funds, such as from the LDC Fund, the Adaptation Fund, and the Green Climate Fund		Expected Start July 2016
Events		Team Responsibility	Expected Delivery
E2.4-1	Workshop for application of criteria to guide prioritization of AP projects	IAPDE, APDE1 & APDE2	November 2016
Products			
P2.4-1	Assessment report recommending at least 2 AP for immediate prioritization with clear justification and particular consideration of gender and social inclusion co-benefits	IAPDE, APDE1 & APDE2	December 2016

Activity 2.6 Assist government staff in preparing necessary documents and submit at least two proposals for funding

334. Upon the completion of activities 2.2 and following the training under Activity 2.5 and the identification of at least 2 suitable adaptation projects under Activity 2.4, the sector climate change working group will work with the project team to prepare necessary documentation to submit at least two high priority project proposals for funding.

Table 6-12: Overview of Activity 2.6 and corresponding Results/ Products

Activity 2.6	Assist government staff in preparing necessary documents and submit at least two proposals for funding		Expected Start July 2016
Events		Team Responsibility	Expected Delivery
E2.6-1	Proposal preparation workshop for preparation of project proposal – sector 1	IAPDE, APDE1 & APDE2	September 2016
E2.6-2	Proposal preparation workshop for preparation of project proposal – sector 2	IAPDE, APDE1 & APDE2	September 2016
Products			
P2.6-1	Draft Proposal 1 ready to send to finding agency	IAPDE, APDE1 & APDE2	February 2017
P2.6-1	Draft Proposal 2 ready to send to funding	IAPDE, APDE1 &	February 2017

Activity 2.6	Assist government staff in preparing necessary documents and submit at least two proposals for funding		Expected Start July 2016
	agency	APDE2	
Contracted Technical Reports			
TR 2.6-1/ 2 (T10)	Two project design documents to receive international adaptation funds	IAPDE, APDE1 & APDE2	April 2017

Activity 1.10: Review and incorporate climate risk management into sector guidelines, manuals, and infrastructure design standards

335. This activity will bring together the findings of the case studies developed under Activity 1.6 to identify entry points and tools to support for a program of policy reform that will result in strengthened sector capacity to mainstream climate change risk management into sector guidelines, manuals and design standards. This activity will also draw on the project team's work to regularly assess sector capacity with climate change issues and the project feasibility studies.

336. The specific actions to be adopted by the project team as part of this activity relate to Step II of the SAPA process; namely the project team will:

- Identify the sector-specific entry points for climate resilience;
- Prioritize adaptation activities based on an assessment of sector vulnerability; and

(ii) Draft sector-specific SAPA guidelines for approval and adoption.

337. Identify the sector-specific entry points for climate resilience: This activity will involve a synthesis of the work undertaken by the project team during Workstream 2 and consultation with stakeholders to lay the foundation for the SAPA process. Key tasks required include:

- Review of legislation, policy, guidelines and other documents;
- Consultation with stakeholders to compile lists of current guidelines, manuals, design standards; and
- Mapping documents across sectors and identify linkages.

338. Prioritize adaptation activities based on an assessment of sector vulnerability - As resources are limited the project team will then agree a process with stakeholders to prioritize action according the entry points most relevant for the respective ministries. Key tasks required for the successful achievement of this activity include:

- Conduct a gap analysis to identify gaps in current documentation and opportunities for the creation of new documents; and

(iii) Provide summary recommendations for filling gaps in legislation and policy.

339. Draft sector-specific SAPA guidelines for approval and adoption – Finally the project team will formalize the SAPA through a drafting and consultation process with key stakeholders. Key tasks required for the successful achievement of this activity include:

- Develop draft guidelines and other documents;
- Follow-up consultation and workshop with stakeholders to develop and refine documents; and

(iv) Complete documents and submit for approval.

340. The final products of this activity will be sector-oriented guidelines for mainstreaming climate resilience into development planning. These are contractual reports for TA 8179 Package 1. To finalize this activity, a national workshop will be organized for the respective ministries to present the summary of the full program of work undertaken to produce the guidelines and the key elements of the guidelines themselves.

