

**KINGDOM OF CAMBODIA**

**NATION RELIGION KING**

**MINISTRY OF EDUCATION YOUTH AND SPORT**

# **Climate Change Action Plan for the Education**


**Phnom Penh, January 2014**

## Preface

Education is regarded by each country in the world as an important field in ensuring the development of human capital to meet national needs. Societies and nations need continuous human capital development. In this regard, the Royal Government of Cambodia (RGC) has integrated education into the socio-economic development plan by 2015. Under the Rectangular Strategy, RGC considers that "Education is a priority" in terms of national development. Improvement of quality and efficiency of education is at the core of the efforts to develop this sector.

Currently, climate change is one of the greatest social, economic and environmental challenges facing the globe. Climate change affects people across the world. Likewise, climate change is likely to affect the effectiveness of the Cambodian education sector as Cambodia is vulnerable to impacts of climate change. In response, the Ministry of Education Youth and Sport has developed **the Climate Change Action Plan for the Education** to achieve the goal of CLIMATE CHANGE STRATEGIC PLAN FOR EDUCATION in field of adapting to climate change for sustainable development, in coping with extreme weather events and threats to rural livelihoods, especially rural-urban migrations as well as Education for all.

In this regard, the Ministry of Education Youth and Sport has reexamined and integrated the concept of the Climate Change Education in the school curriculum.

**The Climate Change Action Plan for the Education** is expected to be a useful resource for teachers, school directors, educational officers, parents, scientists, researchers and other stakeholders. To ensure effective implementation, the Ministry of Education Youth and Sport looks forward to close cooperation with all educational institutions, local communities, Non-Governmental Organizations (NGOs), International Organizations (IOs) and other stakeholders. 



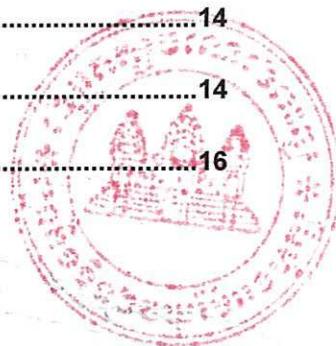
2014

**Im Koch**

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## I. Background

Climate change can threaten the overall outcome of poverty reduction, sustainable development and the Education for All. The Royal Government of Cambodia acknowledges the crucial role of education in improving knowledge and skills for better living standards, attaining sustainable development and effective response to climate change. The Climate Change Action Plan for Education (CCAPE) is designed to provide an integrated framework of concrete actions to contribute to the achievement of the goals and objectives of the Climate Change Strategic Plan for Education (CCSPE) and the Education for All National Plan 2003-15. The CCAPE will improve capacity and knowledge of the public by integrating climate change courses and training programs in both formal and non-formal education taking into consideration gender disparity and inequality in education. CC courses and training programs of good quality will be developed based on the need of the sectoral institutions, the general population and the private sector in addressing CC adaptation and mitigation efforts. This first CCAPE adopts the short and medium term actions with five years implementation consistent with NSDP cycle.

### a. Policy

The RGC goal for education is to achieve a holistic, high quality and ethical education for all Cambodia's young people in order to develop a knowledge-based society able to compete on the world stage.

To achieve the above vision, the Ministry of Education, Youth and Sport (MoEYS) has the mission of leading, managing and developing the education, youth and sport sector in Cambodia by responding to the socio-economic and cultural development needs of its people in the context of the realities of regionalization and globalization.

To contribute to sustainable development and address the challenge of climate change, MoEYS has embedded climate change education into its Education Strategic Plan through the Climate Change Strategic Plan (CCSP) for education.

This CCAPE is the instrument for converting the strategies outlined in the CCSP for Education into practice. The CCAPE has been developed following the recent adoption of the Cambodia Climate Change Strategic Plan (CCCSP), the Climate Change Strategic Plan for Education (CCSPE) and the Education Strategic Plan, 2014-2018. It has been prepared in response to the growing climate change risks and impacts on the Cambodian education sector and is in line with key national planning strategies such as the Government Rectangular Strategy in Rectangle IV: Capacity Building and Human Resources Development, Side 1: Strengthening the Quality of Education, National Green Growth Roadmap Master Plan (2010), Reducing Disaster Risk document (2010), Administering on Disaster Risk document (2011), Climate Change and Clean Development document (2010).

In response to the need to address climate change, the MOEYS has established the following vision, mission and goal.

**The Vision for the education sector** is to develop quality climate change education for sustainable development in Cambodia.

**The Mission for the MoEYS** will be to lead, manage and develop the education sector in responding to climate change adaptation and mitigation.

**This will be done through** building the capacity of teachers, students and communities on Climate Change Education by increasing understanding of Climate Change adaptation and optimizing mitigation opportunities for sustainable development.

To achieve the above, MoEYS has already started to include climate change-related education (CCE) into the National Curriculum by integrating environmental education into primary and secondary text books, and Cambodian higher education, focusing on the two main themes:

- the improvement of the quality of education of students and communities by educating them about climate change impact, disaster risk, adaptation and resilience to climate change; by encouraging teachers, students and communities to engage with CCE activity in order to protect against deforestation, air pollution and water resource degradation and through active social awareness;
- the promotion of community participation by the encouragement of teachers, students and communities engagement in directly improving climate change education (CCE) thereby strengthening the nation's knowledge and resilience to climate change.

#### **b. Situation**

Climate change may affect the education sector directly resulting from increased frequency and/ or severity of extreme weather events, and through a range of socio-economic impacts. Extreme weather events may lead to damage of educational and other infrastructure, causing temporary or more lasting disruption in the provision of educational services. For example, the 2013 floods caused the close-down of more than 500 schools throughout the country.

More indirectly but perhaps more significantly, the socio-economic impacts of climate change may reduce educational achievements and the performance of the education system. Flood, drought and storm impacts may lead to increased school dropout rates or to an increase in the number of days in which children and teachers do not attend schools. For instance, children may be required to spend more time travelling to school, or fetching scarce water and fuel wood, or assisting in agricultural work or to seek other work under conditions of reduced agricultural production/increased precariousness of livelihoods. Malnutrition caused by flood or drought, which is known to impair concentration and learning capacity (and if suffered over long periods during childhood, can impair mental development), may adversely impact on children's performance at school. The increased morbidity caused by changes in water quality and availability and changes in the seasonality and range of disease vectors, etc. may both reduce school attendance by pupils and teachers and adversely impact on children and student learning performance.

