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**CAMBODIA CLIMATE CHANGE STRATEGIC PLAN
2014 – 2023**

2013

National Climate Change Committee



**Samdech Akka Moha Sena Padei Techo HUN SEN,
Prime Minister of the Kingdom of Cambodia**

MESSAGE

Climate change has become one of the greatest risks facing humanity in the 21st Century. As the earth continues to heat up, the severity of climate change impacts continues to intensify and amplify, prompting our attention to seek for urgent solutions.

Southeast Asia continues to face increasing threats from climate change with increasing losses in human lives and significant damages to economic development and natural resources. We all have observed the alarming trends of more frequent and intensified floods, droughts, saline intrusion and extreme weather events, especially over the last decade. Research and study have projected increasing trend by the end of this century. Therefore climate change becomes a primary issue requiring urgent attention in designing appropriate climate change policies, strategies and actions as responses at the global, regional and national levels.

Having ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1996, Cambodia has actively participated with international communities in its effort to address climate related issues. However, the country remains highly vulnerable to the impacts of climate change due to its high dependency on climate-sensitive sectors such as agriculture, forestry, fisheries, tourism...etc. which form foundation its economic growth and development, and supporting the livelihoods of a great majority of its population. It is important to note that Cambodia has enjoyed stable macro-economic performance for the last several years as indicated by the steady growth in GDP, rising household income, and reduced poverty rate. Retaining this robust growth performance under a changing climate will be a real challenge in many years to come. Response efforts to address climate change cannot be separated from

economic development and poverty alleviation, which are vital in a transition towards a green economy, low carbon and climate resilient development.

In this regard, it is my great honour and pleasure on behalf of the Royal Government of Cambodia to announce the official promulgation of the Cambodia Climate Change Strategic Plan 2014-2023 (CCCSP). This is the first ever comprehensive national policy document responding to climate change issue that occurs in Cambodia. The CCCSP has reflected our political will, our firm commitment and readiness for reducing climate change impacts on national development efforts and providing contribution with international community to the global efforts for mitigating GHG emissions under the UNFCCC.

Integration of climate change into national and sub-national level planning and the development of climate change strategies, action plans and financing framework are among the priority actions undertaken as defined in the National Strategic Development Plan Update 2009-2013. The development of the CCCSP is a significant step towards embedding climate change in the NSDP 2014-2018 and in sector development plans of all relevant ministries. The CCCSP will guide and assist national entities, non-governmental organizations, and development partners in developing concrete and appropriate measures and actions related to adaptation and GHG mitigation, which are the supportive pillars for the achievement of the Rectangular Strategy and the Millennium Development Goals of the Royal Government of Cambodia.

I must stress that the CCCSP captures the main strategic objectives and directions leveraging sustainable development goals for us to pursue for the next 10 years. As a dynamic policy instrument, it will be periodically evaluated, revised and improved in order for it to be able to respond effectively to evolving situation in the future. I strongly believe that more practical solutions and best practices will be learned to guide national capacity building during the course of its implementation. It is our goal to promote Cambodian society towards a climate resilient, low-carbon and green economy.

I would like to express my sincere gratitude and appreciation to the National Climate Change Committee (NCCC) and its officers, all the participating line ministries, development partners,

non-governmental organizations, and all of you who have contributed to make this CCCSP possible.

Our ability to address climate impacts on national development processes will be enhanced by coordinated efforts to reduce the vulnerability of people and natural systems that support livelihoods and drive national economic growth and prosperity. The National Climate Change Committee and its secretariat have a very important role to play to coordinate Cambodia's Climate Change responses, manage partnerships with various stakeholders, and monitor the implementation of this strategic plan.

Once again, I urge all stakeholders from the government, private sector, national and international non-governmental organizations and development partners to continue their close cooperation with NCCC in implementation of climate change responses, in particular the CCCSP, which would contribute to the development of Cambodia towards a green, low carbon, climate resilient, equitable and sustainable society.

Phnom Penh, 31 October 2013

HUN SEN

PREFACE

On behalf of the National Climate Change Committee and the Ministry of Environment I would like to express my profound respect 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 climate change as one of the key issues to be addressed for the development of the country. The National Strategic Development Plan (NSDP Update) 2009-2013 identified key priority actions to be undertaken in response to climate change that have negative implications on national development efforts. On this basis, climate change is considered cross-cutting issues in the planning process of NSDP 2014-218. In this context, it is my pride to see the CCCSP developed under the auspices of the NCCC. It is the first comprehensive strategic document ever developed under the intelligent leadership of **Samdech Akka Moha Sena Padei Techo HUN SEN**, the Prime Minister of the Kingdom of Cambodia.

I would like to express gratitude and appreciation to Excellencies, ladies and gentlemen from line ministries and agencies, non-governmental organizations, private sectors, and development partners for good cooperation in the development and materialization of the CCCSP.

Recent study findings presented in the Second National Communication to the United Nations Convention on Climate Change (UNFCCC) have concluded that change in temperature and rainfall in Cambodia has already started since the last half century. The projection for the next eighty years further concludes that the future temperature in Cambodia will continue to rise with the potential declined dry season rainfall while delayed arrival of the wet season regardless of the potential increased wet season rainfall. The change may vary in accordance with greenhouse gases (GHGs) emission scenarios.

Climate change is a real challenge for our country as we all have witnessed more frequent and intense extreme weather, floods, droughts, and increased storm surges, and the significant physical and monetary damage they cause to the country economy and livelihoods. In order to ensure sustainable development in the context of climate change Cambodia has worked out

practical solutions to cope with the rapidly changing climate by putting in place new policies, strategies, and plans. The CCCSP is prepared following the guidelines of the council of ministers and is consistent with the planning cycle of the NSDP. Line ministries have provided inputs to the development of the CCCSP and also have developed sector climate change action plans, which would become policy programmes for integration of climate change at national and sub-national levels.

The development of the CCCSP is based on a broad and inclusive consultation process to ensure consensus, comprehensiveness and ownership of the product by relevant stakeholders. Building synergy with existing government policy documents such as NSDP, Rectangular Strategy, National Policy on Green Growth and sector development plans, the CCCSP is designed to ensure its strategic cohesion to address a wide range of climate change issues concerning adaptation, GHG mitigation, and low-carbon development. Much emphasis is put on building institutional capacity and science-based knowledge for projection of climate change impacts, adaptation, and disaster risk reduction since these would have immediate far-reaching implications on vulnerable sectors such as agriculture, water supply, forestry, fisheries, and tourism. The CCCSP also envisages building resilience capacity and production skills, especially at the community level, to effectively overcome climate change impacts.

Cambodia is rich in water and renewable energy resources where much of it remains out of reach. Improved access to food, water, and energy, together with promotion of low-carbon development through a combination of technology transfer, legal reform and fiscal incentives, are regarded as appropriate solutions to sustainable development in the context of climate change. The Second National Communication provides a good analysis of renewable energy options, energy efficiency and GHG mitigation potential, which will inform specific actions and viable investments.

Mobilization of funding resources for implementation of climate related programmes and projects in specific locations of high climate risks are also critical to achieve the goals and objectives of the CCCSP. Integration of the CCCSP into NSDP and sector plans would bring about multiple benefits in terms of knowledge and capacity enhancement for climate change

planning, improved stakeholder participation, coordination of funding flow, and systematic monitoring and evaluation of climate change related policy responses. The CCCSP will create an enabling environment conducive to success.

I would like to take this opportunity to express my deep appreciation to line ministries and agencies, development partners and experts for their valuable inputs, assistance and active participation in the development process of the CCCSP in a timely and effective manner.

Phnom Penh, 30 October 2013

Say Samal

Acknowledgement

The Royal Government of Cambodia expresses its deep gratitude to national ministries and agencies, development partners, non-governmental organizations, academia, private sectors, and all stakeholders for their contributions to the development of the Cambodia Climate Change Strategic Plan (CCCSP).

The CCCSP was developed under the overall coordination of the Climate Change Department of the Ministry of Environment with the active participations of Climate Change Technical Team (CCTT) and invaluable guidance of the National Climate Change Committee (NCCC). Their participations made the strategic plan more coherent and aligned to other existing plans of the line agencies and ministries. The suggestions and comments from peer reviews by all stakeholders provide strategic guidance for development of the CCCSP. A wide range of technical support was provided by several national and international experts to the development of the CCCSP.