341. At this stage the guidelines documents are contracted to be delivered in two batches with the first two sets of guidelines for the agriculture and water sectors to be delivered in October 2016. With

this proposed process these guidelines documents would not be fully developed until after July 2017. As a result, the timing of delivery for these technical reports will need to be adjusted.

Table 6-13: Overview of Activity 1.10 events, products and contracted technical reports

Activity 1.10	Review and incorporate climate risk management into sector guidelines, manuals, and infrastructure design standards		Expected Start July 2016
Events		Team Responsibility	Expected Delivery
E1.10-1	Series of roundtable meetings with target ministries to discuss findings of case studies and identify entry points for mainstreaming	DTL, ICCS, AWRCCS, APDE1 & APDE2	November 2016
E1.10-2	Series of roundtable meetings with target ministries to discuss and finalize proposed entry points for mainstreaming and sector guidelines	TL, IICCS, IACCS, IAPDE, DTL, ICCS, AWRCCS, APDE1 & APDE2	June 2017
E1.10-3	National workshop to present and discuss proposed sector entry points for mainstreaming and sector guidelines	DTL, ICCS, AWRCCS, APDE1 & APDE2	September 2017
Products			
P1.10-1	Case Study Roundtable Meeting Summaries	DTL	December 2016
P1.10-2	Entry Point Roundtable Meeting Summaries	DTL	July 2017
P1.10-3	Workshop Summary	TL	October 2017
Contracted Technical Reports			
TR1.10-1 (T4)	Guidelines for mainstreaming climate change into development planning of agriculture	IACCS, AWRCCS	October 2017
TR1.10-2 (T5)	Guidelines for mainstreaming climate change into development planning of water resources sector	TL, DTL	October 2017
TR1.10-3 (T11)	Guidelines for mainstreaming climate change into development planning of transport sector	IICCS, ICCS	April 2017
TR1.10-4 (12)	Guidelines for mainstreaming climate change into development planning of urban planning sector	IICCS, ICCS	April 2017

Activity 1.5: Conduct sector-specific training events and workshops on integrating climate resilience into sector plans, programs, projects at national and subnational level

342. The SAPA process also acknowledges the cyclical and iterative nature of CCA. There is no permanent "fix" to climate vulnerability. Adaptation responses need to be regularly adjusted based on experience and new information. It is not necessary or possible to do everything at once - priorities need to be set. Some things need to be done before others are possible. Adaptation is best achieved in phases. As a result, part of this activity the project team will also lay the ground work for Step 3 of the SAPA process by establishing M&E systems to monitor progress and adjust sector adaptation plans as necessary.

343. This activity will build directly on the work undertaken for Activity 1.10 to enhance the capacity of target ministries to monitor implementation of the SAPA periodically revise and augment it in the future. As a result, this activity will also involve inputs from the project team's M&E specialist on

tools and methods to assist in the future monitoring of the SAPA following the implementation of TA 8179 Package 1. The aim is to develop and implement tailored capacity building initiatives that will transform the SAPA and associated sector-oriented technical and institutional activities into a lasting and meaningful system for strengthening climate resilience.

344. The activity will consist of training workshops on the SAPA process, the sector-specific guidelines developed for target ministries and M&E of SAPA. Training will be targeted at the core group with the intention that they become established as champions of the SAPA process who can provide follow-up training and communicate key messages to their ministries. In this way the training and workshops will also work as important opportunities to embed future capacity to disseminate these materials through RGC owned capacity building activities.

345. This activity will require the organization of a national training workshop on SAPA, which will be supplemented by a series of sector-specific training-of-trainers workshops. It will result in a number of capacity building workshop summaries for SAPA and sector mainstreaming using SAPA including instruction materials (Table 6-14).

Table 6-14: Overview of Activity 1.5 events, products and contracted technical reports

Activity 1.5	Conduct sector-specific training events and workshops on integrating climate resilience into sector plans, programs, projects at national and subnational level		Expected Start January 2017
Events		Team Responsibility	Expected Delivery
E1.5-1	National training workshop on SAPA	TL, IICCS, IACCS, IAPDE, DTL, ICCS, AWRCCS, APDE1 & APDE2	February 2017
E1.5-2	Series of sector training workshops on SAPA and sector mainstreaming guidelines	DTL, ICCS, AWRCCS, APDE1 & APDE2	June 2017
Products			
P1.5-1	Workshop report on national training on SAPA	TL	March 2017
P1.5-2	Sector training workshop materials on SAPA and sector mainstreaming guidelines	TL, IICCS, IACCS, IAPDE, DTL, ICCS, AWRCCS, APDE1 & APDE2	May 2017
P1.5-3	Workshop reports on sector training workshops	DTL	July 2017