Climate change may create conditions of physical insecurity in which the provision of educational services and/or school attendance becomes difficult or impossible. Finally, increase in the frequency and/or intensity of extreme weather events and threats to rural livelihoods, may increase rates of migration, especially rural-urban migration. The resulting population increases in urban areas and in



particular in urban slums, may put unbearable stress on already insufficient public educational infrastructure and human resources.

The main role of the education sector in reducing climate change impacts will be to build knowledge and awareness of climate change and its impacts, for teachers, students and citizens. They can then prepare themselves for extreme weather and also make appropriate decisions in their daily personal and business lives about energy sufficiency, cleaner and renewable energy, thereby contributing to reduce GHG emission reduction.

MOEYS' initiatives to address climate change have been limited so to curriculum development. Since 1996, the MoEYS has integrated in the National Curriculum for primary, secondary, and higher education levels, while general climate change concept is gradually mainstreamed in the text books for primary and secondary schools. No Climate Change Courses are provided at the bachelor degree or higher.

### c. Priority Areas

The education mission for climate change is based on the establishment of different learning modules on *Climate Change, Environmental Education, Natural Disaster Preparedness and Response* and *Training-of-Trainers on Climate Change*. And based on the sector CCSP and in line with the Education Strategic Plan 2014-2018, four prioritized areas for climate change education have been identified.

- education policy and planning for building resilience capacity in order to respond to climate change issues.
- education quality on climate change subjects for formal education
- awareness raising and mainstreaming climate change in non-formal education
- green concepts and climate-proofing of schools, universities and education facilities

## II. Strategies

Based on the priority issues, the following education sector climate change strategies have been identified:

Strategy 1: Improve education policy and planning for building resilience capacity to respond to climate change issues.

Strategy 2: Improve education quality on climate change subjects for formal education

Strategy 3: Promote awareness raising and mainstreaming climate change in non-formal education

Strategy 4: Promote green concepts and climate-proofing of schools, universities and education facilities

### III. Action Plan

#### a. Summary of Scope of Planning

The climate change action plan for education sector focuses on capacity building and sensitization on climate change adaptation and mitigation for education officers, teachers and students through policy development, research, training, curriculum development and green growth concept. The intended results will be a resilient society to climate change and green growth and low carbon development.

#### b. Action plan Matrix

**Strategy 1: Improve education policy and planning for building resilience capacity to respond to climate change issues.**

1. Developing educational policy, analyses, research and planning for climate change adaptation and mitigation.
2. Strengthening capacity of the relevant departments under MoEYS for planning and monitoring of education effectiveness related to climate change;
3. Promoting university and centres of excellence for delivering climate change courses and research.

**Strategy 2: Improve education quality on climate change subjects for formal education**

4. Upgrading curriculums and training methodologies, including libraries, to include climate change subjects for primary and secondary schools.

**Strategy 3: Promote awareness raising and mainstreaming climate change in non-formal education**

5. Upgrading curriculum to include climate change for non-formal education and Buddhism schools.

**Strategy 4: Promote green concepts and climate-proofing of schools, universities and education facilities**

6. Promoting climate proofing and retrofitting of existing and planned schools and universities infrastructure.
7. Integration of green growth concept and low-carbon development in school and university building and design.

Table 1. Scoring of Actions

MoEYS Actions	Effectiveness			Co-benefits			Feasibility		
	Reduced costs of climate risk	Cost per beneficiary	Mitigation cost effectiveness	Economic	Social	Environmental	Political commitment	Capacity	Easy to implement
	-1 – 3	0 – 3	-1 – 2	0 – 2	0 – 2	0 – 2	Green/Yellow/Red		
1- Developing educational policy, analyses, research and planning for climate change adaptation and mitigation.	2	2	2	2	2	2	Y	Y	G
2- Strengthening capacity of the relevant departments under MoEYS for planning and monitoring of education effectiveness related to climate change.	3	2	1	1	1	2	G	Y	G
3- Promoting university and centers of excellence for delivering climate change courses and research.	2	1	2	1	2	2	Y	Y	Y
4- Upgrading curriculums and training methodologies, including libraries, to include climate change subjects for primary and secondary schools	3	3	1	1	2	2	G	Y	G
5- Upgrading curriculum to include climate change for non-formal education and Buddhism schools	2	2	2	2	2	2	Y	Y	G
6- Promoting climate proofing and retrofitting of existing and planned schools and universities infrastructure.	3	1	0	1	2	2	G	Y	Y
7- Integration of green growth concept and low-carbon development in school and university building and design.	3	2	1	2	1	2	G	Y	G



Table 2: Planning Matrix

Action Number	MOEYS Actions	Estimated budget (USD'000)					
		(note: present costs to the nearest 1000 USD)					
		2014	2015	2016	2017	2018	Total
	Strategy 1: Improve education policy and planning for building resilience capacity to response to climate change issues.						
1	Developing educational policy, analyses, research and planning for climate change adaptation and mitigation.	400	100	100	100	100	800
2	Strengthening capacity of the relevant departments under MoEYS for planning and monitoring of education effectiveness related to climate change.	100	400	400	0	0	900
3	Promoting universities and centres of excellence for delivering climate change courses and research.	250	800	800	800	600	3,250
	Strategy 2: Improve education quality on climate change subjects for formal education						
4	Upgrading curriculums and training methodologies, including libraries, to include climate change subjects for primary and secondary schools	500	700	400	200	200	2,000
	Strategy 3: Promote awareness raising and mainstreaming climate change in non-formal education						
5	Upgrading curriculum to include climate change for non-formal education and Buddhism schools	200	300	150	150	150	950
	Strategy 4: Promote green concepts and climate-proofing of schools, universities and education facilities						
6	Promoting climate proofing and retrofitting of existing and planned schools and universities infrastructure.	400	400	400	400	350	1,950
7	Integration of green growth concept and low-carbon development in school and university building and design.	150	150	150	150	150	750
	<b>Grand Total</b>	<b>2,000</b>	<b>2,850</b>	<b>2,400</b>	<b>1,800</b>	<b>1,550</b>	<b>10,600</b>
	<b>Ceiling</b>	<b>2,000</b>	<b>2,000</b>	<b>2,000</b>	<b>2,000</b>	<b>2,000</b>	<b>10,000</b>

### c. Implications for Expenditure in the Ministry

Total public expenditure under the Ministry's portfolio amounted to 1,150.6 billion riels in 2012 (approx. 287.7 million USD)<sup>1</sup>. This included 1,008.6 billion riels (252.2 million USD) through the national budget (including sector budget support), and 142 billion riels (35.5 million USD) through off-budget support.