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

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List of Abbreviations and Acronyms

AF	Adaptation Fund
ASEAN	Association of Southeast Asian Nations
CBO	Community-Based Organization
CCCA	Cambodia Climate Change Alliance
CCCSP	Cambodia Climate Change Strategic Plan
CCD	Climate Change Department
CCTT	Climate Change Technical Team
CDC	Council for the Development of Cambodia
CPEIR	Climate Public Expenditure and Institutional Review
CRDB	Cambodia Rehabilitation and Development Board
CSO	Civil Society Organization
DANIDA	Danish International Development Agency
EM-DAT	The International Disaster Database
EU	European Union
GCF	Green Climate Fund
GDP	Gross Domestic Product
GHG	Greenhouse Gas
INC	Initial National Communication
IPCC	Intergovernmental Panel on Climate Change
LDC	Least Developed Country
M&E	Monitoring and Evaluation
MAFF	Ministry of Agriculture, Forestry and Fisheries
Mekong ARCC	Mekong Adaptation and Resilience to Climate Change
MIME	Ministry of Industry, Mines and Energy
MOE	Ministry of Environment
MOEYS	Ministry of Education, Youth and Sport
MOH	Ministry of Health

MOWA	Ministry of Women's Affairs
MOWRAM	Ministry of Water Resources and Meteorology
MPWT	Ministry of Public Works and Transport
MRD	Ministry of Rural Development
NAPA	National Adaptation Programme of Action
NCCC	National Climate Change Committee
NCDD	National Committee for Sub-National Democratic Development
NCDM	National Committee for Disaster Management
NGO	Non-Governmental Organization
NSDP	National Strategic Development Plan
NSPS	National Social Protection Strategy
PBA	Programme-based Approach
REDD+	Reducing Emissions from Deforestation and Forest Degradation
RGC	Royal Government of Cambodia
RS	Rectangular Strategy
Sectoral CCSP	Sectoral Climate Change Strategic Plan
SNC	Second National Communication (Draft)
SRES A1B	Special Report on Emission Scenario A1B
SRES A2	Special Report on Emission Scenario A2
SRES B1	Special Report on Emission Scenario B1
SWEDEN (Sida)	Swedish International Development Cooperation Agency
SWOT	Strengths, Weaknesses, Opportunities and Threats
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

Executive Summary

The complexity and many uncertainties of climate change risks and threats to Cambodia's economic growth, livelihoods and ecosystem functions point to the need for integrated approaches to planning climate change policy interventions in harmony with relevant economic policy agenda geared towards sustainable development, poverty reduction and environmental conservation. The Cambodia Climate Change Strategic Plan 2014-2023 (CCCSP) is well designed to fill the gap, to complement existing policy and to meet the emerging challenge of the national development efforts.

Following the guidelines of the Council of Ministers, the CCCSP (2014-2023) was structured with logical steps including the analysis of current and future national development and climate risks; the formulation of a vision, mission and goals; the development of a strategic framework consisting of strategic objectives and strategies; the identification of a set of actions, institutional arrangements and implementation roadmaps; the analysis of financial resources; and the development of a Monitoring and Evaluation framework.

Cambodia's real GDP had a growth rate of 7.1 % in 2011 and is forecasted to stabilize around 7-8 % in 2013. The economy is narrowly based and driven by four main sectors: garment, tourism, construction and agriculture. Agriculture continues to be the dominant employment sector for the rural population, accounting for 57.6 % of the country's 8.8 million-labour force, and contributing to about 32.1 % of GDP (in 2011). The Government has the export target of 1 million tonnes of rice by 2015, which would benefit the rice processing industry. Agro-industrial crops such as rubber and cassava have enjoyed speedy growth, with rubber production had a growth rate of 10.1 % in 2011 (MEF, 2011). The tourism sector has an annual growth rate of 20 %, with a GDP share of 4.3 %. Electricity production relies mainly on combustion of fossil fuel which accounts for 95.2 % of the total energy mix, while hydropower and other renewable energy represent only 3.3 % and 1.5 % respectively. Oil, gas and mineral extraction industries will come to play a significant role in contributing to GDP growth in the near future.

As a result of modelling work of the Initial National Communication (INC) and the Second National Communication (SNC) team, Cambodia's mean surface temperature has increased by 0.8°C compared to 1960. The mean monthly temperature is predicted to increase between 0.013°C to 0.036°C per year by 2099, depending on the location. The rate of temperature increase is higher in low altitude areas than in high altitude areas. Under elevated [CO₂] with low rate of emission scenarios (SRESB1), it is quite likely that the wet season rainfall will continue to increase in the future, and then might decrease again after 2050s. But under high emission scenarios (SRESA2), the direction of change will reverse. The 4th Assessment Report of Intergovernmental Panel on Climate Change showed that the global sea level is projected to increase between 18cm and 50cm by 2100 based on the SRESB1 and SRESA2 respectively. An increase in the temperature is likely to affect agricultural productivity. According to the International Rice Research Institute, rice grain yields decline by 10 % for each 1°C increase in minimum (night) temperatures during the growing time in the dry season. Cambodia's coastline of 435 km would be affected by sea-level rises, while low-lying farming areas would be exposed to saline water intrusion causing damage to crops.

The vision, mission and goals of the present CCCSP were based on the analysis of institutional capacity, observed climate change impacts and climate change projections.

Vision: Cambodia develops towards a green, low-carbon, climate-resilient, equitable, sustainable and knowledge-based society.

Mission: Creating a national framework for engaging the public, private sectors, civil society organizations, and development partners in a participatory process for responding to climate change and to support sustainable development.

Goals:

- Reducing vulnerability of most vulnerable groups and critical (natural and societal) systems to climate change impacts.
- Shifting towards a green development path by promoting low-carbon development and technologies.

- Promoting awareness and participation of the public in climate change response actions.

To achieve the vision, mission and goals, Royal Government of Cambodia has identified 8 strategic objectives as follows:

1. Promote climate resilience through improving food, water and energy securities.
2. Reduce sectoral, regional, gender vulnerability and health risks to climate change impacts.
3. Ensure climate resilience of critical ecosystems (Tonle Sap Lake, Mekong River, coastal ecosystems, highlands etc.), biodiversity, protected areas and cultural heritage.
4. Promote low-carbon planning and technologies to support sustainable development of the country.
5. Improve capacities, knowledge and awareness for climate change response.
6. Promote adaptive social protection and participatory approaches in reducing loss and damage due to climate change.
7. Strengthen institutions and coordination frameworks for national climate change responses.
8. Strengthen collaboration and active participation in regional and global climate change processes.

The CCCSP has set out a number of actions structured into three phases of implementation.

In the short term (2013 – 2014): the focus of this phase is on putting in place institutional and financial arrangements for the implementation of the CCCSP; development of national M&E framework and indicators; and development of climate change action plans (2014-2018) by line ministries.

In the medium term (2014 – 2018): this phase will continue to support the implementation of what was planned in Phase 1, with expansion to cover other activities such as accreditation of the adaptation fund and green climate fund, research and knowledge management, capacity development, mainstreaming of climate change across sectors at different levels, operation of M&E and data management system, and launching some high priority projects/programmes in

key sectors identified in the Climate Change Action Plan. Initially priority would be given to adaptation activities but gradually GHG mitigation activities will be included. The Royal Government of Cambodia may undertake the review and revision of the CCCSP 2014-2018 building on lessons learned in Phases 1 and 2.

In the long term (2019 – 2023): the focus of this phase will be on research and learning, but its main objectives will be to scale up and out successes and to continue mainstreaming climate change into national and sub-national programmes. This will involve an increased use of budget support for national programmes, including funding the climate change response through sub-national administrations.

1. INTRODUCTION

The Royal Government of Cambodia (RGC) remains committed to pursuing sustainable development that ensures a better quality of life and improves the living standards of its people.

The main national development priority is to reduce poverty. Thus, the efforts in addressing climate change cannot be separated from economic development and poverty alleviation in the country. Addressing economic and social development by taking into consideration climate change will assist Cambodia in reducing her vulnerability to the potential climate risks, improving air quality and participating with international community to mitigate the GHG emission- the root cause of climate change. Climate change has a critical implication for the people, especially the rural poor who are dependent strongly based on natural resources that are projected to be highly impacted by climate change. Households engaged in agricultural activities currently have the highest incidence of poverty and as such they are also highly vulnerable to climate change.

The National Strategic Development Plan (NSDP) update 2009-2013 emphasizes that *‘to effectively deal with the implications of climate change, the capacity of RGC institutions needs to be strengthened to identify and develop a strategy to deal with the anticipated impact of the climate change, and strengthen disaster management capabilities’*. This requires focusing on the following priorities as listed in the NSDP:

- Strengthen the capacity of the Secretariat of the National Climate Change Committee.
- Promote and coordinate the mainstreaming of climate change in concerned sectors.
- Continue preparing the Second National Communication under the United Nations Framework Convention on Climate Change.
- Prepare a National Strategy and Action Plan to respond to climate change.
- Promote the establishment of a national climate change Fund.

- Promote the implementation and update the National Adaptation Programme of Action to Climate Change (NAPA).
- Further identify and foster the implementation of a clean development mechanism and GHG reduction projects.
- Educate and raise awareness of the public on climate change.
- Mobilize resources and support to address climate change.
- Decentralise the preparation of GHG inventory and set up a database management system.

Meeting the projected national development targets envisaged in the revised NSDP will require measures to respond to climate change impacts. The development of the CCCSP provides the entry point for a structured and coherent approach to integrate climate change into national development processes.

The CCCSP is developed following the guidelines of the Council of Ministers. The CCCSP defines the vision, mission, goals and objectives, as well as the strategic framework outlining the strategic objectives and strategies. A climate change action plan will be prepared as a separate document, which details the identification and prioritization of the actions for achieving the strategic objectives of CCCSP.