Activity 2.5: Provide training on guidelines for securing adaptation funds

346. This activity will involve review/assessment of global climate funds and identifying Cambodian eligibility and capacity to meet criteria and fund requirements such as CIF, GCF, Adaptation Fund, GEF, and Global Climate Change Alliance. Through reviewing and assessing fund by fund, a brief on key accessing and applying information of each fund will be prepared and guidelines for securing these funds will be developed.

347. We will identify what capacities that may need to build for government staffs of key ministries in order to meet the requirements of these funds. Then drawing on expertise within the project implementation team and appropriate development partners, training and workshops will be prepared to build the capacity of the SPCR AWG to work collaboratively to prepare proposals to seek climate finance for priority adaptation projects of key ministries.

348. Climate fund accessing and securing guidelines will be prepared as guiding document for key ministries to prepare for designing feasibility studies, project concepts and project proposals for submission to climate funds.

Table 6-15: Overview of Activity 2.5 events, products and contracted technical reports

Activity 2.5	Provide training on guidelines for securing adaptation funds Provide training on guidelines for securing adaptation funds		Expected Start January 2017
Events		Team Responsibility	Expected Delivery
E2.5-1	Training workshop for accessing and securing climate funds	IAPDE, APDE1 & APDE2	September 2017
E2.5-2	Training workshop on development of adaptation project proposal fit with climate fund formats	IAPDE, APDE1 & APDE2	December 2017
Products			
P2.5-1	Climate fund briefing compiled and disseminated	IAPDE, APDE1 & APDE2	September 2017
P2.5-2	Training workshop report on accessing and securing climate funds	IAPDE, APDE1 & APDE2	October 2017
P2.5 -4	Training workshop report on development of adaptation project proposal fit with climate fund formats	IAPDE, APDE1 & APDE2	January 2017

Activity 1.3: Revise PPCR Phase 1 guidelines on mainstreaming CC into national development planning

349. During phase 1 of the PPCR a range of guidance materials were produced on mainstreaming climate change into national development planning in Cambodia. However, a number of years have since passed since the close of phase 1 and a number of key policy documents have either been adopted, such as the CCCSP, or lapsed, such as the SNAP for DRR. Following on from the SAPA process to be implemented under TA 8179 Package 1, there will also be the development of a range of climate change risk assessment and planning activities that will need to be integrated into future guidelines for investment planning and decision-making. This activity will involve review of the PPCR Phase 1 guidance and update them to reflect key institutional and policy changes and the specific sector planning processes that will be advocated under Activities 1.8, 1.6, 1.5 and 1.10.

350. This activity will involve the following actions:

(i) Review of the existing PPCR Phase 1 guidelines and any supplementary or duplicate guidance materials for climate change mainstreaming for infrastructure investment planning at the national, sub-national and sector levels;
(ii) Identification of gaps and needs to be covered by revised guidance materials;
(iii) Revision of guidelines incorporating based on steps 1 and 2 and salient features from SAPA process implemented by the project team; and
(v) Validation of the revised guidance materials at workshop involving key stakeholders from target ministries.

351. This activity will require the organization of a national workshop on guidelines for climate change mainstreaming. It will also result in the development of two contracted reports on revised guidelines for national and sub-national mainstreaming of climate change into development planning (Table 6-16). It is noted that Package 3 will have a focus of sub-national mainstreaming of climate resilience. However, while this TA will not prepare sub-national guidelines, any national guidelines

would include substantial provisions for engaging local government and communities as part of the resilience planning process.

352. According to the DMF and the technical report delivery schedule included in the consultant contract, these technical reports are required to be delivered after the first year of project implementation. However, as they will need to account for the full range of project activities it is recommended that they are delivered towards the end of the project.

