

Kingdom of Cambodia
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Royal Government of Cambodia

Ministry of Environment



Climate Change Action Plan
2016 – 2018

2016

MINISTRY OF ENVIRONMENT: CLIMATE CHANGE ACTION PLAN 2016-2018

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PREFACE

On behalf of National Council for Sustainable Development and the Ministry of Environment, I would like to express my profound admiration and sincere gratitude to **Samdech Akka Moha Sena Padei Techo HUN SEN, Prime Minister of the Kingdom of Cambodia**, for his full support and strong commitment to addressing climate change. In 2013, the Royal Government of Cambodia, under the leadership of **Samdech Akka Moha Sena Padei Techo HUN SEN**, launched the Cambodia Climate Change Strategic Plan 2014-2023 setting the vision and goals for Cambodia to develop towards a green, low-carbon, climate-resilient, equitable, sustainable and knowledge-based society. Samdech Techo Prime Minister stressed that the launching of CCCSP represented an important step towards mainstreaming climate change issues in the National Strategic Development Plan 2014-2018 and sectoral development plans of relevant ministries.

Now, fourteen ministries and government institutions have prepared sectoral Climate Change Action Plans to contribute to the country's climate change efforts and to the successful implementation of the CCCSP. As part of this national effort, the Ministry of Environment has developed the **Climate Change Action Plan 2016-2018**, setting guidance for general directorates, departments and units under its jurisdiction, so that the environment sector can contribute, in a strategic, coordinated and effective way to Cambodia's efforts to respond to climate change. The scope of the plan encompasses the mandates of MoE and the General Secretariat of the National Council for Sustainable Development related to climate change, covering multiple strategic areas, including the mainstreaming of climate change in national and subnational planning and budgeting processes, environmental protection, biodiversity and conservation of natural resources, and strengthening knowledge management and information systems.

This document has been prepared in accordance with the guidance set by the Council of Ministers, and it integrates inputs from multiple consultations within the Ministry, as well as with other ministries, development partners and stakeholders, ensuring its comprehensiveness and consistency with existing strategies and policies, as well as its alignment with the Ministry's priority programs. Key references used in the preparation of the present document include the National Vulnerability Assessment Report, First and Second National Communications to UNFCCC, CCCSP 2014-2023, National Strategic Development Plan 2014-2018 and sectoral plans, as well as the findings from research focusing both on climate change adaptation and mitigation.

Consensus was a key step in the development of the present document, ensuring its ownership and responsibility by the relevant departments, and a broader participation of stakeholders in the implementation of this action plan. The action plan provides crucial strategic orientation for the Ministry's departments and other institutions to tackle climate change issues, and it also constitutes an important tool for mobilizing domestic and external resources and funds for successful implementation of climate change interventions.

The implementation of the CCAP is expected to generate significant benefits, not only in terms of a healthier and more resilient environment, but significant gains for the Kingdom of Cambodia as whole, helping to turn the climate change challenge into an opportunity to secure a greener, more resilient, equitable future.

I would like to take this opportunity to express my deep appreciation and thanks to the Ministry's staff, national and international climate change experts, the Cambodia Climate Change Alliance and all stakeholders for their active support to the development of the present Climate Change Action Plan 2016 – 2018 for Ministry of Environment.

It is my great pleasure to promulgate and to formally direct the immediate commencement of the implementation of the Climate Change Action Plan 2016 – 2018.



SAY Samal
Minister of Environment
Chair of National Council for Sustainable Development

ACKNOWLEDGEMENT

The CCAP 2016 – 2018, developed under the overall coordination of the Ministry of Environment, counted with the active participation of all its departments and with the invaluable guidance from National Council for Sustainable Development. Their participation made the action plan more strategic, coherent and aligned both with the MoE’s programs, plans and policies, and with national development goals. The suggestions and comments received from peer reviews and from numerous stakeholders provided further strategic inputs for development of the CCAP 2016 – 2018. A wide range of technical support was provided by several national and international climate change experts to the development of the CCAP.

The Ministry of Environment wishes to express its deepest gratitude to the National Sustainable Development Council for their guidance, to all the stakeholders for their valuable input during consultations, and to all the Ministry’s departments who have worked tirelessly to assist in the preparation of the MoE Climate Change Action Plan 2016 – 2018.

The development of the CCAP was also made possible with the financial and technical support from development partners, namely the European Union, the Swedish International Development Cooperation Agency (Sida), and the United Nations Development Programme (UNDP), through the Cambodia Climate Change Alliance (CCCA).

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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank	MAFF	Ministry of Agriculture, Forestry and Fisheries
AF	Adaptation Fund	M&E	Monitoring and evaluation
AFD	Agence Française de Développement	MEF	Ministry of Economy and Finance
AIF	Alternative Investment Fund	MIH	Ministry of Industry and Handicraft
ASEAN	Association of South East Asian Nations	MLMUPC	Ministry of Land Management, Urban Planning and Construction
BURs	Biennial Update Reports	MME	Ministry of Mines and Energy
CC	Climate Change	MoE	Ministry of Environment
CCAP	Climate Change Action Plan	MoEYS	Ministry of Education, Youth and Sport
CCCA	Cambodia Climate Change Alliance	MoInfo	Ministry of Information
CCCSP	Cambodia Climate Change Strategic Plan	MoP	Ministry of Planning
DCC	Department of Climate Change	MoT	Ministry of Tourism
CCSP	Climate Change Strategic Plan	MOU	Memorandum of Understanding
CCTT	Climate Change Technical Team	MOWA	Ministry of Women Affairs
CDC	Council for the Development of Cambodia	MOWRAM	Ministry of Water Resources and Meteorology
CDM	Clean Development Mechanism	MPTC	Ministry of Posts and Telecommunications
CI	Conservation International	MRV	Measuring, Reporting and Verification
CIF	Climate Investment Fund		
COP	Conference of the Parties	NAMA	Nationally Appropriate Mitigation Action
CPEIR	CC Public Expenditure & Institutional Review	NAP	National Adaptation Plans
CSIRO	Commonwealth Scientific and Industrial Research Organisation	NAPA	National Adaptation Program of Action
DAPF	Department of Administration Planning and Finance	NBSAP	National Biodiversity Strategy and Action Plan
DCD	Department of Curriculum Development of MoEYS	NC	Nation Communication
DGEKI	General Directorate of Environmental Knowledge and Information	NCA	Natural Capital Accounting
DNA	Designated National Authority	NCCC	National Climate Change Committee
DST	Department of Science and Technology	NCF	Nordic Climate Facility
EbA	Ecosystem-based Adaptation	NCSO	National Council for Sustainable Development
EIA	Environmental Impact Assessment	NEFCO	Nordic Environment Finance Corporation
EP&L	Environmental Profit and Loss	NGO	Non-Governmental Organization
EU	European Union	NIE	National Implementing Entity
FAO	Food and Agriculture Organization	NIS	National Institute of Statistics
FFEM	Fonds Français pour l'Environnement Mondial	NOx	mono-nitrogen oxides NO and NO ₂
FFI	Fauna & Flora International	NPI	Nordic Partnership Initiative
FWE	Food Water Energy	NSFSN	National Strategy on Food Security and Nutrition

GCF	Green Climate Fund	NSDP	National Strategic Development Plan
GCPF	Global Climate Partnership Fund	PDOE	Provincial Department of Environment
GDNCPA	General Department of Nature Conservation and Protection Administration	QA	Quality Assurance
GDP	Gross Domestic Product	QC	Quality Control
GED	Green Economy Department	REDD	Reducing Emissions from Deforestation and Forest Degradation
GEEREF	Global Energy Efficiency and Renewable Energy Fund	RGC	Royal Government of Cambodia
GEF	Global Environmental Facility	SDG	Sustainable Development Goals
GEF TF	Global Environmental Facility Trust Fund	SDP	Sector Development Plan
GG	Green Growth	Sida	Swedish International Development Cooperation
GGGI	Global Green Growth Institute	SPCR	Strategic Program for Climate Resilience
GHG	Greenhouse Gas	TA	Training Assessment
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit	TNC	Third National Communication
ICF	International Climate Fund	TOR	Term of Reference
ICT	Information and Communications Technology	TWG	Technical Working Groups
IDB	Islamic Development Bank	UK	United Kingdom
IFAD	International Fund for Agricultural Development	UKAID	Department for International Development
IIED	International Institute for Environment and Development	UNDP	United Nations Development Programme
IKI	International Climate Initiative	UNFCCC	United Nations Framework Convention on Climate Change
INDCs	Intended Nationally Determined Contributions	UNEP	United Nations Environment Programme
IPCC	Intergovernmental Panel on Climate Change	UNWTO	World Tourism Organization
IUCN	International Union for Conservation of Nature	USAID	United States Agency for International Development
IWMI	International Water Management Institute	USD	United States Dollar
JCM	Joint Crediting Mechanism	VA	vulnerability assessments
KAP	Knowledge, Attitude and Practices	WB	World Bank
KMIS	Knowledge Management and Information System	WCS	Wildlife Conservation Society
LAIF	Latin America Investment Facility	WMO	World Meteorological Organization
LDCF	Least Developed Countries Fund	WWF	World Wide Fund for Nature
LULUCF	Land use, land-use change and forestry		

EXECUTIVE SUMMARY

The Ministry of Environment has prepared the Climate Change Action Plan (CCAP) 2016-2018 based on the guidance from the Council of Ministers and from the National Council for Sustainable Development.

As a country highly vulnerable to climate change, the investment on an effective response to the challenges posed by a changing climate is crucial to Cambodia's continued sustainable development. Climate projections indicate greater uncertainty of weather patterns and the occurrence of more frequent and intensive extreme weather events such as floods and droughts, indicating, for example, increases of mean temperature between 0.013oC to 0.036 oC per year by 2099, and sea level rise between 0.18m to 0.56m by 2090, depending on the global GHG emission scenarios. The impacts of these changes on economic, social and natural systems will be vast, with the potential to derail future efforts for national sustainable development, and possibly eroding development gains which Cambodia has worked hard to achieve. Thus, a significant investment will be needed to adequately respond to the challenges posed by climate change to the country's development.

CCAP constitutes an integral part of this response, contributing to the successful implementation of the Cambodia Climate Change Strategic Plan (CCCSP) 2014-2023 through a number of strategic actions targeting environmental protection, conservation and sustainable use of natural resources, green growth, environmental education and awareness raising, and climate change governance, including those aiming at building the required capacity within the General Secretariat of National Council for Sustainable Development. These efforts are expected to enable to the Kingdom of Cambodia to address climate change challenges and opportunities through improved coordination and more effective implementation of strategic climate change interventions.

MoE has identified 17 actions that respond directly to the eight strategic objectives of the CCCSP, requiring a total budget of USD 28 to 30 Million for the three years of the CCAP's implementation. The CCAP was developed through multiple discussions with relevant departments of MoE and relevant development partners and stakeholders.

The key expected impacts from the implementation of CCAP 2016-2018 include: 1) greater public awareness of climate change issues; 2) increased institutional capacity and mainstreaming of climate change issues into national and subnational planning; 3) increased community resilience; and 4) greater contribution to the GHG emission reduction efforts, with increased volumes of carbon credits issued from carbon offset projects in Cambodia. A number of specific results are also expected through the implementation of the following 17 interventions of the CCAP:

1. Technology hub for food, energy and water security
2. Vulnerability assessments
3. Adaptation measure for Protected Areas
4. Natural Capital Accounting system
5. GHG Inventory system
6. GHG Emission Reduction Facility
7. Urban development plans and programs addressing climate change
8. Climate change Knowledge Management System
9. Curricula on climate change
10. Climate change public awareness raising

11. Mainstreaming climate change at subnational planning
12. Climate change M&E system
13. Developing capacity of climate change national coordinating mechanisms
14. Grant facility for implementation of climate interventions
15. Climate change legal framework
16. National carbon finance framework
17. Reporting to UNFCCC

The results from these interventions are expected to make a significant contribution to overall resiliency of the country to climate change.

To support the implementation of the CCAP, communication materials will be prepared for distribution to all departments under MoE, as well as to other ministries, development partners, the private sector and Non-Governmental Organizations to facilitate partnership building and enhance CCAP's implementation. To ensure the ownership of the actions, the CCAP preparation team will continue working with the Department of Planning and Budgeting and relevant departments to include the identified actions in the next Budget Strategic Plans and Public Investment Plans of the Ministry. The CCAP will be updated as needed, according to findings from the monitoring and evaluation framework established herein, with a next CCAP being expected in 2019, aligning with the government mandate 2019-2023.

1. INTRODUCTION

Background

The Royal Government of Cambodia (RGC) has since long paid the highest attention at both national and sub-national level to address the challenges posed by climate change. The country ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1995 and the Kyoto Protocol in 2002. The Ministry of Environment (MoE) acts as the country's focal point to the UNFCCC and the Kyoto Protocol, playing a major role in the development and coordination of Cambodia's climate change response. Other sectors, including key ministries of the Royal Government of Cambodia, are also significantly contributing to climate change efforts through policy development and the implementation of various projects and programs related to climate change.

In 2013, the RGC launched the Cambodia Climate Change Strategic Plan 2014-2023 (CCCSP), providing an overall framework for climate change response and the integration of climate change issues into development planning at national and sectoral levels. As a result, the Strategic National Development Plan 2014-2018 (NSDP) has set climate change as a cross-cutting issue, making climate change mainstreaming an integral part of development and poverty reduction efforts in Cambodia. Following guidance from CCCSP, technical line ministries have developed climate change action plans to operationalize the CCCSP for their sectors, thus contributing to a coordinated effort to address climate change issues in Cambodia.

The Ministry of Environment has developed the present Climate Change Action Plan (CCAP) following guidance from the Council of Ministers, and with the support from the National Council for Sustainable Development (NCSDD) and technical and financial support from Cambodia Climate Change Alliance (CCCA). The process for developing the CCAP involved a series of consultations with all technical departments and with development partners, making use of available information and findings from research and assessments focusing on climate change issues in Cambodia. The technical and policy alignment with MoE's annual plan, relevant policy papers and plans for the sector, as well as with national development goals were a core part of the CCAP development process.

The present CCPA defines the concrete actions and resources needed for the operationalization of the MoE's response to climate change for the period 2016-2018. The overall direction provided covers, not only climate change governance issues, but a number of other related, including environmental protection, natural resources conservation and sustainable development, green growth, and environmental education and outreach, as well as engagement in international dialogue on climate change and commitments under the UNFCCC.

Situation

The Royal Government of Cambodia has recognized the importance of environmental protection and climate change in economic development efforts in Cambodia. The NSDP states clearly that managing environment and climate change has become a challenge for the sustainability of Cambodia's economic growth and social development, due to pressure from population growth, urbanization, expansion and intensification of agriculture, as well as of transport, energy and other sectors. Many environmental issues are cross-sectoral in nature, thus requiring effective coordination amongst government agencies, at both national and sub-national levels, and cooperation with all the stakeholders.

Environmental issues, biodiversity loss and climate change are hampering the efforts of the RGC to promote sustainable use of natural resources. According to the CCCSP, the climate of Cambodia has already started to change, with projections pointing to significant changes to climate regimes in the future. Projections indicate, for example, an increase in mean monthly temperatures between 0.013°C and 0.036°C per year by 2099, and an

increase in mean annual rainfall. These forecasts indicate different effects throughout Cambodia, with expected increases in rainfall between June and August in the northwest part of the country, while a decrease of rainfall is expected in the northeast. Projections also indicate impacts on the coastal zone, with sea-level rise between 0.18 m to 0.56 m by 2090, depending on the global GHG emission scenarios. For example, the 435 km Cambodian coastline is vulnerable to sea-level rise, with an expected loss of 25,000 ha of coastal areas due to permanent inundation within 90 years, under a 0.56 m rise of sea-level scenario, with severe impact on the tourism sector.