Alongside the CCCSP, line ministries have developed their sectoral climate change strategic plans (Sectoral CCSPs) to guide the integration of climate change into their sectoral planning. While the CCCSP provides a national perspective and framework for addressing climate change, the Sectoral CCSPs of the line ministries focus on sector-specific responses to climate change. The line ministries are now developing their sector climate change action plans to operationalize their Sectoral CCSP. Good coordination of the national and sub-national response is very important to effectively address climate change. To that end, a guideline for mainstreaming climate change into sub-national planning is being prepared under the auspices of the Secretariat of the National Committee for Sub-national Democratic Development (NCDD).

2. VISION

Cambodia develops towards a green, low-carbon, climate-resilient, equitable, sustainable and knowledge-based society.

3. MISSION

Creating a national framework for engaging the public, the private sectors, civil society organizations, and development partners in a participatory process for responding to climate change to support sustainable development.

4. GOALS

- Reducing vulnerability of most vulnerable groups and critical (natural and societal) systems to climate change impacts.
- Shifting towards a green development path by promoting low-carbon development and appropriate technologies.
- Promoting awareness and participation of the public in climate change response actions.

5. STRATEGIC FRAMEWORK

Cambodia is highly vulnerable to climate change and the RGC recognises the need for mainstreaming climate change into the NSDP and national policies at all levels based on selected key guiding principles.

5.1. Guiding Principles

1. Adhere to the values of sustainable development;
2. Ensure that national development priorities can be achieved under a changing climate;
3. Focus on the threats as well as opportunities of climate change and capitalise on synergies between adaptation and mitigation;

4. Recognise the complex and interconnected nature of climate change and the need to use interdisciplinary, cross-sectoral and multi-scale approaches in addressing it;
5. Recognise the uncertainty of future climate change, build flexibility in the management of key systems to address unforeseen changes and use risk-based and phased approaches in planning responses;
6. Address both extreme events and critical changes (e.g. shift in seasons) induced by climate change;
7. Use a combination of science-based, ecosystem-based and community-based approaches;
8. Ensure that a climate change response is equitable, gender sensitive, transparent, accountable and culturally appropriate;
9. Leverage on knowledge, innovation and behavioural change in developing solutions for adaptation and mitigation;
10. Engage actively with international and regional processes for addressing climate change.

5.2. Strategic Analysis

To ensure alignment with national development goals and priorities, several key documents were considered when conducting the strategic analysis. These include the following:

- The Rectangular Strategy Phase II
- Cambodia Vision 2030 (Draft)
- Cambodia Human Development Report 2011
- Cambodia Millennium Development Goals
- The Cambodian Government's Achievements and Future Directions in Sustainable Development (National Report for Rio+20)
- National Strategic Development Plan Update 2009-2013
- Cambodia's Initial National Communication Under the United Nations Framework Convention on Climate Change

- Draft Second National Communication Under the United Nations Framework Convention on Climate Change
- National Adaptation Programme of Action to Climate Change (NAPA)
- Draft of National Environmental Policy 2012
- National and sectoral strategies, policies and plans
- National Policy on Green Growth and National Green Growth Strategic Plan 2013-2030
- Policy Paper on the Promotion of Paddy Production and Rice Export.

National Development Baselines

Cambodia has achieved a long-term growth (1994-2011) of 6-7 % in its GDP annually. The stable and steady economic growth is largely attributed to the continued good performance of the agriculture sector, garment, construction and tourism. Project-based approach is steadily giving way to programme-based planning in consolidating sustainable development. Better data collection and management is contributing to improving planning systems, and the effective allocation of resources. However, economic diversification is limited and there is still a considerable percentage of the unskilled population.

Forest cover as a percentage of total land area in 2010 was 57.07 %, of which over 3 million ha of protected areas is under the jurisdiction of the Ministry of Environment.

Agriculture continues to be the dominant employment sector absorbing the majority of the population accounting for 57.6 % of labour force.

According to the NSDP update (2009-2013), as of 2008 the total arable land area was in the range of 3.31 million ha, constituted by 2.61 million ha of rice farming area, 0.59 million ha of permanent crops, and 0.11 million ha of rubber plantation. The Strategy for Agriculture and Water 2006-2010 indicates that only 7-8 % of arable land area is fully irrigated, 10 % is supplementary irrigated, and the remaining 80 % relies on rain water.

Fish provides up to 80 % of all animal protein intake in the Cambodian diet and fish production contributes about 10 % of Cambodia's GDP, creating 6million full-time and part-time jobs nationwide. The main inland fisheries are predominantly found along the rivers, lakes and wetlands such as the Tonle Sap Lake and the Mekong River.

The tourism is the third largest sector, after agriculture and the garment industry. National revenue from tourism has increased 17 folds from USD 100 million in 1995 to USD 1786 million in 2010 with 315,000 jobs created by the sector.

The Cambodian report for the Rio+20 Summit has indicated insufficient supply of electricity, with only 17.2 % national average and about 6 % of the rural population, has, in 2012, access to grid quality power supply. The per capita electricity consumption is estimated at 199KWh per annum (estimated in 2013).

Fossil fuel based electricity production accounts for 95.2 % of total energy mix, and hydropower and renewable resources represent only 3.3 % 1.5 % respectively. More than 80 % of the population still depends on fuel-wood and charcoal for household cooking.

Based on the statistics of the Ministry of Public Works and Transport, the total number of vehicles registered in 2009, including motorcycles , family cars, vans and buses, and small and big trucks, was 307,000 with 1.9 % annual growth rate.

National Development Projections

- The Cambodia's economic growth is projected at 7-8 % for 2014.
- Agricultural sector is expected to maintain a 5 % growth rate annually in order to meet the national economic growth target.
- Agriculture sector contributed 32.1 % to the GDP in 2011 and is considered an important engine of growth in the next NSDP.
- The target for tourism sector (in number of tourist arrivals) is 4.5 million and 6.1 million international tourists by 2015 and 2018 respectively, with domestic tourist is targeted at 10.5 million and all together would create directly 700 thousand jobs.

- The Royal Government of Cambodia has the ambition to progress from the least-developed country (LDC) status towards the low and high middle-income country by 2018 and 2030 respectively.
- With 57.07 % of land area (2010) under forest cover, Cambodia has an opportunity to benefit from the forest carbon credit and carbon market mechanisms such as REDD.
- With 5.72 % annual growth rate in rice production, Cambodia expects to export 1 million tons of milled rice by 2015.
- The Ministry of Environment projects GHG emissions from the transport sector to increase from 785 GgCO₂ equivalents in 2000, to 11,376 GgCO₂ by 2050, representing a 27 % increase annually.

Climate Change Implications as Recognised in the NSDP Update 2009-2013

The NSDP recognises the climate change impacts and importance of addressing climate change in national development planning and calls for response measures as follows:

- Flood implications on infrastructure
 - The road structure needs strengthening, especially rural roads, so that floods do not cut off people's movement and transportation of goods;
 - Flood control and drainage system should be constructed in areas prone to flooding from rivers and streams.
- Cambodia is shortage of energy, one of the reasons for its low level of industrialization. Consideration should be given to more eco-friendly energy sources such as hydropower;
- Sustainable poverty alleviation is Cambodia's long-standing goal. However, since more than 80 % of the population depends largely on subsistent agriculture, floods and droughts could push large numbers of people back to below the poverty line;
- Management of water and fisheries is the lifeline of Cambodian people. Change in hydrology as a result of climate change may have adverse effects on fisheries;
- Preservation of Cambodia's rich and diverse flora and fauna;
- Expansion of capacity for provision of water and sanitation, particularly to rural areas;

- Protection of water and forest resources along with tree planting, rehabilitation of degraded forests and investment in production of biofuels, which are already a part of the current government's effort. Climate Projections and Their Implications

Climate Projections

- Historically, temperatures in Cambodia have increased and this trend is projected to continue with mean monthly temperatures increasing between 0.013°C and 0.036°C per year by 2099 depending on location, with higher rates at low latitudes.
- Although there is inconclusive evidence of climate impact on rainfall, projections of the mean annual rainfall have indicated an increase in rainfall for Cambodia. There is an increasing trend in seasonal rainfall between June and August in the Northwest, and decreasing trend in the Northeast of the country.
- According to the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report, sea levels in the region are projected to rise under various scenarios by 2090, relative to 1980 – 1999 as follows: 0.18 - 0.43 m under SRES B1; 0.21 – 0.52 m under SRES A1B; and 0.23 – 0.56 m under SRES A2. This corresponds to a 0.56 m rise under the high emissions scenario (A2), which at this rate would cause permanent inundation of about 25,000 ha coastal Cambodia within 90 years.

Implications

- Increase in temperature is likely to affect agricultural productivity. According to the International Rice Research Institute, rice yield declined by 10 % for each 1°C increase in growing-season minimum (night) temperature in the dry season.
- The Mekong Adaptation and Resilience to Climate Change (Mekong ARCC) demonstrated that rainfall will get higher in the provinces of higher elevation during the wet season, but it will get drier during the dry season, which could hamper the production of coffee and rubber in Cambodia.
- The 435 km Cambodia coastline is vulnerable to sea-level rises and the severe impacts of more frequent typhoons under future climate projections. This could have effect on

tourism potential and cause coastal erosion, and strong winds would damage settlements in the coastal areas.

