



KINGDOM OF CAMBODIA

Nation Religion King



Royal Government of Cambodia

# THEMATIC ASSESSMENTS AND ACTION PLAN

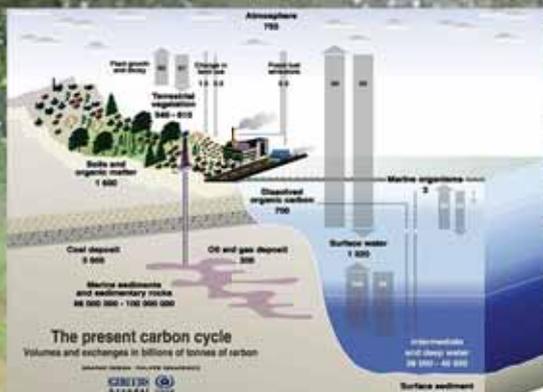
FOR THE THREE CONVENTIONS:

CBD, UNFCCC AND UNCCD

To Contribute to the Poverty Alleviation

Ministry of Environment

Phnom Penh February 2007





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# **THEMATIC ASSESSMENTS AND ACTION PLAN**

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*As for today (as of December 2006), 152 countries participated in the National Capacity Self-Assessment under the UNDP/GEF scheme derived from Capacity Development Initiative (CDI) of the Rio Summit.*

*This National Thematic Capacity Assessment and Action Plan was prepared by the national teams with a regional consultant led by the Ministry of Environment through the National Capacity Self-Assessment for Global Environmental Management Project (CMB/03/G31 or 00035043). The budget came from UNDP/GEF with in-kind contribution from the Royal Government of Cambodia.*

*This Action Plan laid out a blueprint for 10 years of capacity development in the field of biodiversity, climate change, land degradation, their common and cross-cutting themes. 3 national consultation workshops and 10 meetings were held to arrive at the final draft Action Plan. The Action Plan was developed in two languages: Khmer and English to promote effective implementation and resource mobilization for capacity development.*

***Following is the list of National Specialists participated in formulating the document:***

1. Mr. Sam Chamroeun, National Project Director, MOE
2. Mr. Oum Pisey, National Project Manager and Lead Consultant, MOE
3. Mr. Mam Kosal, Team Leader for Biodiversity and Climate Change, MOE
4. Mr. Tuot Saravuth, Team Leader for Land Degradation, MAFF
5. Mr. Kim Sour/Mr. Eng Kimsan, Assistant to the National Project Manager
6. Dr. Ben Malayang III, International Lead Consultant

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**សូមគោរពជូន  
សម្តេចនាយករដ្ឋមន្ត្រី**

**កម្មវត្ថុ:** ករណីសេចក្តីព្រាងឯកសារ ស្តីពីស្វ័យវាយតម្លៃសមត្ថភាពជាតិ និងផែនការសកម្មភាពកសាងសមត្ថភាពសម្រាប់ការគ្រប់គ្រងជីវៈចម្រុះ ការប្រែប្រួលអាកាសធាតុ និងដីខ្សោះជាតិ ដើម្បីរួមចំណែកកាត់បន្ថយភាពក្រីក្រ

- យោង :**
- លិខិតលេខ ០៦០ សណ.បស្ថ ចុះថ្ងៃទី ២០ ខែ មករា ឆ្នាំ ២០០៦ របស់ក្រសួងបរិស្ថាន
  - លិខិតលេខ ១១២៥ សជណ.អត ចុះថ្ងៃទី ២០ ខែ មករា ឆ្នាំ ២០០៦ របស់ទិស្តីការគណៈរដ្ឋមន្ត្រី
  - របាយការណ៍លេខ ៥៧ របស.កសសស ចុះថ្ងៃទី ០៧ ខែ ធ្នូ ឆ្នាំ ២០០៦ ស្តីពីលទ្ធផលកិច្ចប្រជុំរួមរបស់ក្រុមប្រឹក្សាអ្នកច្បាប់ និងក្រុមសង្កេតការណ៍សេដ្ឋកិច្ច សង្គមកិច្ច និងវប្បធម៌

ខ្ញុំបាទ សូមជម្រាបជូនសម្តេចមេត្តាជ្រាបថា ក្រសួងបរិស្ថានបានរៀបចំផែនការសកម្មភាពជាតិស្តីពី ស្វ័យវាយតម្លៃសមត្ថភាពសម្រាប់គ្រប់គ្រងបរិស្ថាន ដែលស្របតាមគោលនយោបាយរបស់ជាតិ ដើម្បីចូលរួមវាយតម្លៃតម្រូវការសមត្ថភាពជាតិ ដែលពាក់ព័ន្ធក្នុងការអនុវត្តកាតព្វកិច្ចនៃអនុសញ្ញាទាំងបី គឺអនុសញ្ញាជីវៈចម្រុះ អនុសញ្ញាការប្រែប្រួលអាកាសធាតុ និងអនុសញ្ញាប្រយុទ្ធប្រឆាំងនឹងភាពរហោស្ថាន ដែលស្របតាមយុទ្ធសាស្ត្រចតុកោណក្នុងការកាត់បន្ថយភាពក្រីក្ររបស់រាជរដ្ឋាភិបាល ហើយបានផ្ញើមកទិស្តីការគណៈរដ្ឋមន្ត្រី តាមរយៈលិខិតលេខ ០៦០ សណ.បស្ថ ចុះថ្ងៃទី ២០ ខែ មករា ឆ្នាំ ២០០៦ ដើម្បីសុំឆ្លងគណៈរដ្ឋមន្ត្រី។ នៅថ្ងៃទី ៣០ ខែ មករា ឆ្នាំ ២០០៦ សម្តេចបានចាត់ឱ្យទិស្តីការគណៈរដ្ឋមន្ត្រីដឹកនាំការប្រជុំអន្តរក្រសួង ដើម្បីពិនិត្យជាចុងក្រោយ ។