Table 6-16: Overview of Activity 1.3 events, products and contracted technical reports

Activity 1.3	Revise PPCR Phase 1 guidelines on mainstreaming CC into national development planning		Expected Start July 2016
Events		**Team Responsibility**	**Expected Delivery**
E1.3-1	National workshop on revised guidelines for mainstreaming climate resilience into infrastructure investment planning decisions	TL, IICCS, IACCS, IAPDE, DTL, ICCS, AWRCCS, APDE1 & APDE2	February 2018
Products			
P1.3-1	Workshop report on national workshop on revised guidelines for mainstreaming climate resilience into infrastructure investment planning decisions	TL, DTL	March 2018
Contracted Technical Reports			
TR1.3-1 (T1)	Guidelines for mainstreaming climate change into national development planning	TL, DTL	July 2018
TR1.3-2 (T2)	Guidelines for mainstreaming climate change into sub-national development planning Note that based on ADB comments and the expected outputs of other packages under the overall TA, this contracted report has been removed		No longer required

Activity 2.7 Assist government staff in developing the NAP for Cambodia

353. Cambodia has committed to incorporate the NAP process for CCA even though the CCCSP is already in place. NAP is a process to address medium term and long term CCA. MOE with support from GIZ, UNDP and UNEP identified entry points for the Government to institutionalize Cambodia's NAP process. The Cambodia NAP process already has several of the building blocks including the CCCSP, climate change financing framework and several climate mainstreaming initiatives at national and sub-national levels.

354. The main objective of Cambodia's NAP process is to strengthen on-going CCA processes. Cambodia can strengthen these processes through cross-sectoral programming and implementation at national and sub-national level. There are gaps that need to be covered and addressed in implementing NAP process. These gaps include lack of inventories of existing climate information, fragmented and outdated VAs, lack of consistent climate scenarios, and limited cross-sectoral collaboration on climate adaptation programming at national and sub-national levels.

355. Clearly the TA activities align closely to the intended objectives of the NAP process. The activities of the project will provide a suitable foundation for consultations and discussions with government stakeholders about the nature and structure of Cambodia's NAP process. Thus, with this existing ongoing Cambodia's NAP process and its objective, the adaptation specialists and sector specialists of the TA will be involved, participate and contribute in terms of technical input within the NAP process of Cambodia.

356. The MOE, with cooperation and support from GIZ and USAID, organized a workshop on National Adaptation Plan Process and Climate Change Readiness Program in Siem Reap on 24-25 June 2015. One of the national adaptation specialists of the TA participated in this event and has engaged with the process.

Table 6-17: Overview of Activity 2.7 and corresponding Results/ Products

Activity 2.7	Assist government staff in developing the NAP for Cambodia		Expected Start June 2015
Events		Team Responsibility	Expected Delivery
E2.7-1	Take part in NAP process workshops	IAPDE, APDE1 & APDE2	June 2015 to April 2019
Products			
P2.7-1	Report on NAP development process for water, agriculture and infrastructure sectors	IAPDE, APDE1 & APDE2	July 2018

Activity 1.11: Conduct theme specific workshops

357. To complement efforts to integrate climate risk management into sectoral guidelines and standards (Activity 1.9), a set of theme-specific training programs will be developed and implemented on cross-cutting issues. The topics for the workshops will include:

- Impact and VA
- Community-based adaptation
- Ecosystem-based adaptation
- Disaster risk management

358. It is recommended that some flexibility be maintained to adjust the topics of the workshops in the future in consultation with MOE and other key stakeholders. It is possible that as the project is implemented there may be interest in alternative topics more relevant for specific project related activities and actions.

359. In designing the workshop program and materials the project team will consult with the SPCR Coordination Committee, the sector core group and development partners working with the topics in question. In preparing the materials appropriate consideration will be given to gender, vulnerable groups, social capital and community-based hazard avoidance and mitigation (autonomous adaptation).