The changes in Cambodian climate have also other significant environmental and economic implications. More frequent typhoons are expected to cause increasing damages to settlements in coastal areas. In addition, the impact of climate change on biodiversity in Cambodia is yet to be determined but likely to induce significant changes to the health of ecosystems, and to the rural communities who depend on natural resources for their livelihoods. Changes in water regimes are expected to severely impact food production system, such as agriculture and fisheries sectors, with the central plains including Tonle Sap Lake experiencing more extreme changes.

Ministry of Environment's Priority programmes

With a mandate to coordinate national climate change response, and in the context of the ongoing institutional reform efforts of RGC, the Ministry of Environment has recently undergone a structural change to respond more effectively to the current challenges to environmental protection, biodiversity conservation and sustainable use of natural resources. The RGC issued in May 2015 the Sub-Decree 55 on the Organization and Functioning of the MoE and the Royal Decree 403 on the Establishment of the National Council for Sustainable Development.

With the establishment of NCS, a multi-sectoral body with the mandate to coordinate climate change response, and with the establishment of its Secretariat at MoE, the Ministry continues to play a key role in the coordination of the national climate change response. The Department of Climate Change (DCC), part of the General Secretariat of NCS (GSSD) for climate changes issues, has led the technical efforts regarding the preparation of the CCSP as well as of this CCAP, providing also to sectors on CCAP development and implementation.

The current structure of MoE is aligned with the key priorities identified for this sector, namely 1) Environmental Protection, 2) Protected Area Management, 3) Sustainable Development (including Environmental education and information), and 4) Good Governance. These areas now correspond to the four priority programs of MoE's Budget Strategic Plan 2016-2018. These four programs, and respective subprograms, are listed in Box 1.

Box 1: Priority Programmes and Sub-programmes of MoE

Priority programme 1: Environmental Protection

- 1.1. Prevention and reduction of air pollution, noise and vibration
- 1.2. Prevention and reduction of public water pollution
- 1.3. Environmental hazards management
- 1.4. Monitor the management of solid waste in capital, urbans and provincial cities.
- 1.5. Law and regulation enforcement for environmental protection
- 1.6. Analyze and test the waste and pollutant substances
- 1.7. Survey and monitor the Environmental Impact Assessment
- 1.8. Supporting services to environmental protection

Priority programme 2: Protected Area Management

- 2.1. Natural resources and heritage conservation in the protected area
- 2.2. Management of community in protected area
- 2.3. Management of freshwater wetland, multiple uses area, coastal zone and seascape.
- 2.4. Supporting services to protected area management

Priority programme 3: Sustainable Development (including Environmental education and information)

- 3.1. Green economy development and promotion of science and technology
- 3.2. Promote the implementation of climate change response
- 3.3. Biodiversity management
- 3.4. Promote environmental education and information

Priority programme 4: Good Governance

- 4.1. Increase efficiency of administration process and public service
- 4.2. Human resource development and management
- 4.3. Finance and state asset management
- 4.4. Planning, budgeting, international affairs, decentralization and deconcentration
- 4.5. Mainstreaming of gender, youth and children in environmental sector
- 4.6. Inspection and auditing

2. ACTION PLAN

Scope of the climate change action plan

To promote implementation of the strategic objectives of the CCCSP 2014-2023, the MoE has developed the present Climate Change Action Plan for the period 2016-2018, in alignment with the mandates of the ministry and of the GSSD. The Climate Change Action Plan (CCAP) sets out the key priority actions for MoE three General Directorates of Environmental Information and Education Centre, Environmental Protection, and Nature Conservation and Protection Administration, through which they can support the implementation of CCCSP. It also sets clear guidance on key priority actions for the GSSD, in particular for the Department of Climate Change Department, as well as the Departments of Science and Technology, Green Economy, and Biodiversity.

The internal discussion of MoE's strategic contributions to the implementation of CCCSP commenced in 2013, and continued through most of 2014. All General Directorates actively contributed to this strategic planning exercise, which was led by the Secretariat of the National Climate Change Committee (NCCC) who, at the time, was mandated to coordinate the implementation of climate change response. The resulting long list of actions that could be implemented by MoE is presented in Annex 1.

In 2015, following the institutional reform of MoE and NCCC which resulted in a revised structure of the Ministry and the establishment of the NCSD in May, further work was undertaken on MoE CCAP, so as to ensure that it would be in line with both the new institutional arrangements for climate change, and environment and the CCCSP (2018-2023).

A short list of key actions to integrate the MoE CCAP for the period 2016-2018 was developed, taking into account previous discussions, current MoE and GSSD mandates, and priorities indicated in MoE's Strategic Budget Plan for 2016-2018, and are indicated in the next section in Table 1 (Action Plan Matrix).

Action Plan Matrix

Table 1 contains a total of 17 priority actions to be implementing by MoE during the period 2016-2018, representing MoE's contribution to the first period of implementation of CCCSP. The table indicates the contribution of these actions to the different strategic objectives of CCCSP, indicating also the respective estimated cost and the departments responsible for their implementation.

In identifying the actions to be included in this first CCAP, existing programs and projects designed to strengthen institutional capacity for and implement climate change response were taken into account, and where appropriate they have been integrated into the current Action Plan, thus capitalizing on existing efforts and partnerships. Some of these actions are expected to be continued well beyond 2018, though continued monitoring and an evaluation exercise schedule for mid-2018 will make that determination.

For each of the 17 CCAP actions, detailed matrix (Annex 2) is provided with additional information, including rationale, expected outputs, indicators and conditions for success, institutional arrangements for implementation, cost and potential sources of funding, as well as funding already mobilized from the stated budget and external sources. More accurate cost estimates and additional information on potential funding sources and level of financing, as well as technical details will be updated prior to the implementation of the respective activities or during proposal preparation for resource mobilization.

Table 1: Key Climate Change Actions for 2016-2018

No.	Action	Responsible department(s)	Estimated budget			
			2016	2017	2018	Total
Strategic Objective 1: Promote climate resilience through improving food, water and energy (FWE) security						
1.	Establish a Resilient Low Carbon Technology Hub for Food, Water, and Energy Security	DST				635,000
Strategic Objective 2: Reduce sectoral, regional, gender vulnerability and health risks to climate change impacts						
2.	Conduct national and sectoral vulnerability assessments	DCC				tbc
Strategic Objective 3: Ensure climate resilience of critical ecosystems (Tonle Sap Lake, Mekong River, coastal ecosystems, highlands, etc.), biodiversity, protected areas and cultural heritage sites						
3.	Conduct an assessment of climate change impact on biodiversity and test specific management options to cope with climate change	GDNCP A				2,300,000
4.	Develop preliminary studies for the establishment of natural capital accounting	DGE				120,000
Strategic Objective 4: Promote low-carbon planning and technologies to support sustainable development						
5.	Develop the national GHG inventory system and preparation of contributes to BURs	DCC				450,000
6.	Facilitate GHG emission reduction through project and program carbon finance crediting mechanisms	DCC				385,000
7.	Develop and test low carbon resilient approaches and options in urban areas	DGE				3,800,000
Strategic Objective 5: Improve capacities, knowledge and awareness for climate change responses						
8.	Establish a knowledge management System on CC & GG	DCC				615,000
9.	Integrate CC and environmental issues into the curriculum at all levels	DCC				450,000
10.	Engage and raise awareness of different target groups on CC and GG/sustainable consumption and production	DCC; DGE				600,000
Strategic Objective 6: Promote adaptive social protection and participatory approaches in reducing loss and damage due to climate change						
11.	Promote and improve the adaptive capacity of communities to respond to climate change	DCC				2,500,000
Strategic Objective 7: Strengthen institutions and coordination frameworks for national climate change responses						
12.	Launch and Roll Out of the National and Sectoral M&E System	DCC; DAPF				215,000
13.	Capacity building of national institutions coordinating the implementation of climate change response	DCC				5,000,000
14.	Support to line ministries to mainstream climate change into development planning and budgeting	DCC				8,000,000
15.	Strengthen legal and regulatory framework for resilient low carbon development	DCC				100,000
16.	Establish a national carbon finance framework	DCC				1,000,000
Strategic Objective 8: Strengthen collaboration and active participation in regional and global climate change processes						
17.	Institutionalize UNFCCC reporting	DCC				1,500,000
	Estimated Total		27.7 Million (*action 2 not yet costed)			

Expected Benefits from the Implementation

The CCAP would enhance the coordination role of NCS D as the inter-ministerial agency for effective response to climate change nationally. Also, the CCAP would generate evident based implementation for future climate change intervention through environmental education, environmental protection and natural resources and biodiversity conservation.

3. MANAGEMENT AND FINANCING MECHANISMS

Existing Management and Financing Mechanisms

a. Management Structure

The Figure 1 and 2 below illustrate the structural management of the Ministry of Environment and the Secretariat of the National Council for Sustainable Development.

Figure 1: Structure of Ministry of Environment

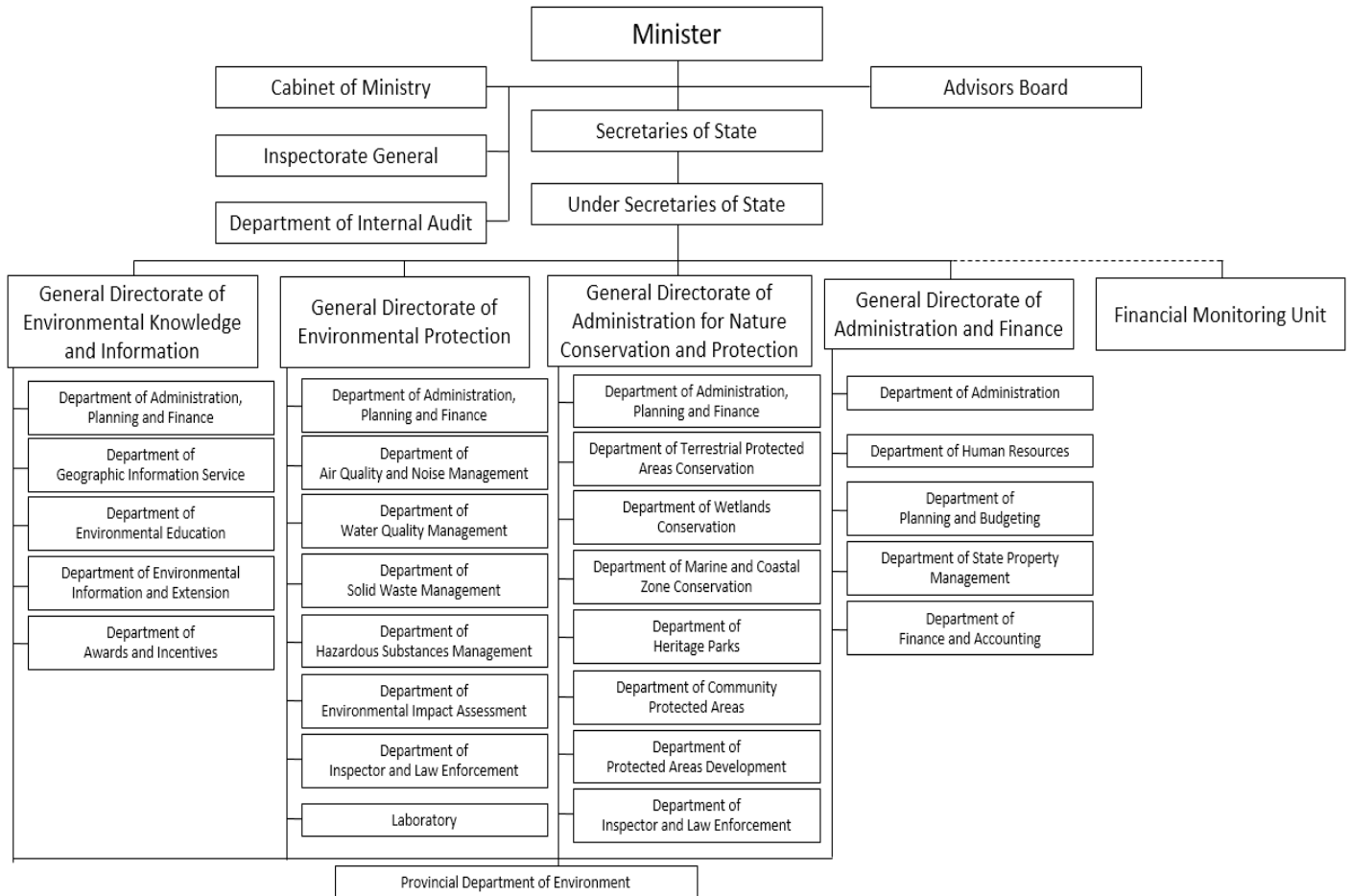


Figure 2: Structure of the Secretariat of National Council for Sustainable Development



b. Budgeting of MoE

The law on financial management approved Kh Riels 17,360,000,000 for MoE for 2013 and additional finance Kh Riels 849,300,000 was requested under budget category 64 and this made the total budget Kh Riels 18,209,300,000. The actual disbursement was 17,221,401,000 equivalents to 94.57% of the budget plan for the year.

During this period, MOE managed several externally-funded projects related to climate change for a total value estimated at USD 4.5 million.

Climate change finance represented about one third of the total resources managed by the ministry, mostly through the Cambodia Climate Change Alliance programme (USD 3.4 million in expenditure in 2013).

It is worth noting until 2015 that the MoE was not able to calculate actual amount of expenses made by the ministry on climate change as there was a lack of clear climate change action plan for the Ministry of Environment, and lack of a programme budget. MoE has introduced programme budgeting starting in 2016, which includes a sub-programme on climate change (Kh Riels 593 million) and another one on green economy (Kh Riels 1,453 million).

c. Financial mobilisation mechanism

Aside from the national budget, MoE has already established partnerships with a number of donors on climate change issues. A dedicated group is in place in MOE, led by the Chief of Cabinet, to further develop MOE-donor partnerships.

Potential Sources and Volume of Finance Climate Change Actions

The present CCAP is estimated between USD 28 and 30 Million over a 3-year period.

Large part of the funds for the CCAP will be financed through the current development partners of MoE. The multi-donor modality consisting of SIDA, UNDP and EU is supporting the Cambodia Climate Change Alliance with total current funding of USD 12.8 Million for 2014-19. The dedicated/global funds for climate change i.e., CIF, GEF, LCDF, AF, FCPF, and UN-REDD are supporting projects in MoE, e.g. CIF is financing MoE through ADB on SPCR project. Dedicated/global funds for climate change are expected to play a more important role as their funding scales are expected to get larger. In addition, key bilateral partners supporting MoE on climate change work are Germany (through GIZ), USAID, JICA, KOICA, UKAID, and SIDA.

Entry Points for Climate Change Mainstreaming in Management and Financing

The GSSD particularly the Climate Change Department will support planning and technical departments to ensure the Actions are aligned with the work plan of the Ministry. The monitoring and evaluation for the CCAP is described in the next section.