អគ្គលេខាធិការដ្ឋានរាជរដ្ឋាភិបាល បានដាក់សេចក្តីព្រាងឯកសារនេះប្រជុំអន្តរក្រសួងចំនួន ៣លើក នៅទិស្តីការគណៈរដ្ឋមន្ត្រី តែដោយមានការពាក់ព័ន្ធនឹងភារកិច្ចមួយចំនួន ទើបអគ្គលេខាធិការរាជរដ្ឋាភិបាល ស្នើសុំយោបល់ណែនាំខ្ញុំបាទ ហើយខ្ញុំបាទបានផ្តល់យោបល់ថា ឱ្យមានកិច្ចប្រជុំរួមគ្នារវាងក្រុមប្រឹក្សាអ្នកច្បាប់ និងក្រុមសង្កេតការណ៍សេដ្ឋកិច្ច សង្គមកិច្ច និងវប្បធម៌ ជាមួយក្រសួងពាក់ព័ន្ធ (អគ្គលេខាធិការដ្ឋានរាជរដ្ឋាភិបាល បានធ្វើលិខិតលេខ ១១២៥ សជណ.អត ចុះថ្ងៃទី ២០ ខែ កក្កដា ឆ្នាំ ២០០៦ ជូនទៅក្រសួងបរិស្ថានផងដែរ) ។

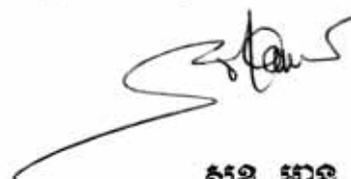
យោងតាមរបាយការណ៍លេខ ៥៧ របស.កសសស ចុះថ្ងៃទី ០៧ ខែ ធ្នូ ឆ្នាំ ២០០៦ ស្តីពីលទ្ធផលនៃកិច្ចប្រជុំរួមគ្នារវាងក្រុមប្រឹក្សាអ្នកច្បាប់ និងក្រុមសង្កេតការណ៍សេដ្ឋកិច្ច សង្គមកិច្ច និងវប្បធម៌ ជាមួយក្រសួងពាក់ព័ន្ធ បានឯកភាពគ្នាកែសម្រួលខ្លឹមសារ ឃ្លាឃ្លោង និងអក្ខរាវិរុទ្ធមួយចំនួន (ដូចមានអត្ថបទជូនភ្ជាប់) និងបានស្នើសុំដាក់ជូនប្រមុខរាជរដ្ឋាភិបាលឱ្យបានទាន់ពេលវេលា ដោយពុំចាំបាច់ឆ្លងការប្រជុំអន្តរក្រសួងទៀតឡើយ ។

**ទិស្តីការគណៈរដ្ឋមន្ត្រីយល់ឃើញថា:** គួរឯកភាពតាមស្មារតីអង្គប្រជុំអន្តរក្រសួង ដាក់សេចក្តីព្រាងឯកសារដែលបានពិនិត្យ និងកែសម្រួលរួចហើយនេះ ជូនប្រមុខរាជរដ្ឋាភិបាលពិនិត្យ និងចុះហត្ថលេខា ដោយពុំចាំបាច់ឆ្លងការប្រជុំអន្តរក្រសួងបន្ថែមទៀតទេ ។

សេចក្តីដូចបានជម្រាបជូនខាងលើ គោរពសូមសេចក្តីសម្រេច និងហត្ថលេខាដ៏ខ្ពង់ខ្ពស់របស់សម្តេច ។

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ដោយសេចក្តីគោរពបំផុត  
ភ្នំពេញ ថ្ងៃទី ០៦ ខែ ឧ ឆ្នាំ ២០០៧  
**រដ្ឋមន្ត្រីទទួលបន្ទុកទិស្តីការគណៈរដ្ឋមន្ត្រី**

  
**សុខ អាន**



## **A MESSAGE FROM SAMDECH HUN SEN, The Prime Minister of Cambodia**

It is a great honor for me to convey a message to our Cambodians on the national capacity self-assessment for the global environment management to reduce poverty alleviation within the framework of the Convention on Biological Diversity, Framework Convention on Climate Change and Convention to combat Desertification. Royal Government of Cambodia has recognized the significance of the biological resources, the threats from the climate change and land degradation to agro-productivity. All of these concerned a result from human activities have been addressed in the Second Five-year Socio-Economic Development Plan (SEDP-II), National Poverty Reduction Strategy (NPRS) and in sectoral plans.

The Rectangular Strategy of the RGC launched in July 16, 2004 (2004-2008) called for strengthening the agriculture sector through improved production and land and forestry reform. This policy mainly focuses on irrigation development, which is very much in touch with fulfillment of the obligations under the three conventions. Furthermore, in order to achieve objective, the government looks for broadening community-based management, and protection of forest cover and reforestation, agricultural improvement, physical infrastructure development. This would positively affect the sustainable natural resources management and conservation.

With these good policies in place, the RGC *recognized that there is a lack of capacity* for concerned Ministries, especially Ministry of Environment and Ministry of Agriculture, Forestry and Fisheries to work on biodiversity, climate change and land degradation. *Capacity is a cross-cutting issue* that requires help relevant ministries, NGOs, Universities and private sector to invest for a sustainable development in Cambodia.

Thus, strengthening of institutional capacity focuses on development of human resource as a mechanism, which ensures the optimal use of very important natural resources. In the same token, the RGC's philosophy is to address the urgent needs and priority to strengthening capacity of institutions. In order to realize this extreme important objective, a partnership needs with donors and IOs. The partnership presents a mean of transferring the knowledge and know-how among institutions, including training and experiences exchanges among various academic and government institutions.

The priority capacity development in Cambodia focuses on the four dimensions of capacity needs and the actions are to be taken in short term (1-3 years), medium term (4-6 years) and long term (7-10 years) as human capabilities, financial capabilities, organizational commitments, and public support. The Ministry of Environment plays important role in cooperating with other relevant ministries, civil society and all stakeholders to invest the capacity development in the country for national benefit of environment protection and natural resource conservation in the future.