360. This activity will require the organization of national theme-specific workshops and accompanying workshop reports.

Table 6-18: Overview of Activity 1.11 events, products and contracted technical reports

Activity 1.11	Conduct theme specific workshops		Expected Start February 2016
Events		Team Responsibility	Expected Delivery
E1.11-1	Workshop on Impact and vulnerability assessment	DTL & sector specialists	February 2016
E1.11-2	Workshop on Community-based adaptation	DTL & sector specialists	January 2017
E1.11-3	Workshop on Ecosystem-based adaptation	DTL & sector specialists	August 2017
E1.11-4	Workshop on Disaster risk management	DTL & sector specialists	February 2018
Products			
P1.11-1	Workshop report on Impact and vulnerability assessment	DTL & sector specialists	March 2016
P1.11-2	Workshop report on Community-based adaptation	DTL & sector specialists	February 2017
P1.11-3	Workshop report on Ecosystem-based adaptation	DTL & sector specialists	September 2017
P1.11-4	Workshop report on Disaster risk management	DTL & sector specialists	March 2018

Table 6-19 Detailed work plan Sub-Work Stream 3 - Mainstreaming climate change in target sector policies and guidelines

Work Stream	Activity		2015												2016												2017												2018												2019											
	Project Month	Team	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
	Year Month		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
3	**Mainstreaming climate change in target sector policies and guidelines**																																																																
2.4	Identify NAPA projects that can enhance the climate resilience of vulnerable groups, including women, and that have high potential to receive international funds, such as from the LDC Fund, the Adaptation Fund, and the Green Climate																																																												
Events																																																														
E 2.4-1	Workshop for application of criteria to guide prioritization of AP projects	IAPDE, APDE1 & APDE2																																																												
Products																																																														
P 2.4-1	Assessment report recommending at least 2 AP for immediate prioritization with clear justification and particular consideration of gender and social inclusion co-benefits	IAPDE, APDE1 & APDE2																																																											
2.6	Assist government staff in preparing necessary documents and submit at least two proposals																																																												
Events																																																														
E 2.6-1	Proposal preparation workshop for preparation of project proposal – sector 1	IAPDE, APDE1 & APDE2																																																											
E 2.6-2	Proposal preparation workshop for preparation of project proposal – sector 2	IAPDE, APDE1 & APDE2																																																										
Products																																																													
P 2.6-1	Draft Proposal 1 ready to send to finding agency	IAPDE, APDE1 &																																																										
P 2.6-1	Draft Proposal 2 ready to send to funding	IAPDE, APDE1 &																																																										
CTR																																																												
TR 2.6-1/2 (T10)	Two project design documents to receive international adaptation funds	IAPDE, APDE1 & APDE2																																																										
1.10	Review and incorporate climate risk management into sector guidelines, manuals, and infrastructure design standards																																																											
Events																																																													
E 1.10-1	Series of roundtable meetings with target ministries to discuss findings of case studies and identify entry points for mainstreaming	DTL, ICCS, AWRCCS, APDE1 & APDE2																																																											
E 1.10-2	Series of roundtable meetings with target ministries to discuss and finalize proposed entry points for mainstreaming and sector guidelines	TL, IICCS, IACCS, IAPDE, DTL, ICCS, AWRCCS, APDE1 &																																																										
E 1.10-3	National workshop to present and discuss proposed sector entry points for mainstreaming and sector guidelines	DTL, ICCS, AWRCCS, APDE1 & APDE2																																																										
Products																																																													
P 1.10-1	Case Study Roundtable Meeting Summaries	DTL																																																										
P 1.10-2	Entry Point Roundtable Meeting Summaries	DTL																																																									
P 1.10-3	Workshop Summary	TL																																																								
CTR																																																												
TR 1.10-1 (T4)	Guidelines for mainstreaming climate change into development planning of agriculture	IACCS, AWRCCS																																																									
TR 1.10-2 (T5)	Guidelines for mainstreaming climate change into development planning of water resources	TL, DTL																																																								
TR 1.10-3 (T11)	Guidelines for mainstreaming climate change into development planning of transport sector	IICCS, ICCS																																																							
TR 1.10-4 (12)	Guidelines for mainstreaming climate change into development planning of urban planning	IICCS, ICCS																																																						

Table 1-19 Cont.