The CCAP development team will work with the relevant departments to build more ownership of the actions. Each action will be detailed into activities or programmes of work for offices under relevant departments, and integrated into annual work plans for the respective departments and then into the Budget Strategic Plan of the Ministry.

The short-fall fund for implementation will be brought for discussion with development partners.

4. MONITORING AND EVALUATION

The monitoring and evaluation framework for this CCAP is aligned with Cambodia's M&E Framework for Climate Change and with the NSDP (integrating its four indicators on climate change). This framework encompasses four main types of indicators, which will be measured on a yearly basis:

1. **CCAP delivery** – tracking progress on the implementation of MoE CCAP
2. **Institutional readiness** – tracking progress in improving institutional capacities including the ability to mainstream CC into the MoE's broader policy and planning instruments
3. **Result indicators** – tracking progress in achieving expected results in the 17 strategic areas
4. **Impact indicators** – tracking the broader impact in development objectives for the country (linked to NSDP indicators)

Note that CCAP delivery indicators, though partially overlapping with other institutional readiness and result indicators part of the M&E framework, they give a summary view of MoE' success in implementing CCAP and they also facilitate a comparison with CCAP implementation across sectors.

The full set of indicators which are part of the CCAP M&E framework is presented in Table 2 below.

Table 2: Indicator Framework for MoE CCAP M&E System

MoE CCAP M&E System	
Indicator	Units
1. CCAP delivery	
Total funding mobilized/total CCAP budget	%
Actions successfully funded	number
Degree of inclusion of CCAP actions into PIPs	number
Degree of involvement of MoE in CCAP implementation	number
2. Institutional readiness	
Status of development of environment policy and planning	% (ladder approach)
Coordination of CC response and CCAP implementation	% (ladder approach)
Status of climate information management	% (ladder approach)
Climate integration into Financing	% (ladder approach)

3. Result indicators

Action 1	Technologies for FEW security piloted	number
Action 2	Coverage and availability of vulnerability assessments	% (ladder approach)
Action 3	Protected Area Management Plans with adaptation measures	number
Action 4	Dialogue on Natural Capital Accounting system	number
Action 5	Participation of Technical Working Groups in GHG Inventory	number
Action 6	Functionality of the Emission Reduction Facility	% (ladder approach)
Action 7	Cities with urban development plans and programs addressing CC	number
Action 8	Satisfaction with MoE's CC Knowledge Portal	survey
Action 9	Teachers trained on updated proposed CC curricula	number
Action 10	CC awareness initiatives jointly implemented by MoE and stakeholders	number
Action 11	Funding from Commune/Sangkat Fund allocated to climate interventions in CIPs	%
Action 12	Functionality of CC M&E system	% (ladder approach)
Action 13	Capacity and Functionality of national coordinating mechanisms for CC: GSSD Secretariat, CCTT, TWGs	% (ladder approach)
Action 14	Ministries reporting on CCAP implementation at MoE's National M&E annual learning event	number
Action 15	Ministries involved in reviewing sectoral legislation with a CC lens	number
Action 16	Project/program proposals submitted for climate financing under the new procedures for CF	number
Action 17	Functionality of Climate Reporting Teams	% (ladder approach)

4. Impact

1	Public awareness of CC issues	KAP surveys
2	Mainstreaming climate change issues into national and subnational plans	number
3	Vulnerability Index	-
4	Carbon credits issued from carbon offset projects	number

Additional result indicators for monitoring progress in the implementation of specific actions is provided in the action fiches presented in Annex 2.

The full development of MoE CC M&E Framework, including baselines and targets, will be finalized at the start of 2016, the CCAP planning period.

A final evaluation will be conducted in mid-2018, to inform the development of the next round of the CCAP.

Monitoring and evaluation of the CCAP will be conducted by MoE's M&E Unit. The Unit, to be established as part of action 12 of the action plan, will be initially housed at DCC (GSSD for CC matters) and will combined staff from DCC and DPB, accumulating functions with CC monitoring and reporting and national level.

In regards to MoE CCAP, the M&E Unit will be responsible for regular monitoring and reporting of its implementation (with at least one M&E report per year), as well as sharing information within MoE, key line ministries and other stakeholders. They will also promote inclusive discussions to extract lessons from the implementation of CCAPs from MoE and other sectors (with at least one learning event a year). Their work will enable continued learning and timely adjustment of activities, potentiating a more effective response.

5. LAWS AND LEGAL INSTRUMENTS TO SUPPORT IMPLEMENTATION

To fulfil the mandates of Ministry of Environment, a number of legal provisions have been developed to ensure effective management of natural resources, biodiversity and critical ecosystems such as the Tonle Sap, coastal and marine systems, as well as environmental and human health, effective waste management, and effective coordination and implementation of climate change response. Annex 3 provides list of laws and legal instruments under the jurisdiction of MoE.

The RGC has been consistently taking steps to mainstream climate change into existing regulatory frameworks, in alignment with the strong guidance provided by national development policies and strategies. Likewise, direction NSDP 2014-2018 entrust the Ministry of Environment with the “preparation of the climate change legal framework, which will include updating the institutional arrangements, financing arrangements, and mainstreaming of climate change across sectors”.

The report on Strengthening the Legal Framework for Climate Change (2013) has reviewed the existing legal and regulatory framework relevant for Cambodia’s climate change response, and identified key entry points for climate change mainstreaming, including:

- Law on Environmental Protection and Natural Resources (first enacted in 1996, to be reviewed 5 years);
- Sub-Decrees on Pollution Control, on Management of ODS (2005), on Solid Waste Management (1999), on Water Pollution Control, and other related legislation (e.g. biodiversity and conservation, Protected Areas Law and Law on Biosafety 2008);
- Sub-Decree on Environmental Assessment Process (EIA), first approved in 1999 and presently under review, with a Law on EIA or a broader Environmental Code to be approved.

The study recommended that, in the short-medium term, entry points such as the ones identified within MoE as well as additional entry points in other sectors be the focus of climate change mainstreaming into the Cambodia’s legal framework. In the long run, it recommended the development of a Framework Law on Climate Change.

6. CONCLUSION

The climate change action plan provides the overall guidance to MoE on the implementation of climate change interventions which will directly contribute to the achievement of the CCCSP goals. This direction also covers priority actions to be taken by MoE as the Secretariat for the National Council for Sustainable Development and as the National Focal Point of the UNFCCC.

As the GSSD, MoE plays a critical role in developing the country’s capacity at all levels for an effective response to the challenges posed by climate change, assisting in the coordination of all climate change interventions to be undertaken by sectors, as well as in the monitoring and evaluation as well as CCCSP implementation, contributing to increase knowledge on Cambodia’s climate change response to better inform future action.

Actions proposed in the present CCAP will be implemented through a joint effort of the various technical departments of the MoE, who, together with NCSO, and municipal and provincial Departments of Environment, in collaboration with relevant ministries-agencies and relevant stakeholders, will enable the country to scale up its climate adaptation and mitigation response and move towards a more resilient and low carbon society.

Ensuring sustainable delivery of results from the implementation of this action plan will require its ownership by all parties implementing the plan as well as the provision of funding and other resources in a timely manner. Thus it is key that MoE systematically integrates CCAP planned interventions in its annual Budget Strategic Plan and Public Investment Plan, and continues its efforts to mobilize additional resources.

The Ministry will ensure that results from the annual stocktake exercises of MoE CCAP's implementation, as well as the results of the yearly planning and budgeting analytical exercises are shared at the MoE Annual Conference at the end of each year, reflecting on lessons learnt and adjusting direction as needed.

The present action plan is to be evaluated at the end of its first cycle of implementation, in 2018, to inform the development of the next round of the CCAP, which will cover the period 2019-2023 to align with government mandate.

MoE strongly believes that the direction set in its climate change action plan for 2016 to 2018 will enable a timely and effective response from the environment sector, contributing significantly to the achievement of the strategic objectives set in the CCCSP 2014-2023. The CCAP will be widely shared with the relevant departments of MoE to ensure the ownership, and widely disseminated to facilitate partnership building to enhance its implementation and to further catalyse efforts that will help Cambodia move towards more resilient and low carbon development.

ANNEX 1: LONG LIST OF ACTIONS

Strategic Priority and activity clusters		Leading implementing unit	Partner Unit	Estimated budget (1000 USD)										
				2014		2015		2016		2017		2018		
				State	Development partner	State	Development partner	State	Development partner	State	Development partner	State	Development partner	
<u>Strategic priority 1: Environmental protection</u>														
1.1	Integrated management of solid and liquid wastes in the capital, cities and urban areas and animal waste management	Department of Environmental Pollution Control		<u>10</u>		<u>1240</u>		<u>175</u>		<u>165</u>		<u>110</u>		
1.1.1	Development of regulation and strategic budget for management of solid and liquid wastes in the capital, cities and urban areas	Department of Environmental Pollution Control	PDOE and Local Authority	0		30		30		30		30		
1.1.2	Development and implementation of 5 year action plan (2015-2020) for priority projects on integrated management of solid and liquid wastes in the capital, cities and urban areas and animal waste management	Department of Environmental Pollution Control	PDOE	0		10		10						
1.2	Incorporation of climate change in the EIA process	EIA Department		<u>54.4</u>		<u>69.6</u>		<u>70.6</u>		<u>99.6</u>		<u>71.6</u>		
1.2.1	Development of regulation on EIA Process	EIA Department	PDOE	20		30		20		20				
1.2.2	Development and implementation of 5 year action plan (2015-2020) for priority projects on EIA	EIA Department	PDOE and Relevant institutions	13		12		12		12		12		
<u>Strategic priority 2: Nature conservation and sustainable development</u>														
2.1	Incorporation of climate change in protected area management planning	GDANCP		<u>10</u>		<u>2465</u>		<u>2464</u>		<u>2466</u>		<u>2464</u>		
2.1.1	Development and implementation of 5 year action plan (2015-2020) for priority projects on PA management	ICBD	DPLA and DCC	0		15		15		15		15		

Strategic Priority and activity clusters		Leading implementing unit	Partner Unit	Estimated budget (1000 USD)									
				2014		2015		2016		2017		2018	
				State	Development partner	State	Development partner	State	Development partner	State	Development partner	State	Development partner
2.1.3	Identify potential areas and need for designation of additional PAs covering wetlands and biodiversity to cope with and adapt to climate change	Department of Wetland and Coastal Zone	Department of national resource assessment and DCC	0		20		20		20		20	
2.1.3	Identify potential areas and need for designation of additional PAs as national parks to cope with and adapt to climate change	Department of National Park	Department of national resource assessment and DCC	10		11		10		12		0	
2.1.4	Develop CPA management plans incorporating community capacity to adapt to climate change	CPA	DCC	0		2419		2419		2419		2419	
2.2	Implementation of protected areas management and protection adaptive to climate change			<u>0</u>		<u>60</u>		<u>60</u>		<u>60</u>		<u>60</u>	
2.2.1	Identify biodiversity sensitive and vulnerable to climate change and priority options for future management and for adding to the current adaptation strategy	ICBD	Departments under GDANCP	0		10		10		10		10	
2.2.2	Improvement of CPA capacity to respond to climate change	Department of Research and Community Development	Departments under GDANCP	0		39.5		39.5		39.5		39.5	
2.2.3	Improvement of social protection for CPAs	Department of Research and Community Development	Departments under GDANCP	0		10.5		10.5		10.5		10.5	
2.3	Implementation of preventive and restoration measures to enhance climate change adaptation			<u>0</u>		<u>25</u>		<u>25</u>		<u>25</u>		<u>25</u>	
2.3.1	Promotion of natural regeneration in PAs as a means to enhance adaptation to climate change	ICBD	Departments under GDANCP	0		15		15		15		15	

Strategic Priority and activity clusters		Leading implementing unit	Partner Unit	Estimated budget (1000 USD)									
				2014		2015		2016		2017		2018	
				State	Development partner	State	Development partner	State	Development partner	State	Development partner	State	Development partner
2.3.2	Identify existing invasive species and their potential development under climate change; development of appropriate technologies for their identification, control and management	ICBD	BSS, DCC	0		10		10		10		10	
2.4	Promotion and improvement of community based adaptation capacity and rehabilitation of natural ecosystems to respond to climate change			<u>56</u>		<u>50</u>		<u>50</u>		<u>60</u>		<u>0</u>	
2.4.1	Management and conservation of PAs and enhancement of biodiversity areas	Department of National Park	Departments under GDANCP	56		50		50		60		0	
2.5	Provision of scientific knowledge on climate change at the national and sub-national levels and to the community			<u>30</u>		<u>34</u>		<u>32</u>		<u>32</u>		<u>0</u>	
2.5.1	Research study on environmental aspects of national parks, wildlife sanctuaries, wetlands, watersheds, protected landscapes, multiple use areas, coastal areas and protected heritage areas	Department of National Park	Department of national resource assessment	30		34		32		32		0	
Strategic priority3: National green growth and climate change		DCC											
3.1	Provision of general administrative support			<u>0</u>		<u>402</u>		<u>402</u>		<u>402</u>		<u>402</u>	
3.1.1	Full time staff	DCC		0		314		314		314		314	
3.1.2	Part time staff	DCC		0		88		88		88		88	
3.2	Environmentally green development and natural resources			<u>0</u>		<u>192</u>		<u>192</u>		<u>192</u>		<u>192</u>	
3.2.1	Development of law and regulation pertaining to green growth	National Council for Green Growth	DCC, DPLA	0		15		15		15		15	
3.2.2	Dissemination of policy and strategic plan pertaining to green environment and natural resources	National Council for Green Growth	DCC	0		18		18		18		18	
3.2.3	Provision of technical training on green growth and sustainable natural resource management	National Council for Green Growth	DCC	0		28		28		28		28	
3.2.4	Organising conferences, workshops and meetings on green growth	National Council for Green Growth	DCC	0		103		103		103		103	

Strategic Priority and activity clusters		Leading implementing unit	Partner Unit	Estimated budget (1000 USD)									
				2014		2015		2016		2017		2018	
				State	Development partner	State	Development partner	State	Development partner	State	Development partner	State	Development partner
3.2.5	Provision of research and study on potential and effective green growth	National Council for Green Growth	DCC	0		17		17		17		17	
3.2.6	Monitoring and evaluation of green growth performance	National Council for Green Growth	DCC	0		11		11		11		11	
3.3	Economic development and green investments			0		81		81		81		81	
3.3.1	Provision of guidelines on economic development and green investments	National Council for Green Growth	DCC	0		17		17		17		17	
3.3.2	Dissemination of policy and strategy on green growth	National Council for Green Growth	DCC	0		11		11		11		11	
3.3.3	Provision of technical training on green growth and sustainable natural resource management	National Council for Green Growth	DCC	0		28		28		28		28	
3.3.4	Organising consultation meetings and forums on green growth with private sector	National Council for Green Growth	DCC	0		8		8		8		8	
3.3.5	Assessment of effective economic performance and green investments	National Council for Green Growth	DCC	0		6		6		6		6	
3.3.6	Monitoring and evaluation of economic development and green investments	National Council for Green Growth	DCC	0		11		11		11		11	
3.4	Low carbon development			0	4506	52.5	12064	52.5	12064	52.5	7558	52.5	7558
3.4.1	Improvement of GHG inventory and data management system (Project: development of national GHG inventory system in Cambodia)	DCC	NCGG	0	100	2	100	2	90	2		2	
3.4.2	Research and study on potential GHG emission reduction	DCC	NCGG	0		2		2		2		2	
3.4.3	Development of biennial updated report	DCC	NCGG	0	4406	10	4406	10	4406	10		10	
3.4.4	Development and regular review of nationally appropriate GHG mitigation actions (NAMA)	DCC	NCGG	0		20		20		20		20	
3.4.5	Mainstreaming GHG mitigation in national, sub-national and sectional planning (Project: GHG emission mitigation through promotion of large scale biomass gasification)	DCC	NCGG	0		15	2433	15	2433	15	2433	15	2433
3.4.6	Development and operation of national registration system and carbon credit scheme for GHG mitigation	DCC	NCGG	0		1.5		1.5		1.5		1.5	