Therefore, may I call for a support to implement the NCSA Action Plan from the short term to long term among those who care for biodiversity, protecting climate change, land quality and the poverty reduction. The Action Plan appeals for Cambodia to be eventually *developing their capacity needs, in the short term to medium term for a self-reliance, which Cambodia wish to be reduced from too reliant on donors to pursue environmental protection and national development.*

Phnom Penh, December, 2006  
**Prime Minister of Cambodia**

## A Message From Senior Minister and Minister for Environment

It is my privilege to voice the key message with the National Capacity Self-assessment Action Plan for environmental protection and natural resource conservation to poverty reduction as many relevant agencies gave a great effort to integrate and formulate this synergistic action plan. Since Cambodia entered as a Party to the conventions on Convention on Biological Diversity, UN Framework Convention on Climate Change and UN Convention to Combat Desertification, concrete activities have been undertaken to fulfill the obligations.

Under the leadership of **Samdech Hun Sen**, Prime Minister of the Cambodia, environment protection and nature conservation has been proudly progressed. Through the Rectangular Strategy of the Royal Government, gross domestic product grew to 13.4% in 2005, which is the highest rate in East Asia and is predicted to be 8.9% in 2006. This economic growth helps promote environmental governance, conservation of natural resources and poverty alleviation in the country.

It took Cambodia 20 months to develop National Capacity Self-Assessment aiming at developing capacities for Cambodia to meet obligations under the three afore-mentioned Conventions and its own need to protect environment and natural resources. This is Action Plan is not a purely plan for environmental protection and natural resource conservation but poverty alleviation of the poor who heavily depending on land, biological, and water for living.

With the funding from GEF/UNDP through the National Self-Capacity Need Assessment Project to assess human technical, financial, supportive, and institutional capacities in the three thematic areas, Biodiversity Conservation, Climate Change, and Land Degradation and their linkages, Cambodia is able to produce the Stock-Taking Report and the NCSA Action Plan followed by a Resource Mobilization Mechanism and Monitoring and Evaluation Plan through a participatory consultation process. The Stock-Taking found that Cambodia is in severely lacking of financial capacity followed by institutional and supportive capacities.

The NCSA Action Plan addressed 160 priority capacity needs in biodiversity, climate change, land degradation, their common and cross-cutting issues to be mainstreamed and implemented for a short-term (1-3years), medium-term (4-6 years) and long-term (7-10 years). With this immense task to develop capacity needs, Ministry of Environment alone cannot achieve unless a participation from relevant ministries, civil society and private sector to invest in capacity development for the future benefit of our environment natural resources. 

The success of this NCSA's implementation does not only emphasize the environmental protection and natural resource conservation but also it contributes to the entire country's poverty reduction and stability of the economic development at the macro picture, which is the backbone policy of *the Rectangular Strategy*. Therefore, I vehemently hope and truly believe that mainstreaming NCSA Action Plan into sectoral policies and plans is essential in terms of cost-effectiveness and secure our scarce resources.

With this, my simple message to those, who care for the environment, to those who benefit from the environment and to those who are a part of nature in the whole country to be a golden key to unlock and open a window of opportunities to steward, participate and promote the ownership over the environment and natural resources in order to make a difference for the benefit of our future children and planet. 

Phnom Penh, January 11, 2007  
Senior Minister, Minister of Environment 



H.E Dr. Mok Mareth



**Message from H.E Dr. Chan Sarum,  
Minister for Agriculture, Forestry and Fisheries**

Cambodia is the Least Developed Country within the Southeast Asia Region with the population of 14,363,519 and among those 80% are farmers living in the rural areas under poor conditions. They are engaged in agricultural activities as their main source of income. Seventy five percent (75%) belong to farmer-headed households. Agricultural and rural development is therefore essential for poverty reduction in Cambodia.

The Agricultural sector has contributed to about 39% of the Gross Domestic Product (GDP). In this connection the third mandate of the Royal Government of Cambodia led by Samdach HUN SEN, Prime Minister, has set out Agriculture as a core foundation for rehabilitation and reconstruction of Cambodia's economy as stated in the Rectangular Strategy for Growth, Employment, Equity and Efficiency, because agricultural sector is the major source of development of other sectors.

However, sustainable development of agricultural sector is relevant to a long period of land use, deforestation, climate change and soil erosion which have led to unfertilized soil, causing serious direct impact on agricultural productivity and environment. Otherwise, damage of natural resources apart occurs due to resource exploitation by poor people in rural area, because they need to find a basic demand for living. Poverty alleviation in rural area and natural resources management is a topic toward sustainable development in Cambodia.

In Cambodia, agricultural practice is a household level. In the first Socio-economic Development Plan (1996-2000), the agriculture increased in average 2% per year, when the projection was 5.2% per year which had positive impact on poverty alleviation plan in the rural. Under the second Socio-economic Development Plan (2001-2005), the Royal Government aims to transform agriculture into a driving force to achieve higher economic growth for the national economy and reduce the incidence of rural poverty by focusing on agricultural sector to promote dynamic productive, competitive of technology innovation, environmental friendly and also promotion sound principle management for sustainable development.

However, land degradation will remain an important global issue for the 21<sup>st</sup> century because of its adverse impact on agronomic productivity, the environment, and its effect on food security and the quality of life. Productivity impacts of land degradation are due to a decline in land quality on sites where degradation occurs, such as erosion, and off site where sediments are deposited.

Land degradation through soil erosion and soil fertility decline is recognized as a major limitation to cropping in terms of the actual loss of agricultural productivity. The decline in land quality directly effects the yield stagnation and decrease in agricultural productivity. In the context of agricultural productivity which limit yields there are direct effect to the national economy, food security of the country, low income for the farmers, keep the farmers poor and present challenges for Cambodia to take off from the poverty line.

The Cambodia National Capacity Needs Self-Assessment for Global Environmental Management (CMB/03/G31) project is very crucial for the Ministry of Agriculture, Forestry and Fisheries to identify the level, prioritize the needs for capacity development, and strengthen the capacity. It will help to develop a strategy and action plan for implementation of the Cambodia's obligation in the context of UNCCD especially for specific sustainable land use management and use of natural resources which provide environmental friendly benefit for farmers



*Un-Official Translation*

As the Minister for Agriculture, Forestry and Fisheries and a Focal Ministry for UNCCD, I would like to convey a message to relevant stakeholders that the key factor which cannot be missed for improving soil fertility, preventing reduction in soil degradation, and ensuring the sustainable use of land is a need for the participation by the public and contributions and close cooperation from concerned institutions at all levels.