Of this total, only 400 million riels (approx. 100,000 USD) have been identified as directly climate related in 2012<sup>2</sup>. The proposed annual budget for climate change actions would represent a 0.8% increase in total public expenditure for the sector, but a 2,200% increase on climate expenditure in the sector (based on 2012 expenditure).

### d. Expected benefits from the Implementation of the Action Plan

The benefits from the climate change action for education sector will improve the public resilience to climate change impacts and mitigation through developing knowledge and awareness of climate change and its impacts, for teachers, students and citizens so that they can act appropriately in their daily lives and profession toward resilient society and green development.

## IV. Management and Financing Mechanism

### a. Analysis of existing management and financing mechanisms

The education sector has well-established mechanisms for the coordination of support to the Education Strategic Plan (2009-13, and the new ESP 2014-18). The Joint Technical Working Group on Education, chaired by the Minister, acts as the main partnership mechanism between Government and development partners, to support the achievement of ESP objectives. Education NGOs are also represented.

The Ministry produces an Annual Operational Plan, based on the ESP, which serves as the basis for budgeting. MoEYS is a pilot ministry for programme budgeting. In 2012, approximately 15% of the Ministry's domestic budget was programme-based. EU provides sector budget support for the education sector. Measures to increase the share of the programme budget in the sector, or Public Financial Management (PFM) reforms to provide more detail on the budget by having budget entities at department level (not just ministry) may attract more budget support in the future. Other donors support the ESP and Annual Operational Plan through a range of modalities, under a programme-based approach. The main donors include ADB, World Bank, JICA and Sweden. UNICEF and UNESCO are important partners, with a focus on technical support.

A pooled funding arrangement is in place to support a capacity development master plan through the Capacity Development Partnership Fund (CDPF) administered by UNICEF, with funding from EU and Sweden.

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<sup>1</sup> Source: 2012 Budget Law, DIC 2012 database on grants and loans managed by MEF, and CDC-CRDB ODA database.

<sup>2</sup> Source: Draft Report on Climate Change Financing Framework, MoE, 2014 



The Department of Planning of the Ministry heads the secretariat of the Joint Technical Working Group and provides support to the Programme Based Approach in the Education sector.

#### **b. Analysis of potential sources and volume of finance for Climate Change actions**

Proposed actions for MoEYS can be clustered in three main areas: i) support to the development of policies, M&E tools and capacities to analyse, plan and address climate change impacts in the education sector (strategy 1); ii) integration of climate change in curricula at all levels, in formal and non-formal education (strategies 2 and 3); and iii) climate-proofing of education infrastructures (strategy 4). The CCAP has been developed in line with a low growth scenario for climate finance, with relatively modest amounts for climate-proofing of infrastructures, but this action could be scaled if additional resources become available.

In order to support coordination efforts in the sector, the preferred solution for channelling funds in support of investment actions (i.e. climate proofing infrastructures) would be the sector budget support modality. Sector budget support funds could be topped up with additional financing to cover this action, and the corresponding indicator(s) should be introduced in the monitoring and evaluation framework for the sector.

Capacity development and technical assistance activities for all four strategies of this CCAP could be supported through the CDPF (if included in the capacity development master plan). Alternatively, if it is felt that stronger and direct links to the Climate Change Department in Ministry of Environment are necessary for technical advisory support, a dedicated project could be put in place, with climate change finance sourced either locally (e.g. CCCA) or internationally (e.g. Adaptation Fund, LDCF).

#### **c. Entry points for climate change mainstreaming in management and financing mechanisms**

Members of the climate change working group will ensure that CCAP actions are included in the Annual Operational Plan by concerned departments, so that the needs can be matched with available domestic and donor resources (through the Joint Technical Working Group mechanism), and additional climate finance. The Department of Planning will play a key role in this process.

Climate vulnerability analysis and mapping for the education sector shall be presented in one of the policy dialogue sessions of the Joint Technical Working Group, to raise the profile of climate change actions with key decision makers.

Standards put in place through CCAP actions (e.g. for climate-proofing of schools, green buildings, curriculum) shall be integrated by concerned departments in their standard practices, including for individual donor-funded projects.



## V. Monitoring and Evaluation

Monitoring and evaluation of the CCAP will be conducted consistently with the national framework for M&E of climate change response established by the CCCSP.

The department of planning will have the responsibility to manage the monitoring, reporting and evaluation process with the technical support of the climate change working group. It will carry out these tasks with the support and in coordination with the NCCC and MoP.

Progress in the implementation of the CCAP will be reviewed on an annual basis in the framework of the Annual Progress Review of the education strategy plan; a specific chapter reviewing the CCAP progress will be included. The CCAP indicator framework will be integrated within the indicator framework of the ministry; relevant indicators for climate change will be also included in the NSDP submission.


A mid-term evaluation will be organized in year 2016 and a final evaluation in 2018. The evaluations will assess the progress in implementing the CCAP and CCSP, its relevance and contribution in mainstreaming Climate Change into the education sector and achieving the impacts foreseen in education strategy plan and NSDP, the effectiveness in terms of mainstreaming climate change within the MOEYS departments, and integration in planning and monitoring systems of the ministry. The evaluations will also assess the alignment and contribution towards achieving the objectives set in the CCCSP<sup>3</sup>, and will provide recommendations for future adjustment of the policy response. To this effect it will be important that evaluations identify lessons learned and, if needed, entry points for improving policies and actions. A precondition for organization of quality evaluations at program (CCAP) and action levels will be that sufficient resources for monitoring and evaluation are budgeted in the actions.