Strategic Priority and activity clusters	Leading implementing unit	Partner Unit	Estimated budget (1000 USD)										
			2014		2015		2016		2017		2018		
			State	Development partner	State	Development partner	State	Development partner	State	Development partner	State	Development partner	
3.4.7	Coordination of implementation of GHG mitigation in relevant sectors. (Project: Building ecosystem based urban area adaptation in Asia-Pacific)	DCC	NCGG	0		1	5125	1	5125	1	5125	1	5125
3.4.8	Monitoring and evaluation of implementation of GHG mitigation actions	DCC	NCGG	0		1		1		1		1	
3.5	Climate change adaptation			0	3783	42	4533	42	4533	42	4533	42	4533
3.5.1	Vulnerability and adaptation options assessment	DCC	NCGG	0		2		2		2		2	
3.5.2	Collaboration in assessment of loss and damage from climate change	DCC	NCGG	0		1		1		1		1	
3.5.3	Development of climate data management system and modelling	DCC	NCGG	0		2		2		2		2	
3.5.4	Coordination for development and implementation of National Adaptation Plan	DCC	NCGG	0		20		20		20		20	
3.5.5	Mainstreaming adaptation actions in national, sub-national and sectoral planning (Project: Promotion of adaptation by rural population and sub-national administration to climate risks and change)	DCC	NCGG	0	3783	15	3783	15	3783	15	3783	15	3783
3.5.6	Coordination and participation in implementation of climate change adaptation actions	DCC	NCGG	0	0	1	750	1	750	1	750	1	750
3.5.7	Monitoring and evaluation of implementation of climate change adaptation actions	DCC	NCGG	0		1		1		1		1	
3.6	Coordination and development of climate change response capacity			160	740	303	2492	303	3350	303	3203	303	2300
3.6.1	Collaboration with educational institutions to mainstream climate change in education curriculum	DCC	NCGG	0		20		20		20		20	
3.6.2	Dissemination and promotion of awareness on climate change including creation of knowledge management centre	DCC	NCGG	0		40		40		40		40	
3.6.3	Capacity building of officials of climate change units in relevant ministries/ agencies at both national and sub-national levels	DCC	NCGG	0		30		30		30		30	

Strategic Priority and activity clusters		Leading implementing unit	Partner Unit	Estimated budget (1000 USD)									
				2014		2015		2016		2017		2018	
				State	Development partner	State	Development partner	State	Development partner	State	Development partner	State	Development partner
3.6.4	Coordination and participation in development of climate change related policy, legal framework and plans	DCC	NCGG	0		10		10		10		10	
3.6.5	Strengthening institutional framework and coordinating multi-sectoral agencies in charge of climate change	DCC	NCGG	0		10		10		10		10	
3.6.6	Assessment and promotion of application of appropriate technologies	DCC	NCGG	0		20		20		20		20	
3.6.7	Leading the implementation of obligations under UNFCCC including the development of the 3 rd national communication	DCC	NCGG	0		5		5		5		5	
3.6.8	Capacity building and strengthening of national support system for implementation and coordination of climate change responses to contribute toward the development of a green, low carbon, climate resilient, equitable, sustainable and knowledge bases society	DCC	Ministries Concerned, INGO and Community	160	740	160	2492	160	3350	160	3203	160	2300
3.6.9	Development and operationalization of a national climate change financing framework	DCC	NCGG	0		7		7		7		7	
3.6.10	Development and operationalization of a national framework for monitoring and evaluation of climate change responses	DCC	NCGG	0		1		1		1		1	
3.6.11	Participation in organisation of annual national environmental forum	DCC	NCGG	0		100		100		100		100	
3.6.12	Participation in regional and international cooperation on climate change	DCC	NCGG	0		60		60		60		60	
Strategic priority 4: Environmental education and outreach		DEEIC											
4.1	Formal environmental education			100		200		200		200		200	
4.1.1	Mainstreaming environmental education and content/issues (General concept on environment, biodiversity, climate change, pollution...) in education curricula at all education levels, from pre-school to tertiary education	DEEIC	DCC, CIBD, DEPC	20		50		50		50		50	
4.1.2	Coordinate and mobilise the implementation of environmentally friendly school programme at all	DEEIC		20		50		50		50		50	

Strategic Priority and activity clusters		Leading implementing unit	Partner Unit	Estimated budget (1000 USD)										
				2014		2015		2016		2017		2018		
				State	Development partner	State	Development partner	State	Development partner	State	Development partner	State	Development partner	
	education levels in the capital and provinces including the development of school based environmental clubs													
4.1.3	Development and publication of environmental education resources and materials (publications, audio-visual, and education materials) to support formal environmental education)	DEEIC	Any Departments	20		30		30		30		30		
4.1.4	Organisation of environmental training (general concepts on environment, biodiversity, climate change, pollution ...) to lecturers at teacher training and pedagogic schools	DEEIC	DCC, CIBD, DEPC	20		40		40		40		40		
4.1.5	Organisation of environmental training (general concepts on environment, biodiversity, climate change, pollution ...) to lecturers at regional pedagogic centres	DEEIC	DCC, CIBD, DEPC	20		30		30		30		30		
4.2	Non-formal environmental education			120		140		140		140		160		
4.2.1	Development of community or school based programmes for awareness raising on climate change and response	DEEIC	DCC	20		20		20		20		30		
4.2.2	Production of materials (magazine, environmental handbook ...) for outreach activities and awareness raising with school children, students and the public	DEEIC		20		20		20		20		30		
4.2.3	Organisation of annual youth environmental debate (including on the concept of and solution to climate change)	DEEIC	DCC	60		60		60		60		60		
4.2.4	Awareness raising with grass root community on sustainable use and production to support green products	DEEIC	NCGG	20		40		40		40		40		
4.3	Environmental training and knowledge building			80		150		150		150		150		
4.3.1	Building and strengthening capacity of environmental officials at both national and sub-national levels on environmental management including training on assessment of risk, vulnerability, adaptation and resilience to climate change	DEEIC	DCC	20		40		40		40		40		
4.3.2	Development of curriculum and agenda for environmental training including on climate change concept	DEEIC	DCC	20		40		40		40		40		

Strategic Priority and activity clusters		Leading implementing unit	Partner Unit	Estimated budget (1000 USD)									
				2014		2015		2016		2017		2018	
				State	Development partner	State	Development partner	State	Development partner	State	Development partner	State	Development partner
4.3.3	Organisation of training or distance learning forum through online resources and materials including videos	DEEIC		20		30		30		30		30	
4.3.4	Provision of training on green procurement to civil servants particularly environmental officials (at national park, wildlife sanctuary, wetlands, watershed, protected landscape, multiple use areas and protected heritage areas, and pollution control officials)	DEEIC and departments under GDANCP		20		40		40		40		40	
4.4	Outreach and cooperation			20		130		130		170		190	
4.4.1	Collaboration with educational institutions to provide scholarship and opportunity for volunteerism in research study and services in climate change to meet the priority needs of national park, wildlife sanctuary, wetlands, watershed, protected landscape, multiple use area, and protected heritage area, and environmental pollution control unit	DEEIC and departments under GDANCP	DCC	0		50		50		50		50	
4.4.2	Foster climate change activities through environmental volunteerism and network of volunteers including on environmental and biodiversity protection, rational use of natural resources and responses to climate change, ...	DEEIC	DCC	20		40		40		60		80	
4.4.3	Provision of incentives and opportunity to young people interested in participation in climate change activities including in mitigation, adaptation, and resilience to climate change	DEEIC		0		40		40		60		60	
Strategic priority 5: Institutional modernisation													
5.1	Defining cadre for secretariat of the National Climate Change Committee to coordinate implementation of climate change action plans	NCCCS		0		135		123		88		108	
5.1.1	Coordination for the development and implementation of effective climate change action plans	NCCCS	DCC	0		10		10		0		0	
5.1.2	Initiating and strengthening administrative management in implementation of climate change action plans	NCCCS	DCC	0		15		15		15		15	

Strategic Priority and activity clusters		Leading implementing unit	Partner Unit	Estimated budget (1000 USD)									
				2014		2015		2016		2017		2018	
				State	Development partner	State	Development partner	State	Development partner	State	Development partner	State	Development partner
5.1.3	Coordination and support of climate change action plan implementing parties in the development of budget proposals	NCCCS	DCC	0		20		20		15		15	
5.1.4	Liaison with donors to mobilise resources for implementation of climate change action plans by all parties	NCCCS	DCC	0		8		8		8		8	
5.1.5	Liaison and monitoring the implementation of climate change action plans by all parties	NCCCS	DCC	0		20		20		20		20	
5.1.6	Development of detailed climate change strategy and action plans for easy implementation at the subnational levels	NCCCS	DCC	0		30		20		0		0	
5.1.7	Promotion and incorporation of climate change responses in national environmental planning	NCCCS	DPLA	0		20		0		0		0	
5.1.8	Develop report, assessment and update of climate change action plan	NCCCS	DPLA	0		30		30		30		50	
5.2	National climate change and green growth data management	NCCCS		0		430		380		150		150	
5.2.1	Defining scope and development of database on climate change and green growth	NCCCS	DCC NCGG	0		300		250		50		50	
5.2.2	Incorporation of climate change in the sectoral strategy for national outreach	NCCCS	DEEIC	0		10		10		10		10	
5.2.3	Integration of results from implementation of climate change action plan in database on climate change and green growth	NCCCS	DCC	0									
5.2.4	National dissemination of results from implementation of climate change action plans and management of database on climate change and green growth to the public	NCCCS	DEEIC and other concern departments	0		30		30		30		30	
5.2.5	Strengthening capacity of officials at secretariat of the National Climate Change Committee in the development of scientific information, database management, public release and interpretation of information	NCCCS	DCC	0		90		90		60		60	

ANNEX 2: ACTION FICHES

Action 1: Establish a Resilient Low Carbon Technology Hub for Food, Water, and Energy Security

Action 1	Establish a Low Carbon and Resilient Technology Hub for Food, Water, and Energy Security
CCCSP Strategic Objective	Strategic Objective 1: Promote climate resilience through improving food, water and energy (FWE) security
Rationale	<p>Global changes in climate regimes are already affecting Cambodia in a number of ways, with weather patterns being increasingly unpredictable and with forecasted increases in the frequency and magnitude of extreme weather events, such as flood and drought. These changes in turn can have a significant impact on food and energy production, as well as water availability, with impacts being particularly felt by the most vulnerable. With approximately 80% of its population relying on farming for their subsistence, an agriculture sector still very much dependent on nature in terms of water supply, and with an energy sector where hydropower represents a significant share of domestic energy production, Cambodia's efforts to increase food, water and energy security are critical to its ability to cope with the challenges posed by the expected changes in climate and hydrologic regimes.</p> <p>Efforts to address food, water and energy security issues in their multiple dimensions (in particular those related to availability and access), through investment in innovative technologies and management approaches, are critical to reducing the country's vulnerability to climate change, and can result in positive contributions to environmental and human health, education, and to building community resilience to climate change.</p> <p>In addition to directly contributing to the implementation of the National Strategy on Food Security and Nutrition (NSFSN 2014-2018) and other energy and water policy objectives, this action can play an important role in the achievement of Cambodia's sustainable development goals in an environment of climate, social and economic change.</p>
Category of climate change action	<input type="checkbox"/> Cat 1 – Re-scaled <input type="checkbox"/> Cat 2 – Modified <input checked="" type="checkbox"/> Cat 3 – Dedicated
Type of action	<input type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input checked="" type="checkbox"/> Mitigation and adaptation
Short description of the action and expected results and benefits	<p>The low carbon technology hub for food, water and energy (FEW) Security will focus on the following actions:</p> <ul style="list-style-type: none"> • Identify/disseminate the opportunities and barriers for the adoption of appropriate resilient low carbon technology and market opportunities for green trade and investment especially aiming to improve food, water and energy security. • Establishment of grants for piloting low-cost scalable solutions aiming directly to improving FWE security of the vulnerable group. • Map the use (and potential) of low carbon technologies for FEW Security in Cambodia, reporting on lessons learnt. <p>Expected Result and Benefit:</p> <ul style="list-style-type: none"> • Knowledge of appropriate technologies increasingly leading to their adoption and implementation, with improvements in FWE security • Other gains expected in term of reduced emissions, improved water quality, health and other social, environment and economic benefits

	<ul style="list-style-type: none"> The work conducted has the potential to inform policy, including water, energy, land use and agriculture policy, which will further contribute development gains.
Cost effectiveness of the action	The cost effectiveness of the action will vary depending on the technology identified and piloted and it will be assessed as part of the technical, economic and environmental feasibility studies required by the Hub. It will be a requirement of the Hub that the low-cost scalable technology solutions targeting improvements in FEW security to be selected and piloted are proven to be cost effective.
Preconditions needed for successful implementation	Knowledge Hub will need to have adequate financial and human resources and expertise to ensure that the objectives of its program are achieved. It is also important that, while exploring technological options for FEW Security for Cambodia, relevant experiences from other countries with similar conditions are analysed and that preliminary feasibility studies are conducted.
Indicator(s) of success	<ul style="list-style-type: none"> Number of applicable technologies (low carbon low cost solutions targeting improvements in FEW security) identified and piloted Mapping of technologies for FEW Security developed and shared.
Implementation arrangements	Responsible departments: Department of Science and Technology, MoE Relevant line ministries, research institutions, and external stakeholders involved in implementation (e.g. MME, MIH, MPTC, MAFF)
Estimated total cost	USD 635,000
Possible funding sources	FAO, IFAD, GEF, State budget, International Water Management Institute (IWMI)
Timeframe	2016 - 2018

Action 2: Conduct national and sectoral climate change vulnerability assessments

Action 2	Conduct national and sectoral climate change vulnerability assessments
Strategic Objective of CCCSP	Strategic Objective 2: Reduce sectoral, regional, gender vulnerability and health risks to climate change impacts
Rationale	The first national assessment of climate change impacts and vulnerability, conducted in 2001, urgently needs to be updated to provide a more comprehensive assessment to policy makers and to guide climate interventions. DCC, the GSSD covering the climate change issues, has the mandate to provide climate change information, including a national climate change vulnerability assessments, to the government agencies, development partners, and other interest groups in order to guide climate change response efforts and reduce climate change risk nationwide.
Category of climate change action	<input checked="" type="checkbox"/> Cat 1 – Re-scaled <input type="checkbox"/> Cat 2 – Modified <input type="checkbox"/> Cat 3 – Dedicated
Type of action	<input type="checkbox"/> Mitigation <input checked="" type="checkbox"/> Adaptation <input type="checkbox"/> Mitigation and adaptation
Short description of the action and expected results and benefits	<p>The action includes the following activities:</p> <ul style="list-style-type: none"> • Assess existing national climate data/information and vulnerability assessments (including sectoral vulnerability assessments, or assessments conducted for specific geographical areas) to assess gaps to be addressed in future vulnerability assessments; • Conduct national level climate change vulnerability assessment (including downscaling, modelling and generating results with the appropriate resolution for local planning) and identify vulnerability hotspots; • Support sectors in conducting specific vulnerability assessments and in identifying adaptation options (including mapping and decision making tools for adaptation planning of investment projects¹); • Support sectors, in collaboration with MOWA, in ensuring that the gender dimension is included in the vulnerability assessments conducted; and • Map and make available information and metadata on vulnerability assessments conducted (at national, sub-national or sectoral level) and recommendations for adaptation planning. <p>This action will guide targeting and design of adaption response, with significant benefits expected in terms of increased effectiveness of climate change response.</p>
Cost effectiveness of the action	The VA report will partly assist the policymakers and planners in prioritizing and identifying climate change interventions to reduce and/or cope with climate risks at specific locations. Thus, availability of VA information can potentially lead to avoided loss and productivity gains, and help project design to increase the cost effectiveness of climate interventions.