Integrated farming system, agro-forestry, agro-biodiversity, organic agriculture and sustainable agriculture are set out as the top priorities to be implemented in the agricultural sector to preserve, enhance, and prevent soil degradation in the future.



## **Acknowledgement Message from HE. Dr. Mok Mareth, Senior Minister, Minister for Environment**

I have the great honor to serve the Royal Government of Cambodia as Senior Minister, Minister for Environment, which is a focal point for Cambodia in developing the National Capacity Self-Assessment and Action Plan for Biodiversity, Climate Change and Land Degradation to contribute to the poverty alleviation. Per this role, I have an opportunity in gaining a strong and full support from **Samdech Hun Sen**, the Prime Minister of Cambodia a support from my officials with competent and skillful as well as a fruitful collaboration from relevant agencies and IOs in fulfilling environmental obligations of the government as well as the national obligation under the Convention on Biological Diversity, United Nations Framework Convention on Climate Change and United Nations Convention to Combat Desertification.

With in-depth understanding on the adverse effects of the change in biological resources, climate change and land degradation on development, economics, society, environment and livelihood of people especially local communities, Ministry of Environment has tried its utmost with relevant agencies and donors to undertake the National Capacity Self-Assessment and Action Plan for capacity development on biodiversity, climate change and land degradation to contribute to the poverty alleviation. This Action Plan includes priority projects with appropriate on real situation in Cambodia in response to urgent needs and concerns in the country to adapt to the negative influence of climate change. Through several consultations with local communities and policy makers, provincial and national workshops, interviews with stakeholders, and surveys, we identified projects for capacity developments pertinent to the three conventions: 53 projects within short term (1-3years), 53 projects within medium term (4-6 years), and 54 projects within long term (7-10years) focusing on strengthening capacity at individual, institutional and systemic levels. Building capacity at individual level would assist officials of relevant ministries, departments, provincial departments, and higher education institutions to have a capability to undertake national and international obligations under the three conventions. Building capacity at institutional level pays attention on the preparation of legislations, Action Plans and policies on biodiversity, climate change and land degradation. Building capacity at systemic level would help in coordinating between relevant agencies, the flow of information and environment enabling easiness for leaders and decision-makers in managing biodiversity, climate change and combating desertification.

As elaborated early, The National Capacity Self-Assessment and Action Plan for Biodiversity, Climate Change and Land Degradation to contribute to the poverty alleviation fully meet to the Development Goals of the Royal Government of 

Cambodia as stipulated in “Rectangular Strategy for growth, jobs, equity, and effectiveness”, Cambodia’s Millennium Development Goals, as well as National Strategic Development Plan 2006-2010, which was officially adopted and promulgated by the National Assembly. Implementing projects proposed under this Action Plan will enhance capability of Cambodia in fulfilling obligations of the three conventions and contribute to the poverty alleviation.

Ministry of Environment determines to undertake works with relevant agencies to transform national capacity building activities for biodiversity, climate change, and land degradation into real actions with real outputs. In this regard, I would like to appeal for support and cooperation with relevant ministries, departments, provincial departments of the government, NGOs, IOs and donor communities to ensure success in implementing this Action Plan.

Finally, I would like to thank relevant stakeholders for their efforts in contributing to the preparation National Capacity Self-Assessment and Action Plan for Biodiversity, Climate Change and Land Degradation to contribute to the poverty alleviation. I sincerely thank to GEF/UNDP for fruitful cooperation and development of this important document. I would like also to renew our determination in successfully implementing the National Capacity Self-Assessment and Action Plan for Biodiversity, Climate Change and Land Degradation to contribute to the poverty alleviation.

Phnom Penh 11 January 2007.  
Senior Minister, Minister for Environment



HE. Dr. Mok Mareth

## A SUMMARY FOR DECISION-MAKERS

The Cambodia National Capacity Self-Assessment (NCSA) Project looks into existing capacities and capacity needs in Cambodia, to address domestic environmental issues and concerns that are also concerns of three United Nations conventions on the environment: the UN Convention on Biological Diversity (UNCBD), the UN Framework Convention on Climate Change (UNFCCC), and the UN Convention to Combat Desertification (UNCCD). Cambodia is a party to all three conventions. Addressing the issues and concerns within its jurisdiction is Cambodia's obligations under the three conventions.

The Cambodia NCSA Project is an assessment of Cambodian capacities, done by Cambodians. It is an undertaking of the Royal Government of Cambodia (RGC) with support from the Global Environment Facility (GEF) and the United Nations Development Programme (UNDP).

The project has two principal segments, one following the other: (1) stock taking and thematic assessment (assessment of existing capacities and capacity needs in Cambodia), and (2) developing an Action Plan to embark on building up the needed capacities in the country in the short- (1-3 years), medium- (4-6 years), and long- (6-10 years) terms.

The *Stock Taking segment* (which is the subject of this report) involves a series of several activities. These include (1) an inventory of Cambodian obligations under each of the three conventions; (2) the determination of the capacities that are required to fulfill the obligations (through a process involving Cambodian experts and staff of technical ministries principally the MOE, MAFF, MOWRAM, MRD, MIME and MLMUPC), (3) assessing existing capacities, (4) determining present capacity needs, (5) identifying the constraints on developing the relevant capacities in Cambodia, and (6) assessing for common and cross-cutting issues and capacity needs that impinge on the capacities to fulfill the obligations to the three conventions.

The *Action Plan*<sup>1</sup> segment follows the completion of the stock taking and thematic assessment segment. (It will be the subject of a separate report following this report.)

### **Definition and Assessment of "Capacity"**

"Capacity" is operationally defined in this assessment as "capability + commitment". "Capability" is having the human skills to do the needed tasks and the financial resources to defray the costs for doing the tasks. "Commitment" is having agencies or organizations properly mandated to do the tasks, and the public support for doing the tasks. Here, capacity is deemed relative: it is a function of both the extent of available capability and commitments, and of the scale of the problems that need to be addressed.