The monitoring of the CCAP will be based on the following indicators framework:

Indicator Type	Purpose	Frequency
1. CCAP delivery and mainstreaming	Tracking the progress in fundamental aspects of CCAP implementation, such as fund mobilization.	Annual
2. Institutional readiness <sup>4</sup>	Tracking the progress in improving capacities and integration of climate change into sectoral policies and planning.	Annual
3. Results	Assessing the results of Actions.	Annual or depending on the nature of the action <sup>5</sup> .
4. Impact	Assessing the progress towards ultimate	Annual, ad-hoc for indicators

<sup>3</sup> The national framework for M&E of climate change response foresees the establishment of a Long Term National Evaluation Program. Evaluations of the CCAP as a whole and of specific actions will be organized in coordination with the national evaluation program.

<sup>4</sup> These indicators will be using a qualitative assessment based on scorecards.

<sup>5</sup> Given that most actions will require formulation of project proposals to access the funds required for implementation, the indicators identified are preliminary and will be updated to reflect the actual scope of the action. Only indicators related to actions that have been funded for implementation will be monitored. 

climate policy and development objectives.	that require specific studies (e.g. sectoral climate change vulnerability assessments).
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To minimize costs and improve mainstreaming, whenever possible indicators will be based on relevant indicators already being monitored<sup>6</sup>. Baseline and targets for indicators for CCAP delivery and mainstreaming, and for impact indicators will be established by the end of 2014, and will be included in the first CCAP progress report. Result indicators will be finalized, and respective baselines and targets established as the actions are financed. The indicator framework will be reviewed in 2016 during the mid-term evaluation.

<b>1. CCAP delivery and mainstreaming indicators</b>	
1. Funds planned and actually disbursed, compared with the CCAP planning matrix <sup>7</sup>	
2. Proportion of actions funded from national budget, which will indicate the progress in mainstreaming financing into national budgets	
<b>2. Institutional readiness indicators</b>	
3. Integration of Climate Change into sectoral policy and budgeting	
4. Capacities for climate change mainstreaming	
5. Availability and use of data and information	
<b>3. Results indicators</b>	
<i>Actions<sup>8</sup></i>	<i>Indicators</i>
1. Developing educational policy, analyses, research	The education policy for climate change mainstreaming is adopted  Degree of knowledge of climate change issues of target groups (to be determined through rapid Knowledge Attitude and Practices (KAP) survey)
2. Strengthening capacity of the relevant departments	Number of MOEYS officials trained on climate change related planning, monitoring and evaluation framework.  Regular updates of indicators of the CCAP framework and timely production of annual progress reports.  Number of policies and plans being informed by evidence generated by the monitoring and evaluation system.
3. Promoting universities and centres of excellence for delivering climate change courses and	Number of universities/institutions/vocational training institutes that are upgraded with quality delivery of CC courses.  Number of national and international universities that join and actively engage in a network of excellence on climate change education.  Number of students (by type of degree and gender) that graduate in

<sup>6</sup> Additional processing and analysis of existing indicators will often be required to address the climate change aspects; this might include classifying the data according to the vulnerability analysis included in the Draft SNC to the UNFCCC and subsequent vulnerability assessments.

<sup>7</sup> This indicator will be calculated as the ratio of actual funds allocated and the budget foreseen in the planning matrix. For example if by 2016 the total funds actually allocated are 28 M (10 M in 2014, 8 M in 2015, 10 M in 2016) and the total budget is of 35.7 M (11.9 for each year), the indicator will be 78%.

<sup>8</sup> Actions as defined in the Action Fiches.



research	courses that incorporate Climate change.
4. Upgrading curriculum and training methodologies	<p>Number of school curricula updated with climate change information.</p> <p>Number of teachers trained on CC curriculum teaching methodologies.</p> <p>Percentage of students with a satisfactory score on CC related questions in assessments/exams.</p>
5. Upgrading curriculum to include climate change for non-formal education and Buddhism schools.	<p>Number of primary and secondary schools that have joined a network for CC non-formal education (community and youth)</p> <p>Number of climate change related curricula developed for non-formal education and Buddhism schools.</p> <p>Number of Buddhism schools integrating CC topics in program.</p> <p>Percentage of students (by gender and age class) with a satisfactory level of CC knowledge assessed through dedicated surveys.</p>
6. Promoting climate proofing and retrofitting of existing and planned schools and universities infrastructure.	<p>Number of schools damaged by floods and storms.</p> <p>Average number of days schools have been closed due to floods and storms.</p> <p>Estimated cost for reconstruction and reparation of schools damaged by floods and storms.</p> <p>Number of students and school children affected by floods, drought and storms.</p>
7. Integration of green growth concept and low-carbon development in school and university buildings and designs.	<p>Number of universities and schools integrating the green growth concept in open space and building design (at least two).</p>
<b>4. Impact</b>	
1. Percentage of school affected by floods.	
2. Percentage of students (by gender and age class) with a satisfactory knowledge of CC and appropriate behaviours during droughts, floods and typhoons.	

## VI. Legal Requirement

No legal requirement is needed to support implementation of this CCAPE. One possible exception is that a directive may be issued by the minister on climate change proofing standards for schools and to include CC curriculum in the education programs at different levels, including life skill program.

## VII. Conclusion

Education plays very important role in all aspects of socio-economic development, be it water resources, agriculture, environment and climate change. The growing threats of climate change and CC uncertainties require science-based knowledge and technological know-how to meet the challenge. Research and development is critical part of capacity development and must be promoted within Cambodian education system, especially in the universities. The CCAPE targets four integrated strategic



areas, namely improving education policy and planning on climate change issues; improving education quality on climate change for formal education; promoting awareness raising and mainstreaming climate change in non-formal education; and promoting green concepts and climate-proofing of schools, universities and education facilities. These integrated strategies would contribute to capacity development and knowledge building of sector ministries to respond to climate change impact and GHG mitigation. Quality education is a central focus of the MEYS, which requires increased funding for upgrading education facilities, teaching methodologies, lab analysis and research and development. Family spending on education looks positive along with increased GDP, therefore private sector involvement can play a significant role in implementation of this CCAPE. The MEYS need to work with all government agencies, civil society, and private sector to effectively deliver the successful results of the CCAPE.