- Given only 7-8 % of total production land area under full irrigation it is difficult for Cambodia to achieve the 5 % annual agricultural growth in order to meet the target of agricultural crops export by 2030 under climate change impacts (e.g. drought), especially for some cash crops such as rice, without further investment in the expansion of irrigation schemes.
- According to the International Disaster Database (EM-DAT), the natural disaster of 2011 resulted in economic losses to Cambodia of about 4.3 % of its GDP. Climate related flooding is projected to increase in its frequency and intensity especially in the central plains. While the coastal zones would be affected by tropical cyclones from the Pacific, the central plains would experience seasonal flooding caused by increased rainfall. Both regions are of significant economic importance due to their contributions generated from tourism, services, navigation, fishing and agricultural production. Therefore, it is crucial that measures are put in places to minimize the impacts of climate change risks and disasters in order for Cambodia to achieve the desirable economic growth and development expected in the NSDP.
- GHG emissions for Cambodia are currently extremely low compared to regional and global averages. According to the Second National Communication for UNFCCC, in 2000 Cambodia emitted 47.6 million tons of carbon dioxide equivalent, but 48 million ton of carbon dioxide equivalent is absorbed by forests. Over the same period, energy consumption by sector was highest in the transport sector, followed by electricity production, residential and the industrial sectors. Cambodia needs to increase energy production to boost industrial activities, while improving energy efficiency in the transport and residential sectors in order to reduce GHG emissions. During this stage of increasing energy supply, it is important that integration of renewable energy is considered in the future energy production.

Climate Change Response Capacity

According to the Climate Change Vulnerability Mapping for Southeast Asia, carried out by the Economy and Environment Programme for Southeast Asia, Cambodia is among the most vulnerable country to climate change in Southeast Asia because of low adaptive capacity.

An analysis of the 'Strengths, Weaknesses, Opportunities and Threats' (SWOT) of Cambodia's response to climate change was conducted with many stakeholders such as government agencies, civil society, development partners and private sectors. The results of the SWOT Analysis (presented below) were considered in the development of the strategic response.

Strengths

- Cambodia has strong economic growth;
- Interest in knowledge and information related to climate change;
- High interest in sustainable development;
- Rich natural resource base;
- Presence of government policies on economic development;
- Selected ministries have developed their sectoral climate change strategies;
- Support for solutions to climate change from government agencies, international community and civil society;
- Increased awareness on climate change;
- Policy on environment and health;
- Gradual improved infrastructure.

Weaknesses

- Weak knowledge and science-based decision making;

- Lack of clear procedure for integration of climate change in the national development planning;
- Limited capacity of the national agencies responsible for climate change and limited participation of stakeholders;
- Out-dated information to address climate impacts;
- Limited human resources;
- Climate change planning is not a common practice;
- Limited knowledge, research and technology;
- Limited financial resources;
- Low adaptive capacity among citizens.

Opportunity

- Increasing global climate change fund;
- Establishment of national Knowledge and Information structure;
- Development of the next national sustainable development plan;
- Political commitment and support to climate change;
- Improved livelihoods;
- Global efforts in addressing climate change;
- Existing programmes such as Cambodia Climate Change Alliance and Strategic Program for Climate Resilience;
- Development Partners support to the Royal Government of Cambodia in addressing climate change;
- Skills and vocational development programmes.

Threats

- 43 % of total communes is highly vulnerable;

- Low understanding of climate change and response options;
- Other policies and priorities are competing with policy on climate change;
- Key economic sectors faced with the risks of climate change impacts;
- Limited capacity for CC responses;
- More frequent climate extreme events;
- Lack of resilience to natural disasters.

Institutions for Coordinated Climate Change Response

The National Climate Change Committee (NCCC) was established in 2006 with the mandate to coordinate and monitor implementation of the Government's policies, strategies, regulations, plans and programs in response to climate change. The NCCC is honorary chaired by Samdech Akka Moha Sena Padei Techo Hun Sen, the Prime Minister of the Royal Government of Cambodia and the Minister of Environment as the chair. A Climate Change Technical Team (CCTT) was established as an inter-ministerial body to provide technical support to NCCC in fulfilling its mandate. The Climate Change Department (CCD) within the Ministry of Environment (MOE) serves as the Secretariat for NCCC and coordinates the activities of the CCTT. There are climate change focal points and working groups appointed by line ministries to oversee the development of the sectoral climate change strategies, action plans and projects.

There is a need for review of the climate change institutional structure aiming to set out appropriate recommendations for its improvement in order to promote inter-ministerial coordination and implementation of CCCSP, as well as climate change response measures.

Gender and Climate Change

The Royal Government of Cambodia recognizes that the poor and rural populations of Cambodia, the majority of whom are women, are most vulnerable to climate change impacts because of their high dependence on agriculture and natural resources. These vulnerable groups are very susceptible to diseases because of their limited resources and capacity to adapt to climate change impacts, including the lack of preparedness to cope with climate risks and hazards. Therefore, there is a need to mainstream gender into climate change response

measures, such as into existing policies and laws, Sectoral Climate Change Strategic Plans (Sectoral CCSPs) in order for this cross-cutting issue to be supported by all government agencies especially at national and sub-national levels, development partners, NGOs, Civil Society Organizations (CSOs), research and academia, and the private sectors.

Education, Awareness and Communication

Mainstreaming climate change knowledge and information into formal and non-formal education is the key principle to sustaining climate change awareness for a greener, more equitable and climate-resilient society. It is important to create an enabling environment for climate change education and awareness by developing and enhancing communication structures, systems and tools.

5.3. Strategic Objectives and Strategies

Strategic Objective 1: Promote climate resilience through improving food, water and energy security

Strategies:

- a. Map sectoral contributions to the security of key systems;
- b. Engage relevant sectors and stakeholders in identifying response measures;
- c. Enhance coordinated response mechanisms for coherent policy responses;
- d. Increase capacity to address climate-induced opportunities in agricultural production systems, ecosystems, and protected areas;
 - Agricultural diversification (e.g. crops, livestock etc.)
 - Increase in productivity (e.g. crops, fisheries, livestock, forestry etc.)
 - Opportunity for new cropping
 - Watershed and ecosystem management.
- e. Facilitate for response by businesses and industries to carbon market opportunities for green trade and investment;
- f. Promote renewable energy and energy efficiency to reduce GHG emissions and impacts on health;

- Renewable energy
 - Energy efficiency
 - Appropriate technology transfer
 - Solid waste and wastewater management through integrated measures in the capital, towns and populated areas, and animal waste management.
- g. Develop decentralized energy production systems integrating the application of renewable energy, especially solar energy;
- h. Rehabilitate and build water infrastructures including small, medium, and large scale irrigation schemes;
- i. Provide for and expand climate proofed rural road infrastructures and for connection between production areas and the market.
- j. Integrate climate change in the Environmental Impact Assessment process.

Strategic Objective 2: Reduce vulnerability of sectors, regions, gender and health to climate change impacts.

Strategies:

- a. Use existing vulnerability and risk assessments, and conduct new ones where necessary, to prioritize adaptation measures for key regions of Cambodia, such as coastal zones, highlands, rural and urban areas;
- b. Implement key actions identified in the Sectoral CCSPs for addressing climate change impacts;
- c. Promote integration of the CCCSP with other national strategies such as the National Strategic Development Plan (NSDP) and the National Social Protection Strategy (NSPS);
- d. Promote community-based adaptation approaches and strengthen partnerships between development partners, civil society, private sectors and the government;
- e. Promote the use of appropriate technologies on animal and crop production for vulnerable farmers;
- f. Improve effective fisheries management;

- g. Improve forest ecology, flooded forest ecosystem, coastal zones and protected areas;
- h. Promote natural rubber production in a sustainable way by focusing on both adaptation and mitigation measures;
- i. Promote animal production and protection of animal health in sustainable ways;
- j. Improve healthcare infrastructure and capacity of health personnel to cope with vector-borne and water-borne diseases in the context of climate change;
- k. Introduce technologies in waterworks development and rehabilitation in response to the negative impacts of climate change;
- l. Promote capital-intensive urban transport infrastructure planning and development;
- m. Provide climate proofing to rural infrastructure (roads, irrigation, wells and culverts) to be resilient to flood and drought;
- n. Promote early warning systems on hydro-met;
- o. Prioritize women's needs in climate change adaptation and mitigation actions.

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.

Strategies:

- a. Enhance biodiversity conservation and restore ecosystems threatened by climate change;
- b. Promote and encourage community-based, ecosystem-based approaches and eco-tourism as cost-effective ways of addressing climate change;
- c. Promote payment for ecosystem service schemes including Reducing Emission from Deforestation and Forest Degradation (REDD+);
- d. Promote participatory land-use planning.

Strategic Objective 4: Promote low-carbon planning and technologies to support sustainable development of the country.