*Existing capacities* in Cambodia to fulfill the obligations are assessed through a modal analysis of a 4-tier Likert rating of their 4 dimensions: *human, financial, organisational, and public support*. The ratings are obtained from interviews and focused group

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<sup>1</sup> The Original name of the document is Stock-Taking, Thematic Assessment and Action Plan, the name on the cover page has been modified.

discussions conducted over three months of selected staff of convention-relevant ministries, departments, academe, research institutions, NGOs, and international organizations (IOs). The ratings are validated from a review of documents on recent environmental undertakings in Cambodia and in a series of stakeholders' workshops conducted in Phnom and Kratie province.

## **Findings on Existing Capacities**

The capacities are insufficient, over-all, for all three conventions. They are rated as "lacking" in a scale of "severely lacking", "lacking", "sufficient", and "more than sufficient". But certain dimensions (mainly human, organizational and public support) of several capacities (mainly developing policies and plans and educating the public) stand out as bright spots. These are where capacity levels range from "lacking" to "sufficient" and even, in a few instances, "more than sufficient." These are mainly capacities of civil services, IOs, academic and research institutions, NGOs and private businesses.

## **Identification of Capacity Needs**

Thematic capacity needs (capacities to address the concerns of the conventions) are identified on the basis of which dimensions of the capacities for addressing an obligation (to either three conventions) are less than "sufficient".

## **Constraints to Developing Capacities**

The constraints to developing the needed capacities in Cambodia are described in terms of the conditions in the country (relating to its development and its development agenda), promote or inhibit the build up of these capacities. These constraints include conditions in the public service that hamper its ability to muster trained personnel and other resources to address the relevant environmental concerns in the country. These are conditions that influence the sufficiency, efficiency and sustainability of national capacities in Cambodia to address the domestic problems that are the concerns of the three conventions.

## **Common and Cross-Cutting Issues and Capacity Needs**

The assessment includes an identification of *common issues and capacity needs* spanning the three themes of the conventions, and which affect individual, institutional and systemic levels of capacities in Cambodia. Ten (10) common issues and eleven (11) common capacity needs are identified. *Cross-cutting issues and capacity needs* are also identified. These pertain to environmental, economic and socio-political conditions in the country that influence individual, institutional and systemic capacities for attending to the environmental issues that are of interests to the three conventions. They indicate the extent that present conditions of the Cambodian economy and development affect the capacities to fulfill the obligations to the conventions. Twenty-one (21) cross-cutting issues and fourteen (14) corresponding capacity needs are identified.

## Action Plan

The development of the identified capacity needs are prioritized in the short- (1-3 years), medium- (4-6 years), and long- (7-10 years) terms:

Priority Actions	Short-term (1-3 years)	Medium-term (4-6 years)	Long-term (7-10 years)	Total
1. Biodiversity Conservation	12	10	11	33
2. Climate Change	12	10	9	31
3. Combating Desertification	7	6	13	26
4. Common capacity needs	11	15	8	34
5. Cross-cutting capacity needs	11	12	13	36
<b>Total</b>	<b>53</b>	<b>53</b>	<b>54</b>	<b>160</b>

A summary of estimated budget to implement the 53 priority actions in the short-term has been prepared to assist relevant agencies in mobilize resources to develop capacity in the short-term on biodiversity, climate change, land degradation, common issues and cross-cutting issues. Total budget required to implement the 53 priority actions amounting to USD16.15 million.

A Monitoring and Evaluation Plan is also presented. It is designed to track the progress of capacity development in Cambodia across agencies, sectors and tiers of social organization and governance in the country.

Recommendations are offered. These relate to embarking on capacity development projects in Cambodia and to appreciating (and addressing) certain risks to capacity development programs in the country. Four proposal synopses are developed to seek funding from donors to ensure the advance implementation and sustainability of the Action Plan. These are:

1. Developing Landscape and Natural Resources Mapping and Tools for Biodiversity Conservation, Climate Change Vulnerability Assessment, and Land Degradation and Drought Control in Cambodia;
2. Strengthening Interagency and Stakeholders' Coordination on Environmental Actions;
3. Developing and Adopting a Comprehensive and Complementary Policy and Legal Framework on Sustainable Use and Conservation of Biological, Land and Water Resources in Cambodia;
4. Promoting National Education and Public Awareness on Biodiversity Conservation, Climate Change and Land Degradation and Drought in Cambodia.

# CHAPTER ONE

## OVERVIEW OF THE CAMBODIA NCSA PROJECT

### 1.1 THE CAMBODIA NATIONAL CAPACITY SELF-ASSESSMENT (NCSA) PROJECT

The Cambodia National Capacity Self-Assessment Project is a *process* in which relevant government organizations and individuals in Cambodia determine *for themselves* how much the country, at this time, is able to fulfill its obligations to three (3) United Nations conventions on the environment:

- The United Nations Convention on Biological Diversity (UNCBD)
- The United Nations Framework Convention on Climate Change (UNFCCC)
- The United Nations Convention on Combating Desertification (UNCCD)

Cambodia is a signatory and a party to each convention. The country is obligated to contribute toward achieving their goals. It is expected that Cambodia will implement measures, and in collaboration with other countries, address the environmental concerns of the conventions *in* Cambodia, to the extent that is expected (in each convention) of countries in development stages like itself.

The NCSA process involves constant validation of findings. No findings on Cambodian capacities (and capacity needs) are established unless reviewed and concurred to by different RGC agencies, experts in academe and NGOs, and stakeholders. The final validation is with the Council of Ministers.

### 1.2 JUSTIFICATION FOR UNDERTAKING AN NCSA IN CAMBODIA

Cambodia faces problems on its environment. They include problems that are among the *thematic concerns* of the three conventions.

- 2 Biodiversity loss, which is the concern of the UNCBD, could result in Cambodia's losing its unique and valuable genetic pool, many of which are found in this general area of mainland Southeast Asia and nowhere else in the world (e.g., the Kouprey (*Bos Sauveli*, java rhinoceros, Siamese crocodile). Cambodia's forests are unique in that they are among the last remaining fringes of the dipterocarp forest biome in Asia. Forest covers still remained more than 11 million ha (61% in 2003). The genetic resources of the country, spread across over 3.3 M ha of protected areas nationwide, could prove valuable in a world that is just now expanding its biotechnological industries for agriculture, pharmaceuticals, and veterinary products.
- 3 Climate change, which is the concern of the UNFCCC, could result to altered patterns of rainfall and monsoons and to sea level rise that can affect coastal fisheries and farming in Cambodia. Sea level rise can lead to increased salt water intrusion into inland water tables and this can affect the freshwater supply (and farming practices) in the country. Climate change can alter drought regimes and is expected to lead to more frequent and more severe

weather events and to the resurgence of certain pests and diseases. These put Cambodian agriculture, food security, economy and society at risk and vulnerable to serious harm.