¹ SPCR has 7 investment projects covering three sectors namely water resources, agriculture and infrastructure, and one Technical Assistance project.

Preconditions needed for successful implementation	<p>Reviewing and compiling the available climate data and vulnerability assessments conducted by various line ministries and development partners will help identify gaps and ensure the quality of national and sectoral vulnerability assessments to be conducted.</p> <p>Effective coordination with sector ministries is required for sectoral vulnerability assessment.</p> <p>Technical capacity of staff to understand and manage climate data (including climate modelling results), communicating results of vulnerability assessments and making data accessible to different users.</p>
Indicator(s) of success	<ul style="list-style-type: none"> • Harmonized climate data, results from down-scaled models will be available (at NCSD and web portal) for public to access • A national level vulnerability assessment report with adaptation options will be available and number of sectoral vulnerability assessment reports • Mapping and decision support tools produced for adaptation planning (targeting at a minimum the 7 SPCR investment projects) • The degree of involvement vulnerable groups (i.e. women, minority groups, children) in the assessment
Implementation arrangements	<p>The Climate Change Department, in collaboration with the Department of Science and Technology, as part of the GSSD, will coordinate and take lead role implementing this action, in close collaboration with MOWRAM.</p> <p>MOWRAM is the sole governmental agency collecting and compiling meteorological data in Cambodia, and they will be responsible to provide official climatic data to be used in the assessment, in addition to the global retrievable data.</p>
Estimated total cost	*Cost and already mobilized funding to be provided by SPCR
Possible funding sources	<p>The Strategic Programme for Climate Resilience (SPCR) and Cambodia Climate Change Alliance (CCCA)</p> <p>ADB, CSIRO, UNEP</p>
Timeframe	2016-2018

Action 3: Conduct an assessment of climate change impact on biodiversity and test specific management options to cope with climate change

Action 3	Conduct an assessment of climate change impact on biodiversity and test specific management options to cope with climate change
Strategic Objective of CCCSP	Strategic Objective 3: Ensure climate resilience of critical ecosystems (Tonle Sap Lake, Mekong River, coastal ecosystems, highlands, etc.), biodiversity, protected areas and cultural heritage sites
Rationale	<p>The 3.2 million ha of national parks, wildlife sanctuaries, protected landscapes, and multiple use areas have been established to conserve the country's biodiversity, including at least 212 species of mammals, 720 species of birds and 2,308 species of vascular plants. Cambodia's protected areas and endangered species, already under pressure from habitat loss, illegal wildlife trade and mining, are also threatened by climate change. However, the impacts on biodiversity and on the ability of the country's protected areas system meeting its conservation goals are yet to be studied.</p> <p>The action will provide up-to-date scientific evidence to support the consideration of climate change issues in the implementation of the National Biodiversity Strategy and Action Plan (NBSAP), including expected impacts of sea level rise, temperature increase and change in precipitation on biodiversity (species composition, distribution, survival, etc.) and potential impacts of adaptation and mitigation measures on biodiversity.</p>
Category of climate change action	<input type="checkbox"/> Cat 1 – Re-scaled <input type="checkbox"/> Cat 2 – Modified <input checked="" type="checkbox"/> Cat 3 – Dedicated
Type of action	<input type="checkbox"/> Mitigation <input checked="" type="checkbox"/> Adaptation <input type="checkbox"/> Mitigation and adaptation
Short description of the action and expected results and benefits	<ul style="list-style-type: none"> • Assess vulnerability of the protected area system, comprising 23 protected areas under the stewardship of Ministry of Environment, to climate change threats (including temperature increase, forest fire, drought, flood and storm) using downscaled climate change scenarios for specific protected areas (link to Action Fiche 2) and field observations. • Prioritize focus of analysis of climate change impacts on endangered species through a consultative process with conservation agencies (e.g., IUCN-Cambodia, FFI, WWF, WCS, CI and Bird Life-International) to identify those species which are most vulnerable to climate change and key for conservation. • Conduct a biodiversity survey and consultation with the communities living in protected areas on the species prioritized in the study to understand their status and conservation needs. • Formulate/adjust protected areas management plans (including assessing the need for expansion) based on the vulnerability assessment of protected areas and studies conducted on (selected) endangered species, identifying specific adaptation management options. • Test specific management options to cope with climate change. • Executing the action is expected to reduce the rate of biodiversity loss in the medium and long term through better management of 23 protected areas, adapting to the changing climate.

Cost effectiveness of the action	<p>The cost of conducting the protected areas vulnerability to climate change is partly covered by the Action 2, conducting assessment of national vulnerability to climate change, which develop the climate scenarios and downscale models (to some extends the modification of downscales may need to suit the specific protected areas).</p> <p>The value of biodiversity, of endangered species and of Cambodia's system of protected areas is not yet fully quantifiable, though there has been attempts in some countries to monetize the services they provide. Yet, regardless of cost effectiveness issues or specific monetized value of biodiversity were it to be estimated, the Government of Cambodia is committed to identifying and enacting the necessary measures to halt biodiversity loss, including the adaptation measures to be adopted.</p>
Preconditions needed for successful implementation	Downscaled climate change scenarios developed in the Action 2 will be used as the basis for analysis of potential impacts on the protected areas and endangered species and the identification of adaptation management options to be included in the protected areas plans.
Indicator(s) of success	<ul style="list-style-type: none"> • Number of protected area management plans with adaptation measures • Number of adaptation measures/actions implemented in protected areas or other measures aiming to reduce threat to endangered species.
Implementation arrangements	The three departments, namely Terrestrial Protected Areas Conservation, Wetland and Freshwater Conservation, and Marine and Coastal Zone Conservation, under the General Department of Nature Conservation and Protection Administration (GDNCPA) working on conservation will take the lead, working in close collaboration with GSSD (BD and DCC) on the climate change impact assessment and with MAFF and IUCN on the study of selected endangered species. MLMUPC will play important role in land management within the Protected Areas.
Estimated total cost	<p>USD 2.3 Million</p> <p>Noted that the cost of conducting the assessment of protected areas' vulnerability to climate change is partly covered by the Action 2 (downscaled modelling results covering the protected areas)</p>
Possible funding sources	<p>NGOs working on conservation, e.g., WWF, WCS, CI, FFI, Wild Aid, Bird Life, IUCN.</p> <p>ADB, UNEP, USAID</p>
Timeframe	2016-2018

Action 4: Develop preliminary studies for the establishment of natural capital accounting

Action 4	Develop preliminary studies for the establishment of natural capital accounting
Strategic Objective of CCCSP	Strategic Objective 3: Ensure climate resilience of critical ecosystems (Tonle Sap Lake, Mekong River, coastal ecosystems, highlands, etc.), biodiversity, protected areas and cultural heritage sites
Rationale	Moving towards a greener economy and more accurate costing of investment options requires more comprehensive accounting systems which can measure services that are at present still difficult to quantify (including ecosystem services). Natural capital accounting (NCA) systems are currently being developed to respond to this need, so that more effective decisions (taking into account climate change and other issues) can be made.
Category of climate change action	<input type="checkbox"/> Cat 1 – Re-scaled <input type="checkbox"/> Cat 2 – Modified <input checked="" type="checkbox"/> Cat 3 – Dedicated
Type of action	<input type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input checked="" type="checkbox"/> Mitigation and adaptation
Short description of the action and expected results and benefits	<p>Conduct a study to define and categorize potential NCA approaches that could be suitable to the Cambodia context with the focus was on living natural capital (i.e. biodiversity and associated ecosystem services) and environmental impacts from greenhouse gas and NOx emissions.</p> <p>The study will include recommendations for a future NCA system integrating climate change, developing tools to assist businesses in taking into account natural capital in their decision-making (e.g. through the use of indicators, or Environmental Profit and Loss Account, or EP&L) and defining a road map for its implementation.</p>
Cost effectiveness of the action	This action will help redefine cost effectiveness measurements in the future.
Preconditions needed for successful implementation	Collaboration of sectors and multiple stakeholders, in particular private sector and research institutions/academia.
Indicator(s) of success	<ul style="list-style-type: none"> • Recommendations from the NCA study being disseminated to assist private sector in assessing investment decisions or to introduce changes in business models • Roadmap discussed
Implementation arrangements	The Green Economy Department, MOE, as part of the GSSD, will lead the NCA study, in straight collaboration with MEF, and with input from a wide range of stakeholders.
Estimated total cost	<p>USD 120,000</p> <p>(Activity can be scaled up based on availability of funding to include the design of specific applications and testing)</p>
Possible funding sources	UNEP, UNDP, EU, WB/ADB, WWF
Timeframe	2017-2018

Action 5: Development of the national GHG inventory system

Action 5	Development of the national GHG inventory system
CCCSP Strategic Objective	Strategic Objective 4: Promote low-carbon planning and technologies to support sustainable development
Rationale	Developing GHG inventories is an essential first step toward managing emissions. As a developing country (Non-Annex I country under United Nations Framework Convention on Climate Change, UNFCCC) Cambodia is not obligated to reduce GHG emissions. However, a complete and transparent national GHG inventory is an essential tool for understanding emissions and trends, projecting future emissions and identifying sectors for cost-effective emission reduction opportunities. A national inventory is also a core element of the required National Communications to the UNFCCC, of which Cambodia is a signatory. Although Cambodia has already prepared two National GHG Inventory in an ad hoc manner, the national GHG inventory system still needs to be developed, approved and institutionalized, along with additional methodological work (in particular related with emission factors) so that the country can monitor its progress in terms of moving towards low carbon development.
Category of climate change action	<input checked="" type="checkbox"/> Cat 1 – Re-scaled <input type="checkbox"/> Cat 2 – Modified <input type="checkbox"/> Cat 3 – Dedicated
Type of action	<input checked="" type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input type="checkbox"/> Mitigation and adaptation
Short description of the action and expected results and benefits	<ul style="list-style-type: none"> • Initial training on GH Inventories, MRV, NAMA, BUR • Develop a proposal for the National Inventory System, with regulatory framework, procedures and institutional arrangements, with program of work to be led by MOE/DCC and identification of capacity needs. (This includes review of previous inventory efforts and arrangements used, analysis of existing proposals for the institutional framework for MRV, MRV needs assessment, and development of the proposal); • Form 5 permanent technical working groups (TWG) in five sectors (energy, industry, agriculture, LULUCF, and waste) with specific TOR, and secure the necessary MoUs with relevant institutions on cooperation and data sharing; • Appoint team of DCC staff (including staff responsible for climate database management) to coordinate inputs from TWGs and to assist in the development of the GHG Inventory; • Provide technical capacity building of TWGs and DCC Inventory Coordination Team; • Based on the guideline of IPCC, develop GHG inventory manuals and procedures for each sector, ensuring that the required software is available; • Develop the National GHG Inventory, applying QC&QAS and ensuring that all data is properly archived and results made accessible through the Climate Change Knowledge portal.
Cost effectiveness of the action	It is mandatory for Cambodia as a Party to UNFCCC. Furthermore, the GHG inventory will help Cambodia to manage GHG emissions effectively, providing useful information to policy makers on potential areas for low carbon development planning in Cambodia. It will also help Cambodia to attract for climate funding earmarked for mitigation projects, as well as to mobilize support from developed countries in terms of technical assistance and technology transfer.

Preconditions needed for successful implementation	<ul style="list-style-type: none"> • Provide timely budget • Experienced officers on greenhouse gas inventory system • Good cooperation from the relevant institutions and organizations
Indicator(s) of success	<ul style="list-style-type: none"> • A proposal for the national GHG inventory system finalized in 2016 • Measures to reduce GHG emissions identified • Level of participation of the TWGs in GHG inventory
Implementation arrangements	CCD together with relevant ministries and other stakeholders
Estimated total cost	<p>USD 450,000</p> <p>This includes capacity development, but does not include staff cost, nor studies/research to determine specific emission factors.</p> <p>Mobilized funding: USD 1,825 (state budget); additional funding will be mobilized through USAID (exact amount currently under discussion)</p>
Possible funding sources	<p>State budget</p> <p>External funding: USAID, other donors</p>
Timeframe	2016 - 2017

Action 6: Facilitate GHG emission reduction through project and program carbon finance crediting mechanisms

Action 6	Facilitate GHG emission reduction through project and program carbon finance crediting mechanisms
CCCSP Strategic Objective	Strategic Objective 4: Promote low-carbon planning and technologies to support sustainable development
Rationale	<p>The total emission of GHG in Cambodia reached 221 Gg in 2000, from a negative 5,143 Gg in 1994, with the highest emissions being generated by the agricultural and energy sectors. However, Cambodia is committed to decoupling carbon emissions from economic growth and is making efforts to keep on the path of low carbon resilient development, thus generating additional sustainable development gains.</p> <p>In order to promote GHG emission reduction, Cambodia is actively engaged in establishing the enabling conditions necessary for the functioning of a number of market-based, carbon offset credit mechanisms which have been established under The UNFCCC, including the Clean Development Mechanism (CDM) first established by the Kyoto Protocol. Other project and program carbon finance crediting mechanisms include the Joint Crediting Mechanism (JCM), Reducing Emissions from Deforestation and Forest Degradation (REDD+), and Nationally Appropriate Mitigation Actions (NAMA).</p> <p>In Cambodia, the Ministry of Environment (MoE) was appointed as Designated National Authority (DNA) for CDM in 2003, and so far 11 projects have been approved by DNA. The legal framework for other mechanisms are at different stages of development as NAMA, REDD+ and JCM mechanisms are still new for Cambodia and further work needs to be done to facilitate access by local project developers to these mechanisms.</p> <p>This action aims to promote GHG emission reduction efforts by facilitating access of project and program developers to offset credit mechanisms, providing clear legal frameworks, procedures and institutional arrangements, with one single designated entity for all mechanisms within MOE, helping engage the public and private sector in low carbon development.</p> <p>The action underlines Cambodia's commitment to national and global emission reduction efforts under the framework of the UNFCCC, and contributes to the achievement of the country's intended national contributions (to be announced at the UNFCCC COP 21 in Paris) and to the National Green Growth Policy and National Strategic Plan on Green Growth 2013-2030.</p>
Category of climate change action	<input checked="" type="checkbox"/> Cat 1 – Re-scale <input type="checkbox"/> Cat 2 – Modified <input type="checkbox"/> Cat 3 – Dedicated
Type of action	<input checked="" type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input type="checkbox"/> Mitigation and adaptation
Short description of the action and expected results and benefits	<p>This action will focus on the establishment of a emission reduction facility within DCC with the purpose of engaging public entities (national or sub-national), as well as the private sector and NGO actors in accessing carbon offset crediting mechanisms to finance low carbon emission projects and programs.</p> <p>This action will include:</p> <ul style="list-style-type: none"> • establishment of an institutional framework for MRV and registry for emission reductions and carbon offset credits; • detailed capacity needs assessment for the new mechanisms