Work Stream		Activity		2015												2016												2017												2018												2019											
		Project Month	Team	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
		Year Month		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
	1.5	Conduct sector-specific training events and workshops on integrating climate resilience into sector plans, programs, projects at national and subnational level																																																																
	Events																																																																					
	E 1.5-1	National training workshop on SAPA	TL, IICCS, IACCS, IAPDE, DTL, ICCS, AVRCCS, APDE1&																																																														
	E 1.5-2	Series of sector training workshops on SAPA and sector mainstreaming guidelines	DTL, ICCS, AVRCCS, APDE1& APDE2																																																													
	Products																																																																				
	P 1.5-1	Workshop report on national training on SAPA	TL																																																														
	P 1.5-2	Sector training workshop materials on SAPA and sector mainstreaming guidelines	TL, IICCS, IACCS, IAPDE, DTL, ICCS, AVRCCS, APDE1&																																																												
	P 1.5-3	Workshop reports on sector training workshops	DTL																																																													
	2.5	Provide training on guidelines for securing adaptation funds																																																														
	Events																																																																		
	E 2.5-1	Training workshop for accessing and securing climate funds	IAPDE, APDE1& APDE2																																																													
	E 2.5-2	Training workshop on development of adaptation project proposal fit with climate fund	IAPDE, APDE1& APDE2																																																											
	Products																																																																		
	P 2.5-1	Climate fund briefing compiled and	IAPDE, APDE1&																																																										
	P 2.5-2	Training workshop report on accessing and securing climate funds	IAPDE, APDE1& APDE2																																																										
	P 2.5 -4	Training workshop report on development of adaptation project proposal fit with climate fund formats	IAPDE, APDE1& APDE2																																																									
	1.3	Revise PPCR Phase 1 guidelines on mainstreaming CC into national development planning																																																												
	Events																																																																	
	E 1.3-1	National workshop on revised guidelines for mainstreaming climate resilience into infrastructure investment planning decisions	TL, IICCS, IACCS, IAPDE, DTL, ICCS, AVRCCS, APDE1&																																																											
	Products																																																																	
	P 1.3-1	Workshop report on national workshop on revised guidelines for mainstreaming climate resilience into infrastructure investment	TL, DTL																																																											
	CTR																																																																
	TR 1.3-1 (T1)	Guidelines for mainstreaming climate change into national development planning	TL, DTL																																																											
	TR 1.3-2 (T2)	Guidelines for mainstreaming climate change into sub-national development planning	TL, DTL																																																										

Table 1-19 Cont.

Work Stream		Activity		2015												2016												2017												2018												2019											
		Project Month	Team	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
		Year Month		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
	2.7	Assist government staff in developing the NAP for Cambodia																																																													
	Events																																																															
	E 2.7-1	Take part in NAP process workshops	IAPDE, APDE1&																																																												
	Products																																																													
	P 2.7-1	Report on NAP development process for water, agriculture and infrastructure sectors	IAPDE, APDE1& APDE2																																																											
	1.11	Conduct theme specific workshops																																																											
	Events																																																													
	E 1.11-1	Workshop on Impact and vulnerability	DTL & sector specialists																																																										
	E 1.11-2	Workshop on Community-based adaptation	DTL & sector specialists																																																										
	E 1.11-3	Workshop on Ecosystem-based adaptation	DTL & sector specialists																																																										
	E 1.11-4	Workshop on Disaster risk management	DTL & sector specialists																																																										
	Products																																																													
	P 1.11-1	Workshop report on Impact and vulnerability assessment	DTL & sector specialists																																																										
	P 1.11-2	Workshop report on Community-based	DTL & sector specialists																																																										
	P 1.11-3	Workshop report on Ecosystem-based	DTL & sector specialists																																																									
	P 1.11-4	Workshop report on Disaster risk management	DTL & sector specialists																																																									

6.3 CROSS-CUTTING ACTIVITIES

6.3.1 Strengthening SPCR Coordination and institutions for mainstreaming climate change into planning and implementation

361. Climate change is a cross-cutting issue that will require holistic and whole of government action on behalf of the RGC. Improving the effectiveness of the Cambodia in addressing climate change threats and opportunities will also require strong coordination and collaboration with the various development and civil society partners working on climate change issues in Cambodia. As a result, improved coordination – both within the MOE and amongst other ministries and stakeholders – is a key aim of Package 1. Under this Sub-Work stream the project team will work with SPCR stakeholders to strengthen coordination and institutions for mainstreaming climate change into planning and implementation.