- 4 Land degradation and drought (with desertification being defined as the most serious degree of land degradation) are the concerns of the UNCCD. The same are major economic, social and political concerns in Cambodia where 80% of the population is dependent on agriculture for income and subsistence. Land degradation is most severe in coastal areas and in the border with Vietnam. Kampong Speu is experiencing widespread loss of soil fertility. Seam Reap has widening sandy soils. Svay Rieng is experiencing acidic soils while in Kampot the soil is increasingly becoming saline.

The NCSA project allows for Cambodians – on their own – to identify the areas of strengths and weaknesses in the country to address these concerns. It allows Cambodia, as a sovereign state, to pinpoint what capacities it needs to develop to address national concerns that are also the concerns of the three UN conventions. Cambodia can be more precise on which capacities it shall need to focus upon and to prioritize when developing internal, bilateral and multilateral investments on capacity development in the country.

### **1.3 THE GOALS AND OBJECTIVES OF THE CAMBODIA NCSA PROJECT**

The *goal* of the project is to develop and strengthen national capacities for sustainable management and use of natural resources and of the environment, for the benefit of the Cambodian poor.

The *primary objective* is to identify country level priorities and needs for capacity development, to address global environmental management requirements, particularly the thematic concerns of the three UN conventions.

Its *specific objectives* are to:

1. Identify country level capacity needs and priorities in Cambodia that are relevant to the thematic concerns of the three UN conventions;
2. Produce a national strategy and action plan for developing in Cambodia the capacities identified in (1);
3. Institutionalize a multi- and cross-sectoral approach in implementing a national capacity self-assessment process so as to strengthen the capabilities of Cambodians to organize and plan for executing capacity assessments;
4. Develop an awareness and understanding among Cambodian stakeholders of the importance of the NCSA process and of developing in Cambodia national capacities for locally and globally-relevant environmental management.

Objective 1 focuses on national capacities in Cambodia directly relating to the relevant obligations to the UNCBD, UNFCCC and UNCCD.

Objective 2 involves producing a National NCSA document on Cambodia that describes the existing stocks of convention-relevant capacities in the country, and an Action Plan to develop in the short-, medium- and long-terms the needed capacities in the country.

Objective 3 focuses on building up a national process to assess capacities and capacity needs in Cambodia, involving different sectors of the economy and society.

Objective 4 addresses the need to involve as many stakeholders on the conventions in the country, to develop a national ownership of the assessment process.

## **1.4 METHODS FOR NCSA UNDERTAKING**

### **1.4.1 General Approach**

The Cambodia NCSA *process* uses the *incremental approach* (as described in the UNDP/GEF Resource Kit) to identify capacity needs in Cambodia. The approach involves a two-step process of:

1. Identifying the obligations to the conventions (that are appropriate and relevant to Cambodia), then,
2. Stock-taking of the existing levels in the country of (a) its *thematic capacities* (i.e., its capacities that are directly relevant to addressing the environmental problems that are the concerns of the three conventions), and (b) the *common and cross-cutting issues and capacity needs* that affect the thematic capacities.

“Capacity” is operationally defined in a manner that lends it to be assessed in levels across agencies and sectors in Cambodia. Existing levels of the capacity are qualitatively determined (here referred to as “stock taking and thematic assessment”) for different agencies and sectors that are relevant to the conventions. But these are cross-checked and validated across at least two other sources of information about the capacities. “Capacity needs” are identified from the assessed levels of existing capacities.

An analysis of the strengths, weaknesses, opportunities and threats (SWOT) to developing the needed capacities in Cambodia, is done to identify (a) the constraints on their sufficiency, efficiency and sustainability, and (b) the issues and capacity needs at the individual, institutional and systemic levels that are common to or cut across them.

An *Action Plan* (to develop the capacities) is put together following the final validation by the RGC of the results of the stock taking and thematic assessment process.

### **1.4.2 Definition of “Capacity”**

“Capacity” is defined as “capability + commitment”. “Capability” is having (a) the *human resources* to do the tasks relevant to the obligations, and (b) the *financial resources* to sufficiently defray the costs related to doing the tasks. “Commitment” is having the (a) *organizations* that have the legal mandate and leaderships to address the thematic concerns of the conventions, and (b) a *public support* in Cambodia for addressing the concerns.

Organizations provide the institutional infrastructure for deploying human and financial capabilities to address the concerns in continuing manner; they provide the direct indications of the commitment of the country to address the concerns. Having a supportive public provides the political impetus and legitimacy for addressing the concerns in Cambodia; it articulates a national commitment to address the concerns.

Thus, capacity has four (4) dimensions:

1. *Human capability* (or having the people, with the appropriate expertise, to do the tasks needed to be done to address an obligation)
2. *Financial capability* (or having the money to defray the costs of doing the tasks);
3. *Organizational commitment* (or having the agencies and other organized groups that have the mandates to do the tasks and to address the obligations, with the leaderships bent to get their mandates executed toward addressing the obligations);
4. *Public support* (or having a constituency, or a body of citizens and citizens' groups, that will be served, or who will benefit, if the concerns of the conventions are addressed in Cambodia [e.g., poor farmers and fishers; small and medium scales agro-industries]; this is the portion of the general public in Cambodia who "need to have" the concerns addressed in the country).

In this view, capability without commitment is *no capacity*. So is commitment without capability. Thus, levels of capacities can be assessed in terms of the level of human, financial, organizational, and public support dimensions of the capacities.

It must be emphasized that this view of capacity implies that it is *relative* to two factors:

- The *existing stocks* of human, financial, organizational and public support for addressing a problem or concern in Cambodia, and
- The *scale of the problems* that need to be addressed in Cambodia.