	<ul style="list-style-type: none"> • establishment of the facility (with designation of staff) in 2016 • development of capacity of the facility staff and of national designated entities and review committees established (or to be established) under the different mechanisms, to enable DCC to fully fulfil their mandate, engaging in constant learning and identification of new options and mechanisms to promote emission reduction (especially those which also contribute to reducing vulnerability) • awareness raising and engagement of stakeholders in accessing these mechanisms; • establishment of a help-desk at the facility to provide advisory support to project and program development and implementation (expected to be fully operational in 2017); and • mobilization of international and national funding to support implementation of interventions targeting GHG emission reductions.
Cost effectiveness of the action	This action is part of Cambodia's commitments under the UNFCCC, and it is expected that it will contribute to attract funding for the implementation of GHG emission reduction projects and programs (both from domestic and international sources), as well as support from developed countries in terms of technical assistance and technology transfer. Thus it is expected that gains from setting up the emission reduction facility will far outweigh the investment made.
Preconditions needed for successful implementation	<p>Legal framework for carbon finance, developed in action 16.</p> <p>Leadership and commitment of NCS D to promote and achieve low carbon development objectives, placing high on the agenda the approval of the legal framework for GHG emission reduction mechanisms and the establishment of a quality MRV and Registry system.</p> <p>In addition, this action should build upon previous efforts of awareness raising, capacity development, and partnership building under the CDM mechanism.</p>
Indicator(s) of success	<ul style="list-style-type: none"> • GHG emissions avoided • Number of emission reduction projects or programs developed with the support of the Facility and under implementation by 2018 (including at least 2 NAMA projects)
Implementation arrangements	DCC
Estimated total cost	USD 385,000
Possible funding sources	UK/ Germany NAMA Facility, Global Environment Facility, Germany (IKI), UK (ICF), Denmark (Global Frame, GCPF), European Union and European Commission (GEEREF, LAIF, AIF), Australia, France (AFD, FFEM), NEFCO (NCF, NPI), Multilateral Development Institutions (ADB, IDB, WB Group), Green Climate Fund, Japan
Timeframe	2016-2018

Action 7: Develop and test low carbon resilient approaches and options in urban areas

Action 7	Develop and test low carbon resilient approaches and options in urban areas
Strategic Objective of CCCSP	Strategic Objective 4: Promote low-carbon planning and technologies to support sustainable development
Rationale	<p>The Action contributes to the achievement of the National Green Growth Policy and National Strategic Plan on Green Growth 2013-2030</p> <p>Cambodia urbanization rate is growing rapidly in recent years, particularly in major cities such as Phnom Penh, Siem Reap and Sihanouk Ville, with currently 21.5% of Cambodians living in urban areas. As a result, cities face significant environmental and social problems, which are exacerbated by the impacts of a changing climate.</p> <p>The action improves the urban resilience to the impacts of climate change (addressing particular issues such as urban heat and air pollution), while it contributes to the GHG emission reduction efforts in urban areas.</p>
Category of climate change action	<input type="checkbox"/> Cat 1 – Re-scale <input type="checkbox"/> Cat 2 – Modified <input checked="" type="checkbox"/> Cat 3 – Dedicated
Type of action	<input type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input checked="" type="checkbox"/> Mitigation and adaptation
Short description of the action and expected results and benefits	<p>This action covers the implementation of low carbon resilient urban development initiatives, such as the Green Urban Development Program (with support from GGGI) and the Building Climate Resilience of Urban Systems through Ecosystem-based Adaptation (with support from UNEP/LCDF). Activities under each of these initiatives include:</p> <ul style="list-style-type: none"> • Green Urban Development Program (of GGGI): <ul style="list-style-type: none"> - Prepare the Green City Strategic Plan for the City of Phnom Penh; - Support to the prioritization of green city investment projects, including through economic analysis and stakeholder consultation, as part of Green City Strategic planning process; and - Prepare an Investment Action Plan to mobilize finance for ‘bankable’ green city investment project, through the public and/or private sector, and potentially to develop a specific project proposal for multilateral funds (e.g. the Green Climate Fund). • Building Climate Resilience of Urban Systems through Ecosystem-based Adaptation (EbA): <ul style="list-style-type: none"> - Identify a city to pilot the proposed urban EbA interventions, in which capacity building will be provided to the institutional capacity and city management authorities to plan and implement urban EbA; - Demonstrate urban EbA interventions in pilot cities; and - Disseminate knowledge and raise public awareness on urban EbA in pilot cities • Piloting adoption of low carbon sustainable solutions: <ul style="list-style-type: none"> - Introduce electric motorbikes in two selected cities to encourage more sustainable urban transport options - Design and test a program for tree planting in public spaces aiming to strengthen the functionality of urban green infrastructures to

	increase cities' resilience (targeting the involvement of schools, municipalities, religious leaders, and the private sector).
Cost effectiveness of the action	Cost effectiveness requirements are part of these low carbon resilient urban development initiatives.
Preconditions needed for successful implementation	The strong leadership and participation of piloted cities (Phnom Penh and a coastal city) are critical to the successful implementation of the action.
Indicator(s) of success	<ul style="list-style-type: none"> • Number of low carbon resilient approaches and options identified/proposed and tested in the city (Phnom Penh and a coastal city) • Number of cities with development plans addressing climate change (integrating both adaptation and mitigation measures).
Implementation arrangements	Department of Green Economy, GSSD Municipality of Phnom Penh Municipality of a coastal city (tbc)
Estimated total cost	USD 3.8 million Funds mobilized: USD 1.5 million from the Green Urban Development Program (GGGI), and USD 2.1 Million (approximate budget allocated to Cambodia under the LDCF funded regional program for 'Building Climate Resilience of Urban Systems through Ecosystem-based Adaptation').
Possible funding sources	GGGI; GEF/LDCF Additional funding from GGGI to expanding the Green Urban Development Program in Cambodia beyond 2016 is yet to be confirmed.
Timeframe	2016-2018

Action 8: Establishment of a Knowledge Management System on CC and GG

Action 8	Establishment of a Knowledge Management System on CC and GG
Strategic Objective of CCCSP	Strategic Objective 5: Improved Capacities, knowledge and awareness for climate responses
Rationale	The Rectangular Strategy III identifies the improvement of human and technological capacities as a major development issue for Cambodia, with the need for improving knowledge, education and awareness on environmental protection, conservation and climate change being also highlighted in NSDP. Climate change in particular has been identified as an area where the development of technical capacities and knowledge still require considerable investment to enable an effective response, with availability of climate data, tools and technologies for adapting and mitigating climate change impacts remaining a key constraints to evidence based policy making.
Category of climate change action	<input checked="" type="checkbox"/> Cat 1 – Re-scale <input type="checkbox"/> Cat 2 – Modified <input type="checkbox"/> Cat 3 – Dedicated
Type of action	<input type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input checked="" type="checkbox"/> Mitigation and adaptation
Short description of the action and expected results and benefits	<p>The development of the KMIS for CC and GG will include the following:</p> <ul style="list-style-type: none"> • CC knowledge needs assessment and development of a proposal for the KMIS, building on existing systems and resources and learning from international practice, with a focus on four components: (a) technical CC knowledge and research, including climate data and repository of piloted technologies and best practices; (b) dissemination and communication of CC and GG knowledge; (c) developing human capital, including technical training and education; (d) technical advisory support/services; • Consultations and fine-tuning of the KMIS design and financing strategy (with agreement on KMIS structure, functions, institutional arrangements and business model) • Establishment of a CC KMIS unit at DCC, responsible for the systems maintenance, update and development, ensuring that data sharing protocols and quality assurance mechanisms are adhere to • Development of KMIS protocols for the different components (including data sharing protocols and quality assurance mechanisms for climate change related information products). • Set up of the infrastructure for climate data management and KMIS portal (in collaboration with ICT/MPTC). • Development of capacity of the KMIS unit at DCC • Development of capacity of staff of MOE and other relevant institutions contributing to CC information/knowledge generation • Develop and disseminate tools to enhance access to KMIS resources by different users • Launch of the KMIS and establishment of key partnerships (with national and international institutions) • Operationalization of the different components of the KMIS system. <p>The establishment of a Knowledge Management and Information System on CC and GG will promote the generation and use of knowledge in these areas,</p>

	<p>potentiating more effective responses and increased awareness of different target groups, contributing to the development of human capital and increased resilience throughout the country.</p>
Cost effectiveness of the action	<p>The investment on KMIS will increasingly enable evidence based decision making and more effective CC responses, with significant expected gains in terms of avoided losses. The increased availability of high quality and relevant climate information is also expected to facilitate the development of bankable projects, thus contributing to mobilize additional finance.</p>
Preconditions needed for successful implementation	<p>A sound initial needs assessment and agreement and collaboration of data producers is essential to maximizing the potential of the KMIS.</p> <p>Political leadership will be indispensable to ensure active participation of sectors in the KMIS and to ensure that the required legal framework is in place for the system's full operation (including data sharing protocols and quality assurance mechanisms).</p> <p>Collaboration of ICT/MPWT in setting up the dedicated CC ICT infrastructure including CC-cloud server, ICT equipment and ICT platform (as per ICT CCAP).</p>
Indicator(s) of success	<ul style="list-style-type: none"> • Number of KMIS partners (national and international) contributing to KMIS resources • Number of best practices published and made available through the KMIS per year. • Number of users of the KMIS portal • Users rating of usefulness of KMIS (different categories include local authorities, NGOs, line ministries, private sector, academia)
Implementation arrangements	<p><i>Responsible department:</i> DCC, as the GSSD</p> <p><i>Other Government and external stakeholders:</i> ICT/MPTC; Meteorology/MOWRAM, NIS/MOP, and other key line ministries and universities.</p>
Estimated total cost	<p>USD 615,000</p> <p>The cost indicated includes the establishment of the KMIS and corresponding systems and staff to operate the system (including cost-sharing of setting up a dedicated CC ICT infrastructure, in collaboration with ICT CCAP). It does not include however the full development of KMIS different components (e.g. collection of climate data/modelling, development of best practices, etc.), which will be gradually with contributions from many different partners.</p> <p>Funds Mobilized: USD 29,000 (CCCA); USD 2,060 (SPCR)</p>
Possible funding sources	<p>CCCA; SPCR; GGGI</p> <p>ICT/MPTC</p>
Timeframe	<p>2016-2018</p>

Action 9: Integrate CC and environmental issues into the curriculum at all levels

Action 9	Integrate CC and environmental issues into the curriculum at all levels
CCCSP Strategic Objective	Strategic Objective 5: Improve capacities, knowledge and awareness for climate change responses
Rationale	<p>As part of the efforts to sustainably and effectively improve capacities, knowledge and awareness for climate change responses (one of the strategic objectives of the Cambodia Climate Change Strategic Plan 2014-2023), it is key to mainstream CC and environmental issues into the formal education curriculum at all levels. The Department of Curriculum Development (DCD) at the Ministry of Education, responsible for developing and updating general education programs (including curriculum, text books, and other educational materials), is engaged in integrating CC subject into the education curriculum, developing educational training materials on CC, and establishing mechanisms to raise awareness and to practice basic CC mitigation and adaptation activities in schools, counting with the support of different funding agencies.</p> <p>This action also supports the priorities and actions identified in the National Adaptation Program of Action to Climate Change (NAPA, 2006) by providing capacity development and institutional strengthening to the DCD in project development, management, monitoring and evaluation, and in developing educational materials and including climate change approaches into revised curricula, thus contributing to institutional development of national and sub-national governmental structures. Integrating CC subject into the national education curriculum is a long term strategy for raising awareness on CC and gradually building the necessary human capital to address the long term challenges posed by climate change.</p>
Category of climate change action	<input checked="" type="checkbox"/> Cat 1 – Re-scaled <input type="checkbox"/> Cat 2 – Modified <input type="checkbox"/> Cat 3 – Dedicated
Type of action	<input type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input checked="" type="checkbox"/> Mitigation and adaptation
Short description of the action and expected results and benefits	<ul style="list-style-type: none"> • Collaborate with Ministry of Education Youth and Sport to define the entry point for curriculum development at all levels. • Develop CC curriculum materials for primary, secondary/high school and tertiary education levels • Test revised curricula in schools and further develop content of the educational materials as needed • Formally integrate recommended changes and revisions into the national education curriculum.
Cost effectiveness of the action	Improved knowledge of climate change issues and appropriate responses amongst the young generation has the power to create transformational change, contributing to the future capacity of the country to cope with the challenges posed by a changing climate and to tap in to opportunities arising from a changing development paradigm. Though there is no information on the cost effectiveness of this action, it is expected to be cost effective in the medium to long term (beyond the horizon of implementation of this Action Plan) and critical to the long term efforts of an effective climate change response in the country.
Preconditions needed for successful implementation	Scientific data is readily available for curriculum material development Training and capacity needs assessment of teachers conducted/updated

Indicator(s) of success	<ul style="list-style-type: none"> • Education materials prepared and being tested in schools (with at least one text book on how to address climate change issues in Cambodia for one of the education levels) • Number of teachers trained on the proposed curriculum • Curricula review board engaged in the work, with one conference organized by MoEYS on the role of education institutions at all levels in the development of human capital to address climate change.
Implementation arrangements	DCC in close collaboration with MoEYS and Universities
Estimated total cost	USD 450,000 Funds mobilized : USD 7,500 (estimated State Budget funding for 2016-2018, tbc); USD 350,000 (CCCA); 70,000 (SPCR)
Possible funding sources	State budget External funding sources: CCCA II; SPCR
Timeframe	2015-2018

Action 10: Engage and raise awareness of different target groups on CC and GG/sustainable consumption and production

Action 10	Engage and raise awareness of different target groups on CC and GG/sustainable consumption and production
CCCSP Strategic Objective	Strategic Objective 5: Improve capacities, knowledge and awareness for climate change responses
Rationale	<p>The action is in line the commitments made at the Rio+20 Conference on Sustainable Development, contributing to the achievement of Sustainable Development Goals (SDG), in particular SDG 12 ‘Ensure sustainable consumption and production patterns’ and SDG 13 ‘Take urgent action to combat climate change and its impacts’.</p> <p>This action also directly responds to the mandate of the National Sustainable Development Council, contributing to engage the broader society in the country’s efforts to keep on a resilient low carbon development path.</p>
Category of climate change action	<input checked="" type="checkbox"/> Cat 1 – Re-scaled <input type="checkbox"/> Cat 2 – Modified <input type="checkbox"/> Cat 3 – Dedicated
Type of action	<input type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input checked="" type="checkbox"/> Mitigation and adaptation
Short description of the action and expected results and benefits	<p>This action comprises a number of initiatives, many of which are already part of the ongoing efforts of MoE to engage and raise awareness of different target groups on climate change, green growth and sustainable consumption and production.</p> <p>Key activities under this action include:</p> <ul style="list-style-type: none"> • development of an engagement, awareness raising, and communication strategy on CC and GG, making use of the lessons learnt from KAP 1 and 2 studies; • development of the KAP III study (integrating relevant strategy recommendations on M&E); and • implementation of the prioritized activities under the strategy for the period 2016-2018. <p>Activities listed below illustrate the wide range of ongoing as well as planned engagement and awareness raising initiatives which will be prioritized during strategy development.</p> <ul style="list-style-type: none"> • Coordination and implementation of ecoschool, with integration of CC issues in cities and provinces, including establishment of environmental clubs in schools • Public awareness raising on CC through mass media (based on KAP survey’s recommendation) and avocacy campaigns on CC, such as the development of a pilot for a future Cambodia Green Minute TV program, with the necessary development of partnerships • Engagement of the network of youth volunteers in awareness raising campaigns and demonstration activities, acting as agents-of-change in society; • Collaboration with the Ministry of Tourism and the private sector to promoting tourism campaigns (One-Tree-One-Tourist, No-Plastic-Bag, etc.) that contribute to increase resilience, sustainable resource use and environmental protection. • Sensitization of the private sector on threats and opportunities of climate change, and development of public-private partnerships for communication