## VIII. Annex: Action Fiches

### ACTION FICHE No 1

<b>Action 1</b>	Developing educational policy, analyses, research and planning for climate change adaptation and mitigation.
<b>CCCSP and Sector CCSP Strategic Objective</b>	<p>This action will contribute to:</p> <ul style="list-style-type: none"> <li>a. CCCSP <ul style="list-style-type: none"> <li>- SO5: Improve capacities, knowledge and awareness for climate change responses.</li> </ul> </li> <li>b. SCCSP <ul style="list-style-type: none"> <li>- SO1: Improve education policy, analyses, research and planning for climate change.</li> </ul> </li> </ul>
<b>Rationale</b>	<p>This action contributes to the achievement of the MOEYS's strategic plan and NSDP 2014-2018.</p> <p>Climate change has direct and indirect impacts on education outcomes, especially student enrolment, attendance and dropouts as a result of rising temperature, prolonged flooding and drought, and storm surges. Limited capacity and knowledge is considered among the key factors making Cambodia most vulnerable to climate change impacts. Education can play a critical role in sustainable development and climate change response. This action is designed to integrate climate change into education policy and planning so that knowledge and skill of the Cambodian population is gradually improved to adequately respond to the challenges of both climate change adaptation and mitigation.</p>
<b>Category of climate change action</b>	Cat 2 – Modified
<b>Type of action</b>	Adaptation and mitigation
<b>Short description of the action and expected results and benefits</b>	<p><i>Short description</i></p> <ul style="list-style-type: none"> <li>• Review of the existing education policy and research plans, including infrastructure (laboratory, library, books) for climate change courses</li> <li>• Developing policy for integration of climate change course at different levels,</li> <li>• Holding consultation with stakeholders for inputs.</li> <li>• Establishing a Technical Working Group for developing educational policy, analyses, research and planning for</li> </ul>

	<p><i>Other Government and external stakeholders involved in implementation (if already identified, mention the name of the partners)</i></p> <ul style="list-style-type: none"> <li>a. MOE</li> <li>b. Concerned development agencies.</li> </ul>
<b>Estimated total cost</b>	USD 800, 000
<b>Possible funding sources</b>	<p><i>Major sources of funding include:</i></p> <ul style="list-style-type: none"> <li>a. Government budget,</li> <li>b. Multilateral climate funds e.g. Adaptation fund, GEF, GCF etc.</li> <li>c. Bilateral donors (USAID, EU, SIDA, UNICEF, JICA, ADB) with possible contribution from CCCA.</li> </ul>
<b>Timeframe</b>	<p><i>Indicate the start and end year</i></p> <p>2014 - 2018</p>



**ACTION FICHE No 2**

<b>Action 2</b>	Strengthening capacity of the relevant departments under MoEYS for planning and monitoring of education effectiveness related to climate change.
<b>CCCSP and Sector CCSP Strategic Objective</b>	<p>This action will contribute to:</p> <ul style="list-style-type: none"> <li>a. CCCSP <ul style="list-style-type: none"> <li>- SO5: Improve capacities, knowledge and awareness for climate change responses.</li> </ul> </li> <li>b. SCCSP <ul style="list-style-type: none"> <li>- SO1: Improve education policy and planning for building resilience capacity to response to climate change issues.</li> </ul> </li> </ul>
<b>Rationale</b>	<p>This action has clear link to MOEYS's strategic plan, 2014-2018.</p> <p>To ensure effective mainstreaming of climate change into educational programs, it is crucial that the capacity of relevant departments, including universities should be enhanced for planning of CC education that meets the needs of the institutions and the population at large.</p>
<b>Category of climate change action</b>	Cat 2 – Modified
<b>Type of action</b>	Adaptation and mitigation
<b>Short description of the action and expected results and benefits</b>	<p><i>Short description</i></p> <ul style="list-style-type: none"> <li>a. Conducting training need assessment for planning climate change in MoEYS,</li> <li>b. Developing training modules and methodologies and organizing training,</li> <li>c. Developing tools for monitoring and evaluation of climate change training and courses.</li> </ul> <p><i>Expected results and benefits, including number of beneficiaries and type of impact on beneficiaries</i></p> <p>The end result and benefits would be the incorporation of the concept of education effectiveness on climate change in planning, monitoring and evaluation by MOEYS planning officials, teachers and staff into their respective work.</p> <p>Beneficiaries include:</p> <ul style="list-style-type: none"> <li>a. Staff of MOEYS (e.g. planning officials, teachers etc.).</li> </ul>
<b>Cost effectiveness of the action</b>	To be completed.

<b>Preconditions needed for successful implementation</b>	<ul style="list-style-type: none"> <li>a. Review of MOEYS' existing planning, monitoring and evaluation framework.</li> <li>b. Participation of all relevant departments of MOEYS</li> <li>c. Knowledge on climate change adaptation and mitigation and M &amp; E framework.</li> </ul>
<b>Indicator(s) of success</b>	<ul style="list-style-type: none"> <li>a. Number of MOEYS officials trained on climate change related planning, monitoring and evaluation framework.</li> <li>b. Regular updates of indicators of the CCAP framework and timely production of annual progress reports.</li> <li>c. Number of policies and plans being informed by evidence generated by the monitoring and evaluation system.</li> </ul>
<b>Implementation arrangements</b>	<p><i>Responsible department(s)</i></p> <ul style="list-style-type: none"> <li>a. MOEYS- Department of Planning</li> </ul> <p><i>Other Government and external stakeholders involved in implementation (if already identified, mention the name of the partners)</i></p>
<b>Estimated total cost</b>	USD 900, 000
<b>Possible funding sources</b>	<p><i>Major sources of funding include:</i></p> <ul style="list-style-type: none"> <li>a. Government budget,</li> <li>b. Multilateral Climate Funds (e.g. Adaptation Fund, UNDP, GEF, CFF EU, ADB etc.)</li> <li>c. Bilateral donors with possible contribution from CCCA.</li> </ul>
<b>Timeframe</b>	<p><i>Indicate the start and end year</i></p> <p>2014 - 2016</p>