Strategies:

- a. Conduct sectoral analyses of low carbon emission options and sources of emission (in agriculture, energy, transportation, industrial, land-use and forest management, and solid waste management)
- b. Develop low-carbon development policies, strategies and action plans in conformity with national development priorities:
- c. Promote appropriate technology transfer for low-carbon development (e.g. improving energy efficiency, renewable energy, etc.) and facilitate their diffusion through:
 - Guidelines, technical assistance and establishment of partnerships
 - Financial and fiscal incentives
 - Carbon market mechanisms
 - Mobilizing public-private partnerships
- d. Promote low-carbon climate-resilient city development planning and develop city level coordination mechanisms (e.g. capital and provincial effective mass transport, innovative water treatment facility and landfill)
- e. Establish a system of registration for GHG mitigation projects and programs;
- f. Establish a high quality national system for GHG inventory.

Strategic Objective 5: Improve capacities, knowledge and awareness for climate change responses.

Strategies:

- a. Enhance the implementation of Article 6 of the UNFCCC on education, training, awareness, participation, and access to information of the people, and the international cooperation in the context of climate change;

- b. Strengthen existing channels for promoting awareness on climate change through service providers, government, teachers, journalists, media, religious leaders and community elders;
- c. Develop targeted awareness programmes aimed at key audiences such as most-vulnerable groups, women, children, youths and minorities;
- d. Facilitate public access to information on climate change through radio, television, newspapers, mobile and web technologies, and targeted outreach materials;
- e. Sensitize the private sector on threats and opportunities of climate change (technical support, financing, and technology transfer), and develop public-private partnerships for communication;
- f. Incorporate climate change into school curricula for all levels of education;
- g. Strengthen education quality of teachers and build capacity of planning officers on teaching and learning methodologies of climate change;
- h. Strengthen the capacity for collection, analysis, modelling and interpretation of climate data and information dissemination to various end-users, including seasonal forecasting for adaptation and community early-warning facilities for disaster risk management;
- i. Improve the national weather monitoring and forecasting systems, and develop partnerships for creating downscaled models of future climate;
- j. Develop early-warning systems and programmes for climate-related disaster management and recovery;
- k. Strengthen the role of universities in training, research and technology development by building international partnerships for climate researches;
- l. Capitalize on lessons learned, local knowledge and good practices for development of policies and actions for adaptation and mitigation;
- m. Develop a knowledge management centre for facilitating access to up-to-date information for climate change response.

Strategic Objective 6: Promote adaptive social protection and participatory approaches in reducing loss and damage.

Strategies:

- a. Promote micro-financing to facilitate access to credits by local communities for climate change response;
- b. Promote and encourage insurance schemes for reducing climate-risk and disaster burdens on society;
- c. Integrate gender into climate change response planning;
- d. Leverage the decentralization process to strengthen financial and institutional processes for local adaptation;
- e. Institute public engagement, participation and consultations as primary entry points for adaptation planning, promoting the involvement of multiple stakeholders including NGOs, community-based organizations (CBOs), youths, indigenous communities and the private sector;
- f. Promote government and private sector partnerships including corporate social responsibility.

Strategic Objective 7: Strengthen institutions and coordination frameworks for national climate change responses.

Strategies:

- a. Mainstream climate change into national and sub-national development plans and the social protection strategy;
- b. Reinforce the national institutional framework and inter-ministerial coordination in policy development;
- c. Strengthen roles and capacities of the NCCC-Secretariat for coordination of climate financing and as a national implementing entity for global climate funds;
- d. Develop a national monitoring and evaluation framework for climate change response and integrate it into the NSDP and the NSPS;

- e. Encourage all ministries to develop a sectoral climate change strategy and plan and engage in the CCCSP process.

Strategic Objective 8: Strengthen collaboration and active participation in regional and global climate change processes.

Strategies:

- a. Promote regional cooperation on climate change within inter-governmental and non-governmental mechanisms:
 - Commitments under the UNFCCC process
 - Cooperation through ASEAN
 - South-South and North-South collaboration
 - Trans-boundary initiatives e.g. Mekong River, etc.;
 - Cooperation through Clean Development Mechanism (CDM), carbon market, relevant carbon credit schemes.
- b. Strengthen the national institutional platform for coordinating consultation on national positions and responses to current and future issues for international negotiations on climate change;
- c. Reinforce negotiation skills to effectively represent Cambodia in the international climate change processes, and improve capacity for implementation of international obligations;
- d. Actively engage with regional and global initiatives and programmes for cross-learning and sharing Cambodia's experience on climate change with international communities;
- e. Secure climate funds from international funding mechanisms.

6. ACTIVITIES

The present strategic plan provides a broad framework for the implementation of the climate change responses in Cambodia. There is a need for development of action plan and relevant

mechanisms such as financing mechanism, monitoring and evaluation framework, and legal framework to implement the CCCSP and build solid foundation for mobilizing resources.

6.1. Phases for Implementation of the CCCSP

Operationalization of the CCCSP will follow phases below:

- ***In the short term*** (2013 – 2014): Institutional and financial arrangements for the implementation of the CCCSP will be put in place, together with the establishment of a national M&E framework. During this phase, detailed and prioritized action plans (2014-18) will be developed by concerned line ministries, including a specific action plan for strategic knowledge management and coordination functions;
- ***In the medium term*** (2014 – 2018): this phase continues to support what has been planned in Phase 1 but expands to include activities such as establishment of the nationally financing accreditation mechanism for Adaptation Fund and Green Climate Fund, research and knowledge-management activities, capacity development, and climate change mainstreaming at various sectoral levels, operationalization of M&E and data management, and launching a few high-priority projects/programmes in each key sector specified in the Climate Change Action Plans. Initially, more emphasis will be put on adaptation activities, but preparatory assistance will be provided to gradually scale up the mitigation component. During this phase, climate change finance for national and sub-national planning, budgeting and implementation modalities will begin and gradually increase. In addition, the Royal Government of Cambodia will establish appropriate institution with sufficient capacity and full credibility for direct access to the Adaptation Fund and Green Climate Fund;
- ***In the long term*** (2019 – 2023): This Phase will continue to focus on research and learning, but the main objectives of this phase will be to scale-up successful pilots and the achievements, and carry on the mainstreaming of climate change at national and sub-national levels. This will involve an increased use of budget support for national programmes, including implementation of climate change response measures through sub-national administrations.

More information is provided below on activities to be implemented in the short term:

Institutional Arrangements

At central level, the NCCC will have overall responsibility for the management and monitoring of CCCSP implementation with the technical support from the CCTT and administrative support from the NCCC's Secretariat.

It is necessary to review and to refine the mandate, roles and functions of the climate change institutions to reflect their specific responsibilities in the management and monitoring of the CCCSP. The NCCC's Secretariat shall legally function as an inter-ministerial body under NCCC, which has a full mandate and authority to play its cross-cutting coordination role, and it should also have the capacity and full eligibility of accreditation for global climate funds. The required legal processes will be detailed in the action plan for strategic, knowledge-management and coordination functions.

At line-ministry level, climate change focal points and/or working groups have already been established. The responsibilities of these focal points and working groups will be clarified, in particular their relationship with other line ministry departments, to ensure that the planning of sectoral policies, programmes and investments fully takes into account climate change risks and opportunities.

At the sub-national administration level, guidelines on development planning in the context of climate change will be put in place by June 2014 under the leadership of the NCCC-Secretariat. These guidelines will build on the wealth of experience generated in recent years through pilot projects, mostly at commune level. To the extent possible, these guidelines will include recommendations on collaboration between the various levels of sub-national administration (province, district/municipality and commune/sangkat), and in particular the modalities for communes to access climate change technical expertise from line departments located at the district or provincial level.

Developing Action Plans

All relevant ministries identified in the CCCSP will develop prioritized action plans and estimate cost to implement their Sectoral CCSPs, with technical and financial support from the NCCC-Secretariat. These action plans will be closely aligned with the relevant sector strategies. A specific action plan will also be developed for coordination functions, including the roles of NCCC, CCTT and the NCCC-Secretariat. Guiding principles for the development of these action plans are included in Section 6.2 below.

Developing a Climate Change Financing Framework

The financing of the CCCSP will involve a number of different funding modalities, with a mix of traditional instruments and new instruments related to climate finance. There is a need to ensure that these various modalities are properly coordinated, and that potential funding partners have a clear overview of the costs and prioritization of activities under the CCCSP. The NCCC and the CCTT will lead the formulation of a Climate Change Financing Framework, which will support a programme-based approach for the climate change responses in Cambodia.

Developing a M&E framework

A national M&E framework is under development and will be finalized by mid-2014. It will be compatible and integrated with the national M&E system. Further details on the M&E framework for this strategic plan are presented under Section 8 below.

Developing a Climate Change Legal Framework

A climate change legal framework will support the implementation of the CCCSP by mainstreaming climate change issues into related policies and core legislations. This will allow for enforcement and compliance with key policy recommendations.

6.2. Programming and Development of Action Plans

The implementation of the CCCSP will require a programme-based approach to ensure the strategic coordination and prioritization of activities. Besides using risk-based programming, activities that promote or support capitalization on opportunities and expanded benefits and co-benefits to society and systems will be encouraged. Details of the action plan are provided in

a separate document as required by the Council of Ministers. The following principles will be followed in the development of the programme, which will be based on sectoral action plans.