	<ul style="list-style-type: none"> Produce and test documentation related to climate change and sustainable consumption and production <p>Some of the expected benefits will stem from increased knowledge of different target groups on CC impacts and potential responses and best practices (at the community, business or individual level) and opportunities to be tapped in, with the potential to significantly change in the medium and long term production and consumption patterns, exposure to risk and other individual choices that can contribute towards a more resilient low carbon society.</p>
Cost effectiveness of the action	Engaging and raising people’s awareness is thought of as a crucial component of changing people’s perceptions and attitudes and ultimately to conduct to more sustainable behavior patterns and choices, does contributing to enact change towards more sustainable patterns of production and consumption and towards more resilient societies. However, an effective strategy is needed to capitalize on the investments being made in engagement and awareness raising initiatives, together with a long term M&E program to assess success and cost effectiveness of the strategy developed and the implementation of its prioritized initiatives.
Preconditions needed for successful implementation	<ul style="list-style-type: none"> Leadership and wide stakeholder involvement in the development of an effective strategy for engagement and awareness raising on CC and GG (the first activity to be conducted under this CCAP action) Ability to negotiate changes/revisions to ongoing and planned activities as per recommendations of the strategy Capacity of DCC KMIS unit, in close collaboration with the GED and DGEKI, to coordinate and monitor activities from a wide range of actors Availability and continuity of funding
Indicator(s) of success	<ul style="list-style-type: none"> Number of initiatives prioritized in the strategy under implementation Number of collaborative initiatives under implementation being led by stakeholders in close partnership with MoE KAP 3 study conducted with results reporting overall improvement
Implementation arrangements	<p><i>Led by:</i> MOE DCC and GED as part of the GSSD</p> <p><i>In collaboration with:</i> MoE DGEKI, MoEYS, MME, MIH, MoInfo, MoT and a wide range of stakeholders and development partners</p>
Estimated total cost	<p>USD 600,000</p> <p>Funds mobilized: USD 275,000 (expected funding from state budget for 3 years); USD 156,484 (up to 2016 CCA, additional tbc); USD 101,900 (SPCR)</p>
Possible funding sources	State budget, bilateral and multilateral fund and Adaptation Fund
Timeframe	2016-2018

Action 11: Promote and improve the adaptive capacity of communities to respond to climate change

Action 11	Promote and improve the adaptive capacity of communities to respond to climate change
Strategic Objective of CCCSP	Strategic Objective 6: Promote adaptive social protection and participatory approaches in reducing loss and damage due to climate change
Rationale	<p>The action is in alignment with the National Social Protection Strategy for the Poor and Vulnerable (2011-2015) and the Cambodia Climate Change Strategic Plan 2014-2023. In addition, the action is also linked to the MoE Decision (<i>Prakas</i>) on the delegation of climate change resilience functions to sub-national administration, in which Provincial Departments of Environment are mandated to mainstreaming climate change into commune development and investment plans, as well as to raising public awareness on the climate change.</p> <p>The action intends to build capacity of sub-national administration and communities to better respond to climate change, particularly aiming at enhancing adaptive capacity of local communities.</p>
Category of climate change action	<input checked="" type="checkbox"/> Cat 1 – Re-scaled <input type="checkbox"/> Cat 2 – Modified <input type="checkbox"/> Cat 3 – Dedicated
Type of action	<input type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input checked="" type="checkbox"/> Mitigation and adaptation
Short description of the action and expected results and benefits	<p>The action has two activities:</p> <ul style="list-style-type: none"> • build capacity of Provincial Departments of Environment to use climate knowledge (climate data and results from downscaled modelling, adaptation options, technologies, and lessons learnt) and to provide support to communes in addressing climate risks and issues related with food, water and energy security. • provide support to the implementation of community-based adaptation measures in protected area. This activity is funded by Adaptation Fund through the ongoing project “Enhancing Climate Resilience of Rural Communities Living in Protected Areas in Cambodia”. The project objective is to implement ecosystem-based adaptation (EbA) interventions and enhance the climate change resilience of communities living in five selected intervention sites within protected areas. <p>Benefits from adaptation measures implemented are expected to extend to communities located downstream of the selected sites. Key expected results also include reduced soil erosion and increased food productivity and security through forest restoration, use of multi-use tree species, use of several drought-tolerant hybrid rice, and other measures to intensify and diversify the productivity of family agriculture areas.</p>
Cost effectiveness of the action	<p>The first component leverages technical assistance provided by MoE to the development and implementation of local planning processes, with Ministry of Interior funding (the Commune/Sangkat Fund of the Royal Government of Cambodia) earmarked for the implementation of commune/Sangkat development plans. This Fund is often complemented with additional funding from NGOs.</p> <p>As to the second component, the expected increase in agricultural productivity from the conservation agriculture interventions in protected areas will provide those communities with food and revenue and reduce the pressure on forests, making ecosystem services more resilient to climate</p>

	change. The benefits of this landscape management to enhance ecosystem services will extend to downstream communities, beyond the selected sites.
Preconditions needed for successful implementation	<p>Capacity development, particularly those aiming at strengthening capacity for climate change response and adaptation planning, has to be provided to PDOE and communities.</p> <p>Effective coordination with Ministry of Interior and National Committee for Democratic Development at Sub-National (NCDD), as well as effective coordination between PDOE and Commune Councils are key to the successful mainstreaming of climate change response at the local level.</p> <p>Coordination is also needed with conservation efforts ongoing in selected protected areas.</p>
Indicator(s) of success	<ul style="list-style-type: none"> • Number of PDOE with increased capacities to coordinate climate change response at the subnational level and to provide support to communities on resilient low carbon development planning; • Number of commune development/investment plan proposals with climate change adaptation/mitigation measures; • Level of funding from the Commune/Sankat Fund allocated to climate interventions of commune development/investment plans.
Implementation arrangements	<p>DCC will provide technical support to the provincial department of environment on climate change mainstreaming to commune development/investment plan.</p> <p>Department of Community in Protected Areas, DGNCPA.</p> <p>Activities will be undertaken in close collaboration with NCDD.</p>
Estimated total cost	<p>USD 2.5 million</p> <p>Funds mobilized: USD 2 million (funding from Adaption Fund for the second activity); USD 62,000 (CCCA); additional funds from Government budget on Delegation of Functions to provincial levels (amount tbc)</p>
Possible funding sources	Adaptation Fund
Timeframe	2016-2018

Action 12: Launch and Roll Out of the National and Sectoral M&E System

Action 12	Launch and Roll Out of the National and Sectoral M&E System
CCCSP Strategic Objective	CCCSP Strategic Objective 7: Strengthen institutions and coordination frameworks for national climate change responses
Rationale	<p>Recognizing that Cambodia’s development is dependent on how well the country can respond the challenges posed by a changing climate, it is key to ensure that that the implementation of the overall national strategy for Climate Change, as well as of the sectoral CCAPs, are effectively coordinated and monitored so that responses can be adjusted as needed and expected objectives achieved.</p> <p>The National Framework for Monitoring and Evaluation of climate change response will facilitate the coordination and monitoring of the effectiveness of the current response, tracking the impacts of climate change interventions and overall development of capacity of national institutions to respond to climate change and promoting low carbon resilient development, reducing vulnerabilities and ensuring effectiveness in keeping national development on track.</p> <p>MOE/DCC, as the GSSD, supports the Council to effectively coordinate and monitor the effectiveness of the national climate change response so that the vision set by the CCCSP can be achieved.</p> <p>The CCCSP recognizes the critical importance of establishing a National Framework for Monitoring and Evaluation of climate change response, with the vision of integrating the framework for M&E into the national and sub-national development planning processes. Developing and mainstreaming the national M&E framework will be a long-term effort and of strategic relevance, as it will create an enabling environment for accountability and learning.</p>
Category of climate change action	<input checked="" type="checkbox"/> Cat 1 – Re-scale <input type="checkbox"/> Cat 2 – Modified <input type="checkbox"/> Cat 3 – Dedicated
Type of action	<input type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input checked="" type="checkbox"/> Mitigation and adaptation
Short description of the action and expected results and benefits	<p>In Cambodia, the development of a national-level framework for the M&E of climate change response is being led by the Climate Change Department of the Ministry of Environment, in its capacity as the General Secretariat of the National Council for Sustainable Development.</p> <p>Actions include: (1) launch of the National M&E System (expected to take place at end of 2015) and operationalization of the M&E Unit (based at DCC for the initial 3yr period, with the participation of MoE staff); (2) develop capacity and the systems within the data producing institutions and DCC to ensure regular production and analysis of initial national indicators/indexes; (3) validation and fine-tuning/development of indicators for the national framework (including further development of the commune database to better capture other dimensions of vulnerability); (4) conducting evaluation exercise; (5) analysis and discussion on lessons learnt for better planning and reflection on possible adjustments needed to CCAPs.</p> <p>The M&E framework helps to gage the success of climate change responses by measuring how well national institutions manage climate risks, and how successful adaptation actions are in reducing climate vulnerability and in keeping development on course at national level, also allowing for a similar exercise to be conducted at sectoral level. Engagement of sectors in further</p>

	<p>development of their respective CCAP M&E frameworks is ongoing and will contribute to the overall efforts of ensuring a coordinated and effective response.</p> <p>In addition to the expected increase of effectiveness of CC response (through adjustment of CC planned interventions, with corresponding gains both in terms of reducing vulnerability to CC and in moving towards low carbon modes of development), a well-functioning CC M&E system will support adaptation/development policymaking to deliver increasingly effective policy outcomes.</p> <p>Improved accountability is also expected to facilitate access to new international climate finance, and learning from investments in CC response measures will generate new knowledge critical for future policy development.</p>
Cost effectiveness of the action	<p>Results from M&E will help make adjustments when needed to climate investments, and though it is not possible currently to provide estimates of the cost effectiveness of setting up a national M&E system, it is expected that gains in timely adjustments to CC investments will far outweigh the cost of setting up and maintaining a sound CC M&E system.</p> <p>Additionally, it should be noted that part of the information provided through the M&E system is part of the country's commitments under UNFCCC, contributing also to the mobilization of climate financing.</p>
Preconditions needed for successful implementation	<p>The availability of data and the capacity of staff to analyse data are required.</p> <p>Active engagement of MoP with the secondment of at least 1 MoE technical staff to the M&E Unit based at DCC.</p> <p>Funding sources for the development and roll out of National and Sectoral M&E system are needed.</p>
Indicator(s) of success	<p>Lunch and roll out of National M&E System carried out, with two M&E reports concluded</p> <p>Number of Ministers/Institutions or sectors with M&E systems developed</p>
Implementation arrangements	<p><i>Responsible department(s):</i> Climate Change Department (GSSD); Department of Planning and Budgeting (DGAF)</p> <p>Departments in charge of the production of specific national and sectoral M&E indicators/indexes</p>
Estimated total cost	<p>Total cost of this action: \$215,000</p> <p>This includes the costs of operationalizing the DCC M&E Unit and developing its capacities (including to provide support to sectoral M&E work),</p> <p>The MoE support to the development and roll out of sectoral M&E work is still to be fully determined, and is not included in the estimated cost indicated, though it will contribute to the strengthening of the national M&E System.</p>
Possible funding sources	IIED, GIZ, and CCCA
Timeframe	2016-2018

Action 13: Capacity building of national institutions coordinating the implementation of climate change response

Action 13	Capacity building of national institutions coordinating the implementation of climate change response
Strategic Objective of CCCSP	Strategic Objective 7: Strengthen institutions and coordination framework for national climate change responses
Rationale	<p>The action responds to a key priority of the NSDP - strengthening the capacity of the Secretariat of the National Committee for Climate Change (NCCC) to coordinate inter-ministerial activities and manage national climate change funds.</p> <p>The National Council for Sustainable Development (NCSD), the inter-ministerial body established in March 2015 which replaced NCCC, has currently the mandate to coordinate climate change response.</p>
Category of climate change action	<input checked="" type="checkbox"/> Cat 1 – Re-scaled <input type="checkbox"/> Cat 2 – Modified <input type="checkbox"/> Cat 3 – Dedicated
Type of action	<input type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input checked="" type="checkbox"/> Mitigation and adaptation
Short description of the action and expected results and benefits	<ul style="list-style-type: none"> • Conduct capacity needs assessment and design the capacity development program for 2016-2023 targeting the current institutional structure for CC response (focusing on NCSD and its Secretariat, CCTT, Sectoral Working Groups) • Develop detailed work plan for the initial three-year CD program (2016-2018) and implement activities targeting capacity development of GSSD (DCC) to provide support to NCSD, CCTT and Working Groups to be established to effectively coordinate the implementation of national CC response and engage in international negotiations. • Implement capacity development activities targeting NCSD, CCTT and Working Groups to be established (sectoral or thematic).
Cost effectiveness of the action	The action will enhance capacity of current institutions responsible for climate change response and is expected to increase, in the medium and long term, the overall effectiveness of climate change investments.
Preconditions needed for successful implementation	<ul style="list-style-type: none"> • Institutional arrangements are finalized (including designation of members to integrate the council and technical committee, as well as working groups, with the respective terms of reference approved) • This action should be coordinated with the implementation of Action 14
Indicator(s) of success	<ul style="list-style-type: none"> • Level of institutional capacity of GSSD (human resources and systems) • Number of ministries with institutional arrangements to manage their CCAP and actively contributing to CCTT and thematic working group activities • Number of inter-ministerial working groups established (target for the 3-year period is still to be defined, though it is expected that there would be a minimum of 5 thematic working groups with a specific focus on climate change, namely climate finance, adaptation, mitigation, technology, and M&E).
Implementation arrangements	DCC will be leading the development and implementation of the overall capacity development program, in close consultation with NCSD.