**ACTION FICHE No 3**

<b>Action 3</b>	Promoting universities and centres of excellence for delivering climate change courses and research.
<b>CCCSP and Sector CCSP Strategic Objective</b>	<p>This action will contribute to:</p> <ul style="list-style-type: none"> <li>a. CCCSP <ul style="list-style-type: none"> <li>- SO1: Promote climate resilience through improving food, water and energy security.</li> <li>- SO2: Reduce sectoral, regional, gender and health vulnerability to climate change impacts.</li> <li>- SO5: Improve capacities, knowledge and awareness for climate change responses.</li> </ul> </li> <li>b. SCCSP <ul style="list-style-type: none"> <li>- SO2: Strengthen the quality of teacher education and training of education planners for teaching and learning methodology for climate change.</li> </ul> </li> </ul>
<b>Rationale</b>	<p>This action has clear link to MOEYS's strategic plan, 2014-2018.</p> <p>Upgrading of higher education, e.g. universities and faculties for delivering climate change courses and training would enable greater and sustainable access to knowledge, information and climate science for institutions and interested individuals who are responsible for implementation and policymaking. This action will develop and improve the capacity of MOEYS' higher education on delivering courses on climate change.</p>
<b>Category of climate change action</b>	Cat 2 – Modified
<b>Type of action</b>	Adaptation and mitigation
<b>Short description of the action and expected results and benefits</b>	<p><i>Short description</i></p> <ul style="list-style-type: none"> <li>a. Review teaching and research capacity</li> <li>b. Identification of universities and institutes (including vocational training institutes) of excellence in Cambodia that can integrate climate change courses;</li> <li>c. Establishing network/contacts with universities in the region for exchange of visits and learning;</li> <li>d. Holding consultation with government ministries about the required knowledge and skills related to climate change;</li> <li>e. Building teaching and research capacity of professors and trainers of universities</li> </ul>



	<p>f. Developing curriculum/course on climate change adaptation and mitigation (courses and research may include climate change adaptation in agriculture; water resources management in the context of climate change; Climate Change Adaptation in Health; GHG inventory and mitigation in energy, transport; GHG inventory and mitigation in LUCF and Agriculture).</p> <p><i>Expected results and benefits, including number of beneficiaries and type of impact on beneficiaries</i></p> <p>The benefits include:</p> <p>a. The incorporation of climate change concept into university courses and higher education system to promote climate change adaptation and mitigation in daily life and profession.</p> <p>Beneficiaries include:</p> <p>a. staff of MOEYS</p> <p>b. higher education staff,</p> <p>c. Universities and students. (Potential universities for CC courses would include Royal University of Phnom Penh, Royal University of Agriculture, Polytechnique Institute, and Institute of Vocational Training Kosmark, and University of Public Health).</p>
<b>Cost effectiveness of the action</b>	To be completed.
<b>Preconditions needed for successful implementation</b>	<p>a. MOEYS circular to mainstream climate change in universities and institutions.</p> <p>b. Good network with regional universities such as AIT and GHG Management Institute under LEAD Program and coordination with concerned ministries.</p> <p>c. Knowledge on climate change adaptation and mitigation.</p>
<b>Indicator(s) of success</b>	<p>a. Number of universities/institutions/vocational training institutes that are upgraded with quality delivery of CC courses.</p> <p>b. Number of national and international universities that join and actively engage in a network of excellence on climate change education.</p> <p>c. Number of students (by type of degree and gender) that graduate in courses that incorporate Climate change.</p>

<b>Implementation arrangements</b>	<p><i>Responsible department(s)</i></p> <ul style="list-style-type: none"> <li>a. MOEYS</li> <li>- Higher Education Department,</li> <li>- Department of Curriculum Development.</li> </ul> <p><i>Other Government and external stakeholders involved in implementation (if already identified, mention the name of the partners)</i></p> <ul style="list-style-type: none"> <li>a. MOE</li> <li>b. Concerned departments and agencies.</li> </ul>
<b>Estimated total cost</b>	USD 3, 250, 000
<b>Possible funding sources</b>	<p><i>Major sources of funding include:</i></p> <ul style="list-style-type: none"> <li>a. Government budget,</li> <li>b. Pool funding,</li> <li>c. Multilateral Climate Funds e.g. Adaptation Fund, EU, ADB</li> <li>d. Bilateral donors e.g. USAID, ADB with possible contribution from CCCA.</li> </ul>
<b>Timeframe</b>	<p><i>Indicate the start and end year</i></p> <p>2014 - 2018</p>

ACTION FICHE No 4

<b>Action 4</b>	Upgrading curriculums and training methodologies, including libraries, to include climate change subjects for primary and secondary schools
<b>CCCSP and Sector CCSP Strategic Objective</b>	<p>This action will contribute to:</p> <ul style="list-style-type: none"> <li>a. CCCSP <ul style="list-style-type: none"> <li>- SO5: Improve capacities, knowledge and awareness for climate change responses.</li> </ul> </li> <li>b. SCCSP <ul style="list-style-type: none"> <li>- SO3: Conduct curriculum training on adaptation, disaster risk management, and resilience to climate change.</li> </ul> </li> </ul>
<b>Rationale</b>	<p>This action has clear link to MOEYS's strategic plan, 2014-2018.</p> <p>This action will enhance the knowledge of school children on climate change by improving and mainstreaming climate change related subjects into school curricula. School children can change their parents' behaviour by communicating CC issues they learn from schools.</p>
<b>Category of climate change action</b>	Cat 2 – Modified
<b>Type of action</b>	Adaptation and mitigation
<b>Short description of the action and expected results and benefits</b>	<p><i>Short description</i></p> <ul style="list-style-type: none"> <li>a. Review current curriculums, training methodologies, facilities, supporting climate change communication and teaching for formal (primary and secondary) and non-formal education;</li> <li>b. Upgrading curriculum and facilities for climate change teaching where appropriate,</li> <li>c. Organizing training of new curriculum for teachers,</li> <li>d. Integration of upgraded curriculums in school program, and publication of curriculum.</li> </ul> <p><i>Expected results and benefits, including number of beneficiaries and type of impact on beneficiaries</i></p> <p>The benefits include:</p> <ul style="list-style-type: none"> <li>a. Better curriculum and training methodologies on the subject of climate change for primary and secondary schools and non-formal education.</li> </ul>