A high capacity can mean either Cambodia has a sufficient stock of capacities to address a problem in its existing scale, or the severity of the problem is low that existing capacities in Cambodia, even if otherwise low when compared to other countries, are sufficient to address the problem. Similarly, a low capacity might mean that existing capacities are low in themselves, or low because even if otherwise high when compared to other countries, the problem in Cambodia is much more severe than elsewhere.

### 1.4.3 Measuring "Capacity"

A four-tier Likert scale is used to compare capacity levels by dimensions of capacity, across agencies, sectors, and obligations:

- a. **Level 1** ("severely lacking"): it is the sense of those involved in the assessment that there is hardly any indicated capability or commitment that can be readily mustered in Cambodia to do the tasks relevant to an obligation, at the needed scale of the tasks;

- b. **Level 2** (“lacking”): it is the sense of those involved in the assessment that there is some capability or commitment that can be readily mustered in Cambodia to do the tasks relevant to an obligation, at the needed scale of the tasks;
- c. **Level 3** (“sufficient”): it is the sense of those involved in the assessment that there is enough capability or commitment that can be readily mustered in Cambodia to do the tasks relevant to an obligation, at the needed scale of the tasks, but with no readily available replacements for them;
- d. **Level 4** (“more than sufficient”): it is the sense of those involved in the assessment that there is more than enough capability or commitment that can be readily mustered in Cambodia to do the tasks relevant to an obligation, at the needed scale of the tasks, and there are readily available replacements for them in the country.

These are highly subjected ratings. For this reason, they are derived from a number of separate sources and processes described in the “Data Gathering” section below.

#### **1.4.4 Data Gathering**

The data to determine existing levels of convention-relevant capacities in Cambodia (and of their four dimensions) are taken from three different sources and processes. (This is a procedure referred to as “triangulation” in rapid appraisals.) Each of the sources and processes are done independent of each other. Capacity levels are indicated in terms of ratings arrived at in each source and process. These are analyzed for *modal pattern* across sources, processes, and dimensions of the capacity. The sources and processes include: (a) a desktop assessment, (b) interviews and focused group discussions conducted in relevant agencies and organizations, and (c) stakeholders’ workshops and validation held in different parts of the country (Figure 2).

##### *1. Desktop Assessment*

This involves a review of documents (reports, publications, data bases) relating to recent activities in Cambodia that are relevant to the obligations under the 3 UN conventions (see the list of the documents reviewed in *Attachment 1*). The assessment was done by the NCSA team composed of Cambodian experts from mainly government agencies, the academe, and some provided by the UNDP. (See below, “Who are Doing the Cambodia NCSA Project?”)

The desktop assessment serves to acquaint the NCSA team of the range, intensity and types of activities now (and recently) done in Cambodia, which could be useful to assess the reasonability of the ratings assigned to each capacity, and to each dimension of the capacity, in the subsequent processes to derive the ratings from agencies, organizations, and stakeholders to the conventions.

##### *2. Interviews and Focused Group Discussions (FGDs)*

These are done by the NCSA team, with selected officials and technical staff of relevant agencies, organizations, and other experts in Cambodia are the respondents (to the interviews) or participants (in the FGDs).

The interviews use an interview instrument (schedule) earlier designed by the team following its desktop assessment (see Data Gathering Instruments, *Attachment 2*). The FGDs center on topics directly relevant to the questions asked in the interviews.

The FGDs serve to also validate (correct, modify, revise, affirm) the team's earlier findings on relevant activities from the desktop assessment.

### 3. *Stakeholders' Workshops and Validation*

This process involves having representatives from different agencies, organizations and groups in Cambodia, which the team, together with representatives from the focal agencies of the three conventions, had identified as "key stakeholders" to addressing the concerns of the conventions in the country. (See list of stakeholders, in *Attachment 3*.)

The workshops serve to: (a) inform the stakeholders of the conventions, their goals and objective, and Cambodia's obligations under them; (2) present to the stakeholders for their review, the results of the initial assessments of existing levels of relevant capacities in Cambodia, as gathered from the desktop assessments, interviews and FGDs; and (3) allow the stakeholders to comment on, modify, or affirm the ratings as presented.

The workshops focus on the stakeholders conducting a SWOT of the rated capacities. These SWOTs serve to provide the NCSA team the basis for:

1. Identifying the constraints on the sufficiency, efficiency, and sustainability of the capacities in Cambodia (see "Assessment of Sufficiency, Efficiency and Sustainability Constraints", below), and
2. Identifying the common and cross-cutting issues that affect these capacities (see "Identification of Common and Cross-Cutting Issues and Capacity Needs", below).

Two stakeholders' workshops have been held, one in Phnom Penh (March 30-31, 2005) and the other in Kratie province (June 27-28, 2005).

A Third workshop was done to validate this report and the Action Plan together on October 2005 in Phnom Penh.

#### **1.4.5 Determining "Capacity Needs"**

*Thematic* "capacity needs" refer to "deficit" capacities in Cambodia relating to an obligation. These are capacities (and their human, financial, organizational, and public support dimensions) that have been determined in the NCSA process to be less than "sufficient".<sup>1</sup>

*Common* "capacity needs" refer to thematic capacity needs that are found to be less than sufficient to address the concerns of the conventions, *in* all three conventions.

*Cross-cutting* "capacity needs" refer to capacities needed in Cambodia to address issues in the country that are beyond the themes of the conventions, but which affect the thematic capacities to address the obligations to the three conventions together.

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<sup>1</sup> Refers to the final rating of the capacity when the results of the desktop assessment, interviews, FGDs and stakeholders' workshops have been taken together.

(See below, “Identification of Common and Cross-Cutting Issues and Capacity Needs”)

#### **1.4.6 SWOTs**

The strengths, weaknesses, opportunities and threats discussed and produced in the stakeholders’ workshops are expressed in terms of human and institutional problems constraining the capacities (see Workshop Proceedings, “Results of Discussion of Session 1”, in [the proceedings of the Phnom Penh First Stakeholder Consultation Workshop] and in [the proceedings of the Kratie Second Stakeholder Consultation Workshop]).

These constraints are conditions in the country that either promote or inhibit the build-up of the capacities to address the thematic concerns of the conventions.