Timeframe

The CCCSP has a 10-year timeframe (2014-2023), with a mid-term review scheduled for 2018. The sectoral action plans (and the corresponding overall programme) will be developed for an initial phase of five years (2014-2018), in line with the national planning and M&E timeframe (NSDP 2014-2018). Action plans will use appropriate methods for prioritization and phasing, including – but not limited to – vulnerability analysis and mapping, and cost-benefit analysis.

Building on the Strategies of Line Ministries

The action plans to be included in the CCCSP programme will not be developed as stand-alone “silos” within the respective ministries. Some dedicated climate change actions will be required, but most actions will be related to existing investment portfolios within the ministries. In all cases, the action plans will be closely integrated within the standard planning and management arrangements of concerned ministries. This will include the reflection of climate change related actions in the budget process and the development of climate sensitive indicators in sectoral M&E frameworks.

Cross-cutting Issues

Programming under the CCCSP will also target common issues shared by all sectors such as gender, social protection, research, education, awareness and communication, M&E, climate financing and knowledge management.

Integrated Programming

Due to the cross-cutting nature of climate change, integrated programming is critical to capitalize on interdisciplinary, multi-sectoral, multi-stakeholder and multidimensional approaches in programming response actions. All concerned ministries and agencies will be asked to consider links with other sectors when developing their action plans, and the NCCC-Secretariat will provide dedicated support to review these links.

Partnerships

It is important to recognize that development partners, NGOs (both international and national), the private sectors and local communities and organizations are important actors in the downstream implementation of climate change activities, as well as in research and development and learning associated with climate change. While this strategic plan is a government document focusing on the use of public resources, it is essential that these resources are used to catalyse broader action and responses to climate change from other actors. Government agencies will be encouraged to engage all relevant partners in the development of their action plans, and to identify partnerships in their action plans.

7. FINANCING RESOURCES

7.1. Principles

The CCCSP, together with the related action plans, will provide a strategic framework for the programming of climate change interventions in Cambodia. National climate change financing mechanisms shall support this strategic approach through the application of the following principles:

- **Alignment with national priorities:** The use of financial resources shall respond to national priorities through funding programmes and projects identified in action plans under the CCCSP. All proposed climate change financing shall be subject to NCCC review and approval.
- **Pooling resources:** In order to minimize transaction costs, climate change finance shall be provided whenever possible through pooled funding mechanisms. These include any existing pooled funding mechanisms in relevant sectors, and the possibility of a dedicated climate change fund.
- **Use of national systems and procedures:** The RGC's preferred modality for climate change financing over the medium to long-term is direct budget support. However, as climate change is a relatively new field, a transitional period will be required to put in

place adequate monitoring, evaluation and financial tracking systems to effectively assess the impact and efficiency of climate change budget support. A national climate fund maybe set up to receive domestic and external financial support and allocate it to high priority climate change projects.

- **Subsidiarity:** While climate change financing will need to be coordinated by the NCCC to ensure alignment with national priorities, financing mechanisms shall ensure that the resources are managed by the most qualified line ministries or local governments. The NCCC-Secretariat shall act as implementer only for strategic or cross-cutting projects, which do not naturally fit within the mandate of another line ministry or sub-national administration.

7.2. Approach

The development of a climate change financing framework for Cambodia will require a number of steps. A Climate Public Expenditure and Institutional Review (CPEIR) was conducted in 2012 and provided initial information on the current status of climate change expenditures in Cambodia, and associated capacity challenges.

The CPEIR estimated that over the period 2009-2011, an average 15.8 % of public expenditures were relevant to climate change. This is a fairly high level compared to other countries in the region. Climate financing should aim not only at attracting new resources, but also at improving the efficiency and effectiveness of these already significant climate-related expenditures. These existing funds are not always well coordinated, as they come mostly through sector-specific projects (60 %), and their interventions are not systematically assessed from a climate change perspective. Dedicated climate change funding, either from bilateral/multilateral donors or through global climate funds, represents only 40 % of the total. Within the coming years, it is expected that the share of dedicated climate change finance will grow. This is an opportunity for Cambodia as these funds can, in principle, be allocated to priority sectors and programmes, as defined in this CCCSP. Some projects will continue to be funded through traditional channels, but pooling mechanisms could be put in place to fund high relevance projects (including institutional capacity development on climate change), top-up existing projects which require

climate-proofing, and continue to pilot innovative approaches to climate change adaptation and mitigation.

Public funding through sub-national administrations is still relatively small at the moment (5 to 6 % of total state expenditure), but very important for climate change adaptation initiatives, which need to provide support for better climate resilience at the community level. Future financing mechanisms should include appropriate procedures and instruments to mainstream climate change in sub-national planning and budgets.

It will be important to regularly monitor the evolution of climate change expenditures and their alignment with CCCSP and NSDP priorities, as well as their efficiency and effectiveness. Regular reviews will be conducted to update information obtained from the initial CPEIR, and mechanisms to mainstream climate change in the national budget process will be established.

In 2014, the following actions will be taken to put in place a credible, attractive and effective climate change financing framework for Cambodia:

- An analysis of resource mobilization opportunities (domestic and external), both at the national level and in priority sectors;
- A costing of the CCCSP and Sectoral CCSPs, with prioritization of high relevance projects;
- A costing of the socio-economic impacts of non-action and net benefits of various response scenarios, in order to provide a basis for prioritization of expenditures per sector/sub-sector;
- An analysis of best national practices and relevant international practices in the management of pooled funding arrangements, and recommendations on proposed arrangements for national and sub-national climate finance mechanisms;
- An analysis of capacity gaps and recommendations to develop national and sub-national capacities to manage the proposed climate change finance mechanisms. This should also include recommendations for further work on possibilities to mobilize private finance, particularly for mitigation activities.

This will lead to the establishment of a programmatic framework, based on action plans in priority sectors, and aligned with the NSDP 2014-2018.

7.3. Management and Institutional Arrangements for Implementation

The Climate Finance sub-group of the CCTT is composed of the Ministry of Economy and Finance, Ministry of Environment, Ministry of Planning, Council for the Development of Cambodia / Cambodia Rehabilitation and Development Board (CDC/CRDB) and the National Committee for sub-national Democratic Development Secretariat (NCDD-S). This group shall lead the development of a national climate change financing framework, to be submitted to the NCCC by 2014.

While the exact financing mechanisms remain to be determined, it is clear that domestic finance and the three main external sources of climate finance (global climate funds, bilateral climate funds, and climate change related activities integrated in traditional sector projects) will need to be coordinated and aligned with the CCCSP. Coordination between “vertical” projects and pooled funding mechanisms will also be required.

As per CDC/CRDB policy, the RGC’s preferred approach to manage these various modalities is the adoption of a programme-based approach (PBA). The NCCC will put in place appropriate structures for the management of a Climate Change PBA, including a structure for dialogue and coordination with donors. This PBA will accommodate various modalities of financing, but it will provide a single engagement point and framework for coordinated planning, and M&E of climate change related interventions in Cambodia. The NCCC-Secretariat shall act as the secretariat for this PBA. Coordinated capacity development support will be required to establish these mechanisms.

8. MONITORING AND EVALUATION

The impacts of climate change on ecosystems and society are complex; addressing them through adaptation requires a coordinated response across multiple sectors and scales. Establishing a low-carbon development path and contributing to mitigation efforts requires

new technologies and cross-cutting policies. Given the complexity of these actions and the technical issues associated with evaluating their effectiveness and impacts, M&E of mitigation and adaptation responses poses a new set of challenges. The CCCSP recognizes the importance of addressing these challenges by establishing a national framework for M&E of climate change, with the vision of integrating the framework into the national and sub-national development planning processes. Developing and mainstreaming the M&E framework will be a long-term effort of strategic relevance, as it will create an enabling environment based on accountability and learning. Improved accountability will facilitate access to new international climate finance and learning from investments will generate new knowledge critical for future policy development. The aim of the national framework for M&E of climate change is to:

- measure to what extent adaptation efforts have been effective in keeping development on track in a changing climate;
- monitor climate change mitigation actions and low-carbon development policies;
- generate evidence and lessons as a basis for future policy development;
- facilitate the coherent integration of M&E of climate change in national development planning and key sectors;
- provide the information required to fulfil the reporting obligations towards the UNFCCC and development partners.

8.1. Principles

The principles that underpin the framework are:

- **Using national systems and procedures:** The framework will be integrated with the National M&E System. Indicators and monitoring procedures will rely as much as possible on data currently monitored by relevant line ministries. They will also be compatible with the guidelines of the Ministry of Planning for the National M&E System. The framework will systematize and build on the on-going initiatives for monitoring and reporting of GHG emissions.
- **Mainstreaming M&E of climate change in national, sectoral and sub-national development planning:** Climate change can potentially undermine the achievement of

the development targets set in NSDP and sector development strategies. Procedures and indicators for tracking climate change responses will be integrated in the National M&E System and will constitute the reference for tracking the effectiveness of climate change sectoral strategies and action plans at national and sub national levels.