ACTION FICHE No 5

<b>Action 5</b>	Upgrading curriculum to include climate change for non-formal education and Buddhism schools.
<b>CCCSP and Sector CCSP Strategic Objective</b>	<p>This action will contribute to:</p> <ul style="list-style-type: none"> <li>a. CCCSP <ul style="list-style-type: none"> <li>- SO5: Improve capacities, knowledge and awareness for climate change responses.</li> </ul> </li> <li>b. SCCP <ul style="list-style-type: none"> <li>- SO2: Strengthen the quality of teacher education and training of education planners for teaching and learning methodology for climate change.</li> </ul> </li> </ul>
<b>Rationale</b>	<p>This action has clear link to MOEYS's strategic plan, 2014-2018.</p> <p>This action will promote climate change knowledge through non-formal education system and Buddhism schools which is a strong influential setting on society.</p>
<b>Category of climate change action</b>	Cat 2 – Modified
<b>Type of action</b>	Adaptation and mitigation
<b>Short description of the action and expected results and benefits</b>	<p><i>Short description</i></p> <ul style="list-style-type: none"> <li>a. Assessment of climate change curriculums for non-formal education and Buddhism schools,</li> <li>b. Improving or integration of climate change curriculum in non-formal education and Buddhism schools,</li> <li>c. Training of teachers and monks to use updated curriculums,</li> <li>d. Establishing non-formal education networks for CC; and</li> <li>e. Piloting community/youth best practice for communication of climate change.</li> </ul> <p><i>Expected results and benefits, including number of beneficiaries and type of impact on beneficiaries</i></p> <p>The benefits include:</p> <ul style="list-style-type: none"> <li>a. Non-formal school children and monk students gain knowledge on climate change adaptation and mitigation.</li> </ul> <p>Beneficiaries include:</p> <ul style="list-style-type: none"> <li>a. Staff</li> <li>b. Education officers,</li> <li>c. Community facilitators, and</li> <li>d. School students.</li> </ul>

<b>Cost effectiveness of the action</b>	To be completed.
<b>Preconditions needed for successful implementation</b>	<ul style="list-style-type: none"> <li>a. Buddhism education program has slots for teaching CC.</li> <li>b. Knowledge on climate change adaptation and mitigation.</li> </ul>
<b>Indicator(s) of success</b>	<ul style="list-style-type: none"> <li>a. Number of primary and secondary schools that have joined a network for CC non-formal education (community and youth)</li> <li>b. Number of climate change related curricula developed for non-formal education and Buddhism schools.</li> <li>c. Number of Buddhism schools integrating CC topics in program.</li> <li>d. Percentage of students (by gender and age class) with a satisfactory level of CC knowledge assessed through dedicated surveys.</li> </ul>
<b>Implementation arrangements</b>	<p><i>Responsible department(s)</i></p> <ul style="list-style-type: none"> <li>a. MOEYS</li> <li>- Department of Curriculum Development</li> </ul> <p><i>Other Government and external stakeholders involved in implementation (if already identified, mention the name of the partners)</i></p> <ul style="list-style-type: none"> <li>a. MOE</li> <li>b. Concerned departments and agencies.</li> </ul>
<b>Estimated total cost</b>	USD 950, 000
<b>Possible funding sources</b>	<p><i>Major sources of funding include:</i></p> <ul style="list-style-type: none"> <li>a. government budget,</li> <li>b. Multilateral climate funds e.g. adaptation fund,</li> <li>c. Bilateral donors e.g. UNICEF, EU, CCCA.</li> </ul>
<b>Timeframe</b>	<p><i>Indicate the start and end year</i></p> <p>2014 - 2018</p>

**ACTION FICHE No 6**

<b>Action 6</b>	Promoting climate proofing and retrofitting of existing and planned schools and universities infrastructure.
<b>CCCSP and Sector CCSP Strategic Objective</b>	<p>This action will contribute to:</p> <ul style="list-style-type: none"> <li>a. CCCSP <ul style="list-style-type: none"> <li>- SO2: Reduce sectoral, regional, gender and health vulnerability to climate change impacts.</li> </ul> </li> <li>b. SCCSP <ul style="list-style-type: none"> <li>- SO5: Build schools that respond to climate change adaptation and disaster risk management.</li> </ul> </li> </ul>
<b>Rationale</b>	<p>This action has clear link to MOEYS's strategic plan, 2014-2018.</p> <p>Climate change events such as flooding and storm surges can have adverse impacts on educational infrastructure such as schools and universities, which would result in interruption of school attendance, program delivery, and student dropouts. This action will support retrofitting of existing school buildings and climate change proofing of new school construction using building codes and guidelines that integrate climate change.</p>
<b>Category of climate change action</b>	Cat 2 – Modified
<b>Type of action</b>	Adaptation
<b>Short description of the action and expected results and benefits</b>	<p><i>Short description</i></p> <ul style="list-style-type: none"> <li>a. Vulnerability mapping of schools and universities affected by severe floods, droughts and extreme weathers;</li> <li>b. Development of cost-effective climate proofing and retrofitting of existing schools and universities affected by floods, droughts and storms;</li> <li>c. Development of design guidelines and building code for specific areas of climate risks in cooperation with Ministry of Land Management, Urban Planning and Construction for building new schools and universities.</li> </ul> <p><i>Expected results and benefits, including number of beneficiaries and type of impact on beneficiaries</i></p> <p>The benefits include:</p> <ul style="list-style-type: none"> <li>a. School and universities are climate proofed to withstand natural disaster, floods, storm surges, and extreme weathers.</li> </ul>