Estimated total cost	USD 5 million Mobilized funding: USD 36,000 (CCCA, tbc) Additional funding through UNDP (tbc),
Possible funding sources	EU, Sida, UNDP, SPCR
Timeframe	2016-2018

Action 14: Support to line ministries to mainstream climate change into development planning and budgeting

Action 14	Support to line ministries to mainstream climate change into development planning and budgeting
Strategic Objective of CCCSP	Strategic Objective 7: Strengthen institutions and coordination framework for national climate change responses
Rationale	<p>This action is in line with NSDP, specifically contributing to one of its indicators on climate change, namely the number of government institutions with climate change plans.</p> <p>The action is executing one of NCS D mandatory functions, namely to provide support to government institutions in preparing the necessary plans to achieve the sustainable development in Cambodia.</p> <p>The action contributes to both adaptation and mitigation efforts and, by clearly mapping out priority investments and respective expected impacts in building resilience and reducing emissions and strengthening the national planning and budgeting systems, it is expected to increase the ability of government institutions to attract climate financing, thus enabling them to scale up climate change response.</p>
Category of climate change action	<input checked="" type="checkbox"/> Cat 1 – Re-scaled <input type="checkbox"/> Cat 2 – Modified <input type="checkbox"/> Cat 3 – Dedicated
Type of action	<input type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input checked="" type="checkbox"/> Mitigation and adaptation
Short description of the action and expected results and benefits	<ul style="list-style-type: none"> • Develop sectoral climate change action plans (CCAPs) • Implementation the NAP process related to development planning and budgeting, including the launch the Cambodia NAP implementation process and develop the climate finance readiness programme. • Support to MEF on developing coding to tag climate change expenditure, and conducting public expenditure review on climate change • Support to CDC on tagging climate change onto the Official Development Aids • Support sectors in conducting Cost Benefits Analyses of climate change investments prioritized CCAP, and including them in Sectors’ Investment Plans and Annual Sectoral Budgets • Establish a grant facility for piloting climate change actions from line ministries and promoting innovative research on climate change, building on DCC experience with CCCA grant mechanism.
Cost effectiveness of the action	Increased capacity of government institutions on planning and budgeting will increase cost effectiveness sectoral and national investments on climate change response (with additional cost effectiveness gains also expected for other development investments). In addition, some of the demonstration projects prioritized in CCAPs will show the cost effectiveness of particular CC investments, providing evidence of the quantifiable positive impacts generated, which in turn is expected increase interest of private sector, development partners and NGOs, contributing to mobilize additional finance.
Preconditions needed for successful implementation	<ul style="list-style-type: none"> • This action should be implemented together with Action 13. • The letter of agreement between MoE and line ministries for CCAP development.

	<ul style="list-style-type: none"> • Strong coordination mechanism with line ministries is required to ensure the successful implementation of the action. • Technical staff in line ministries involved in this action include staff with planning and budgeting functions who are able to understand climate change concept and implications for their respective sectors.
Indicator(s) of success	<ul style="list-style-type: none"> • Number of CCAPs developed and reporting in their implementation, • Degree of implementation of NAP process • Degree of leadership of MEF on code development and CPEIR and of CDC on tagging climate change onto the Official Development Aids • Number of grantees receiving financial support for piloting CCAPs • Number of line ministries which put in place sound climate change criteria for screening investments • Amount allocated annually to sectoral investment in CCAP actions.
Implementation arrangements	<p>DCC will be leading the development and implementation of this action, in close consultation with NCSD, and in close coordination with MEF and CDC, and in collaboration with MoE Departments of Science and Technology, and Administration, Planning and Finance.</p> <p>Collaboration with line ministries developing and implementing CCAPs.</p>
Estimated total cost	<p>8 million USD</p> <p>Fund mobilized: USD 1.5 million (CCCA); additional funding available through the NAP process (tbc)</p>
Possible funding sources	EU, Sida, UNDP, GIZ
Timeframe	2016-2018

Action 15: Strengthen legal and regulatory framework for resilient low carbon development

Action 15	Strengthen legal and regulatory framework for resilient low carbon development
Strategic Objective of CCCSP	Strategic Objective 7: Strengthen institutions and coordination framework for national climate change responses
Rationale	<p>This action is in alignment with the objectives of both NSDP and CCCSP, both emphasizing the need for a comprehensive legal framework on climate change, detailing institutional and financing arrangements and setting the requirements for mainstreaming of climate change across relevant national and sectoral policy and legal and regulatory frameworks (with e.g. EIA Law be expressly mentioned in CCCSP).</p> <p>The action leverages the current efforts for strengthening legislation by line ministries, by providing MoE support to ensure that climate change is considered where relevant.</p> <p>Current discussions on the development of an Environmental Code may detail further the work under this action, as well as the level of funding which will be available. In the interim, MoE will identify and provide support in reviewing key draft legislation to be approved in the short-term.</p>
Category of climate change action	<input checked="" type="checkbox"/> Cat 1 – Re-scaled <input type="checkbox"/> Cat 2 – Modified <input type="checkbox"/> Cat 3 – Dedicated
Type of action	<input type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input checked="" type="checkbox"/> Mitigation and adaptation
Short description of the action and expected results and benefits	<p>In the early stage of action, the focus will be on:</p> <ul style="list-style-type: none"> • Integrate climate change issues into the draft of Environmental Impact Assessment Law (with DCC input ensuring that future EIA regulations will be CC sound, either in the context of a EIA Law or the corresponding chapter in the Environmental Code). • Identify and prioritize current draft legislation, regulation and standards scheduled for approval in the short-term (based on the 2013 study on the climate change legislation review and in consultation with CCTT), and provide recommendations to strengthen CC considerations where relevant.
Cost effectiveness of the action	The action will enhance the enabling environment for CC response, with an expected benefits in the medium to long term on the cost effectiveness of development investments.
Preconditions needed for successful implementation	<p>Leadership of NCS D and strong collaboration of CCTT and relevant line ministries</p> <p>Coordination with the MoE Team working on the Environmental Code</p>
Indicator(s) of success	<ul style="list-style-type: none"> • Number of pieces of draft legislations reviewed and consulted (with a minimum target for 2016 of a full review of the Draft EIA law so that future legal and regulatory framework for EIA fully address Climate Change risks and opportunities, and include regulatory mechanisms which also pragmatically respond to anticipated enforcement challenges) • Number of line ministries collaborating with DCC/MoE in identifying and reviewing draft legislation to better address climate change challenges and opportunities.

Implementation arrangements	DCC leading, in coordination with the team leading the work on the Environmental Code and collaboration with CCTT and relevant ministries.
Estimated total cost	100,000 USD Fund mobilized: USD 21,000 (CCCA)
Possible funding sources	CCCA
Timeframe	2016-2018

Action 16: Establish a national climate change financing framework

Action 16	Establish a national climate change financing framework
CCCSP Strategic Objective	Strategic Objective 7: Strengthen institutions and coordination frameworks for national climate change response
Rationale	<p>Being one of the developing countries highly vulnerable to CC, Cambodia will need significant support (both financial and technical assistance) to implement an effective response to CC. UNFCCC recognizes that significant levels of support required, in particular those needed to enable the implementation of climate change response by developing countries, and is developing mechanisms to increase the level of CC finance available. However, countries need to have a minimum of capacity and systems in place to directly access some of the climate funding available. One of the critical elements is that countries have a clear legal and regulatory framework addressing climate finance issues. Though different types of funding may have specific requirements as to institutional arrangements and/or mechanisms to be in place, an overall framework setting the 'rules of the game' for CC Financing for Cambodia is needed.</p> <p>This action aims to scale up DCC current work on developing such a framework and to operationalize the needed institutional arrangements.</p> <p>It is expected that this action will not only contribute to attracting increase levels of finance for climate change response, but will also have a significant impact on building community resilience, reducing GHG emissions and contributing to poverty alleviation.</p>
Category of climate change action	<input type="checkbox"/> Cat 1 – Re-scaled <input type="checkbox"/> Cat 2 – Modified <input checked="" type="checkbox"/> Cat 3 – Dedicated
Type of action	<input type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input checked="" type="checkbox"/> Mitigation and adaptation
Short description of the action and expected results and benefits	<ul style="list-style-type: none"> • Design the legal framework for climate change finance • Set up the approved institutional arrangements, put in place the required mechanisms and procedures for approval and monitoring of carbon finance projects, and developing capacity of staff in relevant bodies • Finalize accreditation processes for AF and GCF • Develop capacity of NCSD and NIE(s) • Provide support to sectors to identify sources of finance, and to identify and develop bankable project proposals
Cost effectiveness of the action	<p>Legal framework for carbon finance will facilitate Cambodia's access to increased levels of climate finance for both mitigation and adaptation measures.</p> <p>In addition, it is expected that additional sustainable development benefit are generated from carbon financing or other climate funded investments, with positive impacts for local communities in particular, as is the case with CDM financing or with the future REDD+ program.</p>
Preconditions needed for successful implementation	<p>Strong leadership of NCSD and MoE to fast track review and approval of the legal framework for climate finance (ahead of other more comprehensive efforts such as the development of the Environmental Code)</p> <p>Good cooperation with relevant ministries and non-governmental organizations</p>

Indicator(s) of success	<ul style="list-style-type: none"> • Accreditation processes completed with Cambodia directly accessing AF, GCF and other funding sources. • Number of full proposals submitted to different funding sources.
Implementation arrangements	DCC and relevant ministries (particularly MAFF, MIH, MME and MEF)
Estimated total cost	USD 1 million Funding mobilized: USD 300,000 (GCF); USD 500,000 (GIZ, tbc); USD 30,000 (UNEP on AF accreditation); USD 8,000 (CCCA). Additional funding for JCM from Japan tbc.
Possible funding sources	CCCA phase II, UNEP, GIZ and USAID (in the context of NAP process)
Timeframe	2016-2018

Action 17: Institutionalize UNFCCC reporting

Action 17	Institutionalize UNFCCC reporting
CCCSF Strategic Objective	Strategic Objective 8: Strengthen collaboration and active participation in regional and global climate change processes
Rationale	As a signatory to UNFCCC, Cambodia is obligated to fulfill a number of reporting requirements. The reports include Nation Communications (NCs), Intended Nationally Determined Contributions (INDCs), Biennial Update Reports (BURs) on GHG emissions, Nationally Appropriate Mitigation Actions (NAMAs), National Adaptation Plan (NAP) process, and REDD+. These reporting requirements strengthen the information available on CC response, enabling Cambodia to learn from efforts undertaken and to better plan and coordinate future climate change response.
Category of climate change action	<input checked="" type="checkbox"/> Cat 1 – Re-scaled <input type="checkbox"/> Cat 2 – Modified <input type="checkbox"/> Cat 3 – Dedicated
Type of action	<input type="checkbox"/> Mitigation <input type="checkbox"/> Adaptation <input checked="" type="checkbox"/> Mitigation and adaptation
Short description of the action and expected results and benefits	<ul style="list-style-type: none"> • Establish reporting core teams (working together with the M&E unit and climate data management staff) responsible for coordinating inputs, preparing and submitting for approval the required reports under UNFCCC • Develop capacity of core reporting teams and contributing multi-sectoral teams to ensure timely and quality reporting to UNFCCC • Prepare the Third National Communication • Preparation of 2 BURs • Preparation of INDC • Report on NAP and REDD+ processes • Reporting on the implementation of NAMAs
Cost effectiveness of the action	The reports are mandatory for Cambodia as a signatory to UNFCCC. These reports will provide policy makers with information to enable more effective action and cost-effective investments. Establishing timely and quality reporting will also demonstrate that accountability mechanisms are in place, thus potentially contributing to attract increased levels of financing and other types of resources (e.g. technical assistance and technology) to support Cambodia’s development toward a low carbon resilient society.
Preconditions needed for successful implementation	<ul style="list-style-type: none"> • This action should be coordinated with the implementation of Actions 5 and 6 • Good cooperation with relevant ministries and non-governmental organizations, with clear understanding of the added value of timely quality reporting
Indicator(s) of success	<ul style="list-style-type: none"> • Reporting teams established with clear TORs approved and receiving technical assistance to increase capacity • INDC report developed and submitted to UNFCCC • Third National Communication and First BUR submitted to UNFCCC • Systematic reporting on NAP and REDD+ processes
Implementation arrangements	MOE, DCC and relevant ministries
Estimated total cost	USD 1.5 million Funds mobilized: 140,000 USD (UKAID; UNEP earmarked for INDC); USD 500,000 (UNFCCC; other tbc, earmarked for TNC); USD 352,000 (GEF TF earmarked for BUR)

	Additional funding for NAP and REDD+ reporting (tbc)
Possible funding sources	UNFCCC
Timeframe	2016-2018

ANNEX 3: LIST OF LAWS AND LEGAL INSTRUMENTS UNDER JURISDICTION OF MOE

Legal provisions have been developed to ensure natural resources and biodiversity management, Tonle Sap management, coastal and marine environmental management, environmental and human health, effective waste management, and to support the implementation of climate change responses. They are:

1. Royal Decree on Designation and Creation of National Protected Area System dated 1st November 1993;
2. Royal Decree on Designation and management of Tonle Sap Biosphere Reserve dated 10th April 2001
3. Law on Land Management, Urban Planning and Construction, 1994
4. Law on Investment of the Kingdom of Cambodia, 1994
5. Law on Protection of Cultural Heritages, 1996
6. Law on Environmental Protection and Natural Resource Management dated 24th December 1996
7. Law on Pharmaceutical Management, 1996
8. Law on Management of Quality and Safety of Goods and Services, 2000
9. Law on Electricity of the Kingdom of Cambodia, 2000
10. Land Law (1992 and 2001)
11. Law on Management and Exploitation of Mineral Resources, 2001
12. Law on Commune/ Sangkat Administration 2001
13. Fisheries Law dated 30th August 2002
14. Forestry Law, 2002
15. Royal Decree on Community Fisheries, 2005 and amended in 2007
16. Law on Management of Factories and Handicrafts dated 23rd June 2006
17. Law on Water Resource Management in the Kingdom of Cambodia, 2007
18. Law on Concessions, April 2008
19. Law on Administration of capital, provinces, Khan, cities, and districts, 22nd May 2008
20. Law on Tourism dated 10th June 2009
21. Law on Protected Areas dated 15th February 2008
22. Law on Biosafety dated 18th February 2008
23. Ratification for accession to the UNFCCC, December 1995
24. Accession to the Convention on Control of Trans-boundary Movement and Disposal of Hazardous Wastes or The Basel Convention
25. Accession to the Vienna Convention and its Montreal Protocol on Ozone Depleting Substances;
26. Accession to the Stockholm Convention on Persistent Organic Pollutants on 23rd March 2001;
27. Accession to the Cartagena Protocol.

Ministry of Environment also has the duty to enforce many regulations such as:

- Sub-decree No. 27 OrNorKror on Water Pollution Control dated 6th April 1999
- Sub-decree No. 36 OrNorKror BorKor on Solid Wastes Management dated 7th April 1999
- Sub-decree No. 42 OrNorKror BorKor on Air and Noise Pollution Control dated 10th July 2000
- Sub-decree No. 47 OrNorKror BorKor on Management of Ozone Depleting Substances dated 17th March 1999
- Sub-decree No. 27 OrNorKror BorKor on Promotion of Department of Administration and Finance of the Ministry of Environment as General Directorate of Administration and Finance
- Sub-decree on Promotion of Inspectorate of the Ministry of Environment as General Inspectorate

- Sub-decree No. 57 OrNorKro BorKor on Organisation and Functioning of the Ministry of Environment dated 25th September 1997
- Sub-decree No. 72 OrNorKror BorKor on Environmental Impacts Assessment Process dated 11th August 1999
- Prakas on Collection and Transport of industrial solid wastes in Phnom Penh;
- Joint Prakas on application by judicial police officers of template for filing environmental offenses
- Inter-ministerial Prakas on Garbage and Solid Wastes Management in Provinces and Municipalities of the Kingdom of Cambodia
- Guidelines on Solid Waste Management in Factories, Enterprises and Companies
- Notification on Ban of Sale or Provision and Burning of Industrial Solid Wastes.