- **Strengthening accountability, equity and transparency:** The framework will provide a way for measuring to what extent resources have been efficiently and effectively used to achieve the targets set in policies and action plans, thus improving accountability towards civil society and international funding resources.
- **Promoting participatory learning:** Developing climate change response policies and measures is a relatively new endeavour in Cambodia and globally. Generating a solid evidence base of what policies and measures have proven to be effective is therefore essential to inform future policymaking. The framework will hence focus on generating knowledge through participatory approaches and will support identification and sharing of lessons learned.
- **Addressing gender issues:** women and disadvantaged groups are often among those more severely affected by climate change impacts. The framework will address gender equality, gender sensitive performance in climate change response and gender mainstreaming in climate change response.

8.2. Approach

The national climate framework for M&E of climate change response will be developed referring to international best practices. A concept note will be prepared to quantify and mobilize the resources required for fast-starting the development of the framework. The framework will be developed by 2014 and will include: a theory of change, an indicators framework with baseline and targets for tracking CCCSP and the related action plan, procedures for data collection, guidelines for analysis and reporting, guidelines for integration of knowledge management, learning and sharing of results, guidelines for integration within M&E systems of line ministries, and detailed institutional arrangements and coordination mechanisms.

The indicators framework will include two categories measuring institutional response for climate change management and development performance in a changing climate:

- **Upstream indicators**, tracking effectiveness of climate risk management: this will include indicators related to the institutional framework, mainstreaming of climate change in policies and planning processes, climate financing, capacities of institutions, equity and transparency, and engagement of stakeholders and the private sector.
- **Downstream indicators**, tracking changes in the development situation, emissions, and climate vulnerability of communities and eco-systems. The indicators will include national development statistics, indicators aggregated from sectors and individual adaptation and mitigation projects; results will have to be assessed alongside climate trends and incidence of climate extremes.

A set of indicators for inclusion in the NSDP will also be identified. A plan outlining activities, capacity development and costing for long-term implementation and mainstreaming of the framework within line ministries will be prepared.

In the medium term (2014-2018) the framework will be operationalized at sectoral level by priority line ministries and projects, selected depending on capacities and resources available. Integration in local planning will be pilot tested. Adequate resources will be front-loaded in the selected projects to cover additional costs for specialized technical capacities in M&E of climate change, collection of baselines, and development of theories of change, learning and knowledge management.

During this phase, a network of sites for long-term monitoring will be established for assessing the effectiveness and sustainability of adaptation and mitigation measures tested through pilot projects. The sites will be identified in vulnerability hotspots, such as critical ecosystems, and in areas where pilot interventions have shown promising results. This system will generate evidence that will be stored in a national database of approaches and technologies, which will be managed by the NCCC-Secretariat in coordination with line ministries and development partners.

In the long term (2019-2024) the framework will be revised based on the lessons emerging during the piloting phase, and mainstreamed in the remaining line ministries and in sub-national and local planning.

8.3. Management and Institutional Arrangements for Implementation

The NCCC-Secretariat shall act as the secretariat for coordinating the development and implementation of the framework. The secretariat will also be responsible for producing the CCCSP annual progress report, in coordination with the NSDP annual progress review. A unit in charge of M&E will be established within the secretariat. A coordination mechanism within the Ministry of Planning will be established for the integration of the framework within the M&E system of NSDP.

An M&E sub-group of the CCTT shall be established to coordinate data exchange and the mainstreaming of the framework within line ministries. Indicators, procedures and responsibilities for data collection will be agreed with the concerned line ministries, the National Institute of Statistics, and other parties interested in actively engaging in the process.

A partnership with research institutions and academia for managing the network of sites for long-term monitoring will be explored. This arrangement could also be used for organizing ad hoc evaluation studies of adaptation and mitigation effectiveness based on the data generated by the network.

9. CONCLUSION

The Royal Government of Cambodia welcomes the CCCSP as a continuation of national policy response, in providing a framework for climate change responses and guiding the transition to low-carbon, climate resilient development. The CCCSP supports national preparedness in responding to climate risks and disaster management, and in capitalising on emerging opportunities such as green growth, mobilizing climate funds from bilateral and multilateral sources, and enhancing effective participation in international dialogues and negotiations on climate change, both at regional and global levels.

The CCCSP will enhance the ability to address climate impacts on national development processes through a coordination of efforts to reduce the vulnerability of people and natural systems that support livelihoods and drive national economic growth and prosperity. The implementation of the CCCSP will strengthen national capacity, raise awareness and inform decision-making processes using actionable knowledge, developed through the implementation of priority actions, in providing evidence-based information and learning pathways for sustainable solutions. Partnership building and public-private sector engagement will constitute the platform for active participation and mobilization of resources for the implementation of the strategy.

ANNEX

Annex 1. Mapping the Sectoral CCSP objectives to the strategic objectives of the CCCSP

Alongside the development of CCCSP, selected ministries developed their sectoral climate change strategic plans (Sectoral CCSPs). Measures were taken for alignment between the CCCSP at the national level and the sectoral strategies during the development process, and establishing the relationship between the strategies in avoiding duplication, as they target different levels of application. The strategic objectives of the CCCSP were formulated in part based on the strategic objectives of the Sector CCSP. The line ministries included: Ministry of Environment (MOE) Ministry of Agriculture, Fisheries, and Forestry (MAFF); Ministry of Industry, Mines and Energy (MIME); Ministry of Education, Youth and Sport (MOEYS); Ministry of Health (MOH); Ministry of Women's Affairs (MOWA); Ministry of Water Resources and Meteorology (MOWRAM); Ministry of Public Works and Transport (MPWT); Ministry of Rural Development (MRD); and the National Committee for Disaster Management (NCDM).

Table 1: Mapping the Sectoral CCSP objectives against the CCCSP strategic objectives

1. Promote climate resilience through improving food, water and energy security	
MOE	- Promote and engage participation of stakeholders and sectors in identification of climate change response measures. - Strengthen coordination mechanism for coherent policy response to climate change. - Increase capacity for identification of opportunity resulting from climate change in the agricultural production system, ecology, and protected areas. - Facilitate businesses and industries that respond to carbon market opportunity for trade and green investment. - Management solid waste and waste water through integrated approach in the Capital, towns, populated areas, and management of animal waste. - Integrate climate change in the Environmental Impact Assessment process.
MAFF	- Enhance GHG emission reduction from deforestation and forest degradation, animal and crop production. - Promote renewable energy (biomass and biogases) consumption, efficiency and proper agriculture technology usage.

MIME	• Resource mobilization through technical and finance support.
MOH	• Improve health care infrastructure and capacity of health personnel to cope with vector-borne and water-borne diseases in the context of climate change.
MPWT	• Improve petroleum-based fuel.
MRD	• Support adaptation to climate change through creating local business opportunities that focus on micro-credit provision for socioeconomic development.
2. Reduce vulnerability of sectors, regional, gender and health to climate change impacts	
MOE	• Use of results of the existing vulnerability and risk assessment, and conduct new study and assessment as necessary. • Promote implementation of adaptation measures at the community level, including strengthening partnership among the government, the development partners, the civil society, and the private sector. • Enhance forest ecosystem, flooded forest ecosystem, coastal ecosystem and natural protected areas.
MAFF	• Improve the use of new technologies on animal and crop production by vulnerable farmers. • Improve the effectiveness of interventions on rescue and damage restoration. • Improve the efficiency of fishery sector management. • Enhance community fisheries management. • Promote natural rubber production in a sustainable way by focusing on adaptive measures, and mitigate climate change. • Promote animal production development and protect animal health in sustainable ways.
MIME	• Integrate the gender concept into Sectoral CCSP.
MOEYS	• Strengthen the quality of teacher education and training of education planners for teaching and learning methodologies for climate change. • Build schools that respond to climate change adaptation and disaster risk management.
MOWA	• Develop criteria based on the findings of vulnerability and adaptation analyses for prioritizing women's needs for climate change adaptation and mitigation actions.