**ACTION FICHE No 6**

<b>Action 6</b>	Promoting climate proofing and retrofitting of existing and planned schools and universities infrastructure.
<b>CCCSP and Sector CCSP Strategic Objective</b>	<p>This action will contribute to:</p> <ul style="list-style-type: none"> <li>a. CCCSP <ul style="list-style-type: none"> <li>- SO2: Reduce sectoral, regional, gender and health vulnerability to climate change impacts.</li> </ul> </li> <li>b. SCCSP <ul style="list-style-type: none"> <li>- SO5: Build schools that respond to climate change adaptation and disaster risk management.</li> </ul> </li> </ul>
<b>Rationale</b>	<p>This action has clear link to MOEYS's strategic plan, 2014-2018.</p> <p>Climate change events such as flooding and storm surges can have adverse impacts on educational infrastructure such as schools and universities, which would result in interruption of school attendance, program delivery, and student dropouts. This action will support retrofitting of existing school buildings and climate change proofing of new school construction using building codes and guidelines that integrate climate change.</p>
<b>Category of climate change action</b>	Cat 2 – Modified
<b>Type of action</b>	Adaptation
<b>Short description of the action and expected results and benefits</b>	<p><i>Short description</i></p> <ul style="list-style-type: none"> <li>a. Vulnerability mapping of schools and universities affected by severe floods, droughts and extreme weathers;</li> <li>b. Development of cost-effective climate proofing and retrofitting of existing schools and universities affected by floods, droughts and storms;</li> <li>c. Development of design guidelines and building code for specific areas of climate risks in cooperation with Ministry of Land Management, Urban Planning and Construction for building new schools and universities.</li> </ul> <p><i>Expected results and benefits, including number of beneficiaries and type of impact on beneficiaries</i></p> <p>The benefits include:</p> <ul style="list-style-type: none"> <li>a. School and universities are climate proofed to withstand natural disaster, floods, storm surges, and extreme weathers.</li> </ul>

	<p>Beneficiaries include:</p> <ul style="list-style-type: none"> <li>a. School children and students can complete their study without interruption from CC.</li> </ul>
<b>Cost effectiveness of the action</b>	To be completed.
<b>Preconditions needed for successful implementation</b>	<ul style="list-style-type: none"> <li>a. Building code is adopted and put into practice for school retrofitting and climate proofing.</li> <li>b. Knowledge on climate change adaptation and mitigation.</li> </ul>
<b>Indicator(s) of success</b>	<ul style="list-style-type: none"> <li>a. Number of schools damaged by floods and storms.</li> <li>b. Average number of days schools have been closed due to floods and storms.</li> <li>c. Estimated cost for reconstruction and reparation of schools damaged by floods and storms.</li> <li>d. Number of students and school children affected by floods, drought and storms.</li> </ul>
<b>Implementation arrangements</b>	<p><i>Responsible department(s)</i></p> <ul style="list-style-type: none"> <li>a. MOEYS <ul style="list-style-type: none"> <li>- Department of School Construction,</li> <li>- Planning Department</li> </ul> </li> </ul> <p><i>Other Government and external stakeholders involved in implementation (if already identified, mention the name of the partners)</i></p> <ul style="list-style-type: none"> <li>a. Ministry of Land Management, Urban Planning and Construction.</li> </ul>
<b>Estimated total cost</b>	USD 1, 950, 000
<b>Possible funding sources</b>	<p><i>Major sources of funding include:</i></p> <ul style="list-style-type: none"> <li>a. Government budget,</li> <li>b. Multilateral climate funds e.g. adaptation fund</li> <li>c. Bilateral Donors e.g. EE</li> <li>d. Private Sector Funding.</li> </ul>
<b>Timeframe</b>	<p><i>Indicate the start and end year</i></p> <p>2014 - 2018</p>

**ACTION FICHE No 7**

<b>Action7</b>	Integration of green growth concept and low-carbon development in school and university buildings and designs.
<b>CCCSP and Sector CCSP Strategic Objective</b>	<p>This action will contribute to:</p> <ul style="list-style-type: none"> <li>a. CCCSP <ul style="list-style-type: none"> <li>- SO4: Promote low-carbon planning and technologies to support sustainable development of the country.</li> </ul> </li> <li>b. SCCSP <ul style="list-style-type: none"> <li>- SO 5: Build schools that respond to climate change adaptation and disaster risk management.</li> </ul> </li> </ul>
<b>Rationale</b>	<p>This action supports MOEYS's strategic plan 2014-2018 and the National Policy on Green Growth.</p> <p>Green growth concept can support environmental sustainability and low-carbon development, and have many elements consistent with GHG mitigation. Integration of green growth concept in school and university design and building would enhance awareness and communicate practical ideas of green building, living space and GHG mitigation to students and school children. This action will promote green growth concept in education sector.</p>
<b>Category of climate change action</b>	Cat 3 – Dedicated
<b>Type of action</b>	Mitigation
<b>Short description of the action and expected results and benefits</b>	<p><i>Short description</i></p> <ul style="list-style-type: none"> <li>a. Selection of schools and universities that can be retrofitted to include green growth concepts in the existing design;</li> <li>b. gradual expansion of green growth concept to other schools and universities;</li> <li>c. Development of guidelines and code for integration green growth concept in future building of schools and universities as a way to promote green education.</li> </ul> <p><i>Expected results and benefits, including number of beneficiaries and type of impact on beneficiaries</i></p> <p>Beneficiaries include:</p> <ul style="list-style-type: none"> <li>a. MOEYS's planning officers,</li> <li>b. Concerned development agencies, and</li> <li>c. Students.</li> </ul>



<b>Cost effectiveness of the action</b>	To be completed.
<b>Preconditions needed for successful implementation</b>	a. Knowledge on green growth concept and GHG mitigation.
<b>Indicator(s) of success</b>	Number of universities and schools integrating the green growth concept in open space and building design (at least two).
<b>Implementation arrangements</b>	<p><i>Responsible department(s)</i></p> <p>a. MOEYS</p> <ul style="list-style-type: none"> <li>- Department of School Construction,</li> <li>- Universities.</li> </ul> <p><i>Other Government and external stakeholders involved in implementation (if already identified, mention the name of the partners)</i></p>
<b>Estimated total cost</b>	USD 750, 000
<b>Possible funding sources</b>	<p><i>Major sources of funding include:</i></p> <p>a. Government budget</p> <p>b. Multilateral climate funds e.g. adaptation fund,</p> <p>c. Bilateral donors e.g. UNESCAP, ADB with possible contribution from CCCA.</p>
<b>Timeframe</b>	<p><i>Indicate the start and end year</i></p> <p>2014 - 2018</p>