Activity 1.2: Assist in organizing regular meetings of the SPCR coordination team

362. Under this activity, the project team will assist CCD in the organization of regular meetings of the SPCR Coordination Committee to facilitate its role in overseeing the full portfolio of SPCR projects. Agencies that form the SPCR Coordination Committee comprise the key target ministries of the SPCR including MEF, MOE, MOP, MOI, NCDM, MOWRAM, MAFF, MPWT, MRD, MOWA, and senior representatives of the organization managing the civil society support mechanism.

363. The Committee also brings together the implementation teams for the SPCR investment projects including RGC appointed national project directors and the leaders of the other TA 8179 packages.

364. The project team, in particular the national team members, will provide regular support to the activities of the Committee. Under this activity, the project team will determine the SPCR Coordination Committee's requirements and preferences for operations including the scheduling and format for Committee meetings and other Package 1 events. The project team will also develop an indicative meeting and reporting schedule for the Committee to facilitate easy tracking of the Committee's past and future activities and reduce any unnecessary administrative burden for Committee members. This activity will require the organization of bi-annual SPCR coordination team meetings and accompanying meeting reports (Table 6-20).

365. While Activity 1.2 is the primary Package activity linked to the task of coordination, numerous other activities to be undertaken by the team will involve varying levels of communication and coordination amongst the stakeholders of the SPCR program. Relevant coordination activities will include:

(i) Sharing outputs and other relevant SPCR products with SPCR ministries, other RGC ministries, academics, NGOs, civil society groups, private sector organizations and other relevant stakeholders;

(ii) Network with SPCR ministries and development partners to build support for adaptation project feasibility studies and proposals based on the work undertaken by the team;

(iii) Attend the annual meetings, conferences and other events related to Climate Change to share key outcomes and lessons learned from SPCR program of activities in Cambodia;

(iv) Provide progress reports and updates on SPCR activities and the SPCR financial management system to MEF, ADB and CIF.

Table 6-20: Overview of Activity 1.2 events, products and contracted technical reports

Activity 1.2	Assist in organizing regular meetings of the SPCR coordination team		Expected Start February 2015
Events		Team Responsibility	Expected Delivery
E1.2-1	Bi-annual meeting of the SPCR coordination team	DTL	Bi-annually
Products			

P1.2-1	Meeting reports of the SPCR coordination team	DTL	Bi-annually

6.3.2 Capacity building with sectors to enhance climate resilience in a systematic way

366. As noted above, capacity building underpins every activity to be implemented within the TA 8179 Package 1. Further discussion on the current status of capacity with climate change mainstreaming in target ministries and the methodology for the capacity needs assessment is provided in Sections 5.7 and 6.7. The practical implementation of capacity building activities will use the AWG approach (Section 5.2) to engage stakeholders and encourage them to participate in developing and communicating the project outputs and recommendations.

367. The AWG for TA 8179 Package 1 will comprise staff from each of the SPCR counterpart ministries' appointed to the CCTT. The AWG will be regularly involved during the process to develop the TA methodology and the focus of special technical working sessions and on-the-job training. The AWG will also be drawn into help coordinate support for the SPCR investment projects, contribute to VA&AP processes and develop necessary programs of policy adjustment or reform. The ultimate goal will be to transform the AWG into champions for the work being undertaken by the TA team through a systematic process of communication, learning and mutual support.

368. The specific events and products linked to this cross-cutting activity can be found in the specific descriptions of Activities 1.8, 2.1, 1.9, 2.6, 1.5, 2.5, 2.7 and 1.11.

Table 6-21 Detailed work plan Sub-Work Stream 4 - Strengthening SPCR Coordination and institutions for mainstreaming climate change into planning and implementation and Sub-Work Stream 5 - Capacity building with sectors to enhance climate resilience in a systematic way

Work Stream		Activity		2015												2016												2017												2018												2019											
		Project Month	Team	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
		Year Month		1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
VS2	4	**Strengthening SPCR Coordination and institutions for mainstreaming climate change into planning and implementation**																																																													
	1.2	Assist in organizing regular meetings of the SPCR coordination team																																																												
	Events																																																													
	E 12-1	Bi-annual meeting of the SPCR coordination	DTL																																																											
	Products																																																												
	P 12-1	Meeting reports of the SPCR coordination	DTL																																																											
	5	**Capacity building with sectors to enhance climate resilience in a systematic way**																																																											
	All	All activities																																																												