MOWRAM	Introduce technologies in water work development and rehabilitation in order to respond to the negative impacts of climate change.
MPWT	Promote capital-intensive urban transport infrastructure development and planning.
MRD	- Strengthen the quality of rural infrastructure (roads, irrigation, wells and culverts) to be resilient to flood and drought. - Create policies and study profiles to make rural infrastructure development (roads, irrigation schemes, wells, ponds and bridges) resilient to climate change.
NCDM	- Increase attention on risk. - Promote the early warning system.
3. Ensure climate resilience of critical ecosystems (Tonle Sap Lake, Mekong River, coastal ecosystems, highlands etc.), biodiversity, protected areas and cultural heritage sites	
MOE	- Strengthen biodiversity conservation and rehabilitation of ecosystem affected by climate change. - Encourage and promote community-based solutions, ecosystem-based solutions and ecotourism as effective way in response to climate change. - Promote payment for ecosystem services (PES), including REDD+.
MAFF	- Encourage conservation and management of forest resources in a sustainable manner. - Promote the development and improved efficiency of fisheries sector management. - Improve forest ecology and flooded forest protection. - Promote forest conservation and management in a sustainable way. - Promote management and conservation of fisheries and aquaculture in a sustainable way.
MoWRAM	Develop long-term water resource integrated planning, providing the best chance of minimizing the negative effects of sea-level rises.
4. Promote low-carbon planning and technologies to support sustainable development of the country	
MOE	- Study and analyse the GHG mitigation options and sources of GHG. - Develop policy, legal framework, and action plan for low-carbon development

	to be consistent with the national development priorities. • Promote transfer of appropriate technologies for low-carbon development.
MAFF	• Enhance GHG emission reduction from deforestation and forest degradation, animal and crop production and primary production.
MIME	• Support and establish laws, policies, technical guidelines and technical manuals regarding climate change impacts on manufacturing, industrial and energy sectors.
MPWT	• Enhance inspection and maintenance of vehicles. • Promote public transport in major cities. • Efficient and proven transport technology for mitigation and low-carbon development. • Promote efficient driving.
5. Improve capacities, knowledge and awareness for climate change responses	
MOE	• Strengthen implementation of Article 6 of the UNFCCC • Strengthen existing channels for promoting awareness on climate change. • Sensitize the private sector on threats and opportunities of climate change, and develop public-private partnerships for communication. • Strengthen the capacity for collection, analysis, modelling and interpretation of climate data and information dissemination to various end-users. • Capitalize on lessons learned, local knowledge and good practices for development of policies and actions for adaptation and mitigation. • Develop a knowledge management centre for facilitating access to up-to-date information for climate change response.
MAFF	• Improve human and institutional capacity on new technology on crops, rubber, animal production, forestry and fisheries that have adaptive capability to drought, flood, temperature rise, seawater intrusion and destruction from insects and disease. • Enhance extension services on technology transfer for food safety. • Promote research and aquaculture of all kinds. • Promote human resource development essential to contribute to adaptation and the reduction of impacts on crop production, rubber, animal, forest and

	fishery resources. • Provide educational training on information dissemination, transfer and sharing • Develop capacity on using proper technology that does not affect public health. • Develop capacity on using proper technology that does not affect public health (animal production). • Enhance capacity on climate change understanding (fisheries).
MIME	• Strengthen human resource capacity, skills, experiences and institutional development. • Develop and promote communication, information-sharing and strategies that are environmentally sound and green, regarding manufacturing, industry and energy. • Encourage the establishment of research and technology development.
MOEYS	• Improve education policies, analyses, research and planning for climate change. • Strengthen the quality of teacher education and training of education planners for teaching and learning methodologies for climate change. • Conduct curriculum training on adaptation, disaster risk management and resilience to climate change. • Raise awareness on climate change and enhance non-formal education programmes through media, networking and partnerships.
MOH	• Improve healthcare infrastructure and capacity of health personnel to cope with vector-borne and water-borne diseases in the context of climate change • Improve knowledge and research capacity on health impacts and vulnerability to climate change as an information base for mainstreaming climate change into the health strategic planning of MOH, and other sector planning.
MOWA	• Increase the level of awareness of public policymakers on the importance of gender equality in climate change adaptation and mitigation, to achieve sectoral goals in climate change. • Enhance national capacities to plan, implement and monitor gender-integrated climate change adaptation and mitigation initiatives.
MOWRAM	• Mainstream awareness and knowledge on climate change related to water resources management and development to all water-related sectors'

	development aspects at local, provincial and national levels through TV spots, radio and media campaigns. • Build staff capacity on water resources/climate change through long-term studies, short-course trainings and exchange study tours in and out of the country and the region. • Strengthen the capacity of local farmers, especially FWUC members, on the selection of less-water crop varieties, and the planning of a less-water crop system for climate change adaptation. • Establish a data management system for collecting and sharing data and information on water resources-related climate change issues and adaptation/mitigation capacity to related stakeholders. • Establish and/or improve networks for meteorology and hydrology to manage and control, for example, the impacts of temperature, rainfall, flood, drought and weather. • Build a reliable and predictable meteorological service. • Improve human resource capacity at national and provincial levels to meet the requirements of a high-quality meteorological information service provider. • Set up a national early warning system, and provide information related to air pollution.
MPWT	• Raise public awareness about climate change caused by GHG emissions from the transport sector.
MRD	• Support adaptation to climate change through increasing rural awareness about the concepts of climate change and response options. • Provide capacity development to village development committee members on climate change adaptation and mitigation options, and use other scientific knowledge which can be adapted for use by local people (primary health care, water sanitation, research results dissemination and community development)
NCDM	• Build disaster resilience and climate change adaptation capacity at all levels through education.
6. Promote adaptive social protection and participatory approaches in reducing loss and damage	
MOE	• Leverage the decentralization process to strengthen financial and

	institutional processes for local adaptation. • Institute public engagement, participation and consultations as primary entry points for adaptation planning, promoting the involvement of multiple stakeholders including NGOs, community-based organizations (CBOs), youths, indigenous communities and the private sector. • Enhance public-private sector partnerships including corporate social responsibility. •
MIME	• Encourage and motivate the private sector's participation into SCCSP. • Integrate the gender concept into SCCSP.
MOWA	• Increase women's participation in climate change policy making. • Establish funding rules for gender and climate change initiatives and make operational through gender-responsive budget in the current and upcoming projects/programmes/policies (both external and national sources). • Identify effective mechanisms for scaling up the proven experiences on gender and climate change. • Elicit and analyse lessons and best practices of gender and climate change for sharing and learning in national, regional and global forums.
MOWRAM	• Strengthen the capacity of local farmers, especially FWUC members, on the selection of less-water crop varieties, and the planning of a less-water crop system for climate change adaptation
MRD	• Support adaptation to climate change through creating local business opportunities that focus on micro-credit provision for socioeconomic development.
NCDM	• Link Climate Change Adaptation and Disaster Risk Reduction.
7. Strengthen institutions and coordination frameworks for national climate change responses	
MOE	• Reinforce the national institutional framework and inter-ministerial coordination in policy development. • Strengthen the role and capacity of NCCC-Secretariat.

	• Develop a national monitoring framework for climate change. • Encourage all ministries to develop a sectoral climate change strategy and plan.
MIME	• Strengthen human resource capacity, skills, experiences and institution development. • Mobilize resources through technical and financial support.
MoEYS	• Improve education policy, analyses, research and planning for climate change.
MOWA	• Enhance national capacity to plan, implement and monitor gender-integrated climate change adaptation and mitigation initiatives.
MOWRAM	• Mobilize and secure financial resources for programmes/projects, research and development on water resources-climate change adaptation or mitigation, from both government agencies and development partners. • Strengthen cooperation and coordination mechanisms among different sector agencies at local, national, regional and international levels, applying IWRM aspects to the climate change adaptation and/or mitigation response.
MPWT	• Shift long-distance freight movement from truck to train.
8. Strengthen collaboration and active participation in regional and global climate change processes	
MOE	• Promote regional cooperation on climate change within inter-governmental and non-governmental mechanisms. • Strengthen the national institutional platform for coordinating consultation on national positions and responses to current and future issues for international negotiations on climate change. • Reinforce negotiation skills to effectively represent Cambodia in the international climate change processes, and improve capacity for implementation of international obligations. • Actively engage with regional and global initiatives and programmes for cross-learning and sharing Cambodia's experience on climate change with international community.

	Secure climate funds from international funding mechanisms.
MOWRAM	- Strengthen cooperation and coordination mechanisms among different sector agencies at local, national, regional and international levels, applying IWRM aspects to the climate change adaptation and/or mitigation response - Extend climate networking nationally and internationally
MPWT	Enhance traffic management

Annex 2. Mapping the Priorities of NASDP Update (2009-2013) against the Strategic Objectives of the CCCSP

NSDP Update (2009 – 2013) Climate Change Priorities	Strategic Objectives of CCCSP
• Prepare a national strategy and action plan for climate change	
• Promote and coordinate the mainstreaming of climate change in concerned sectors	1. Promote climate resilience through improving food, water and energy security
• Promote the implementation and update of the National Action Programme on climate change adaptation	2. Reduce sectoral, regional, gender and health vulnerability to climate change impacts
	3. Ensure climate resilience of critical ecosystems (Great Lake, Mekong River, coastal ecosystems, highlands etc.), biodiversity, protected areas and cultural heritage
• Further identify and foster the implementation of clean development mechanism and green-house gas reduction projects	4. Promote low carbon planning and technologies to support sustainable development of the country
• Decentralize the preparation of inventory of green-house gas and set up a database management system	
• Educate and inform the public on climate change	5. Improve capacities, knowledge and awareness for climate change response
	6. Promote adaptive social protection and participatory approaches in reducing loss and damage
• Strengthen the capacity of the Secretariat of the National Committee for Climate Change Management	7. Strengthen institutions and coordination frameworks for national climate change responses
• Promote the establishment of a national fund for climate change	
• Continue preparing a Second National	

Report under the United Nations Framework Convention on Climate Change	8. Strengthen collaboration and active participation in regional and global climate change processes
• Mobilize resources and support to deal with climate change problems	