#### **1.4.7 Assessment of Sufficiency, Efficiency, and Sustainability Constraints**

The problems and constraints on capacities identified in the stakeholders workshops are used by the team as basis for determining what conditions and needs have to be addressed in Cambodia so that the country can attain sufficient, efficient and sustainable levels of capacities relevant to the obligations.

“Sufficiency” pertains to the degree that all capacities relevant to the three conventions are at more than “lacking” levels.

“Efficiency” pertains to the degree that convention-relevant human, financial, organizational and public support assets now present in Cambodia, or which will later be developed in the country, will be engaged toward meeting the obligations.

“Sustainability” pertains to the degree that convention-relevant capacities in Cambodia will continue to be available in the country in the longest term.

The same conditions and needs are also used by the NCSA team to identify the common and cross-cutting issues and capacity needs that attend (or which affect the levels of) the thematic capacities in Cambodia.

#### **1.4.8 Identification of Common and Cross-cutting Issues and Capacity Needs**

The UNDP-GEF NCSA Guidelines refer to *synergistic* issues and capacity needs that are *common* to the efforts in the country to address the concerns of the three conventions, or which *cut across* the efforts.

*Common issues* are capacity constraints in all three thematic areas. They relate to the thematic capacities that are similarly less than “sufficient” for each convention. They are produced by the internal conditions unique to the three themes (e.g., the need to link with other sectors to make nationwide observations of environmental events) and to the activities that need to be done to fulfill the obligations to the three conventions (e.g., preparing national reports). They are for the most part within the ambit of responsibility of the agencies and organizations in Cambodia that have the mandates

pertinent to the conventions. These are issues that are within the authority of the focal agencies to either address entirely or to mitigate. Common issues are in three levels: *individual* (relating to the human resources needed to achieve a certain level of capacity), *institutional* (relating to the financial and organizational dimensions of the capacity) and *systemic* (which relates to the public support and other institutional factors that determine the level of human, financial, organizational and public support for addressing an obligation).

*Cross-cutting issues* are capacity constraints on all three thematic areas, but, in this case, engendered by conditions occurring on a wider scope than any or all three themes. They are produced by external conditions rooted on circumstances beyond the three themes and beyond their focal agencies (e.g., the fiscal condition of the government), and are, for the most part, outside the ambit of the mandates of the focal agencies to address entirely, but which, at best, with some added capacities, they can mitigate. They are at best exogenous to the thematic capacities. Like the common issues, cross-cutting issues, too, are in three levels: *individual*, *institutional*, and *systemic*. But because they are about conditions that extend beyond the thematic concerns (and beyond the authority and mandates of the focal agencies), cross-cutting issues are identified by way of three categories: *economic*, *environmental*, and *socio-political*. (These coincide with the three dimensions of sustainable development so that viewing them this way links them to the wider issues on development policy in Cambodia.). Common and cross-cutting *issues* and *capacity needs* are identified using a two-step process:

1. Identification of the *technical issues* that are common to and cross-cutting the three themes, in three categories: individual, institutional, and systemic. (The latter [cross-cutting issues] are further classified into three: economic, environmental, and socio-political.) The issues are identified first by the team, and then validated from the results of the stakeholders' workshops.
2. Identification of *capacity needs* to address the technical issues. These are categorized into three levels: (a) those relating to *human resources* (individual level capacities); (b) those relating to *organizational and financial arrangements* (institutional level capacities), and (c) those relating to *governance systems* (systemic level capacities).

# CHAPTER TWO

## RESULTS OF THEMATIC ASSESSMENTS

### 2.1 CAMBODIA'S CAPACITY NEEDS RELATING TO THE THREE U.N. CONVENTIONS

In general, Cambodia's "capacity needs" for the three conventions are extensive. It needs to upgrade most required capacities of all sectors for almost all obligations. To do this, it needs to address the particular dimensions of the capacities that are presently short of being "sufficient".

### 2.2 THE CONSTRAINTS TO BUILDING UP CONVENTION-RELATED CAPACITIES

A number of conditions **PROMOTE** the build up of Cambodian capacities for the conventions. Among them are:

1. *The increasing stability of governmental and political institutions which encourage public and private investments on capacity development.*

After decades of civil war and the general election in 1993, a constitutional monarchy is in place. The government has a clear principle for development policy. Political processes have been regularized. Long-term plans and policies have been adopted.

The long-term plans create an environment for:

- Professional growth and development (or the build up of human capabilities)
  - Investments (the build up of financial capabilities)
  - Organizational specialization (the build up of mandates)
  - The consolidation of public support for pursuing different interests of the country (including on the environment).
2. *The increasing number of academic institutions offering degree programs and engaged in some research that are relevant to the conventions.*

Since 1998, over 20 new universities and technical schools have been established in Cambodia. These are mostly private and include only those with a significant array of offerings involving more than two faculties. Their programs cover biology, physics, chemistry, engineering, agriculture, and natural resources, which are relevant to the conventions. The graduates of these institutions have the potential to be eventually involved in convention-related undertakings in Cambodia.

3. *The presence of a large community of foreign-based and local NGOs that are engaged in activities relevant to the conventions.*

Cambodia's NGO community is large. Among them are noted NGOs that have global reach and which could bring into the country experts (and funds) relevant to the conventions.

Cambodian NGOs have extensive reach among local communities in the country, up to community and village levels. This is a potent dimension of capacity that facilitates public participation in undertaking the activities related to the conventions.

4. *The presence of a large community of donors, all committed to assist Cambodia build up its basic institutions and its national capacities.*

The donor community in Cambodia is large and diverse. They include both bilateral (e.g., USAID, DANIDA, AusAID, SIDA, JICA, CIDA, DFID, others) and multilateral donors (e.g., UNDP, FAO, ADB, WB). These donors are all committed to assist Cambodia build up its institutions and capacities.

Donors offer a wide range of opportunities for capacity development in Cambodia, among them scholarships, technical assistance, specialized training, acquisition of equipment and facilities, and projects. Their interests cover many areas that are relevant to the conventions: e.g., environment, biodiversity conservation, vulnerability assessment, adaptation, agriculture, forestry, fishery, and land management.

5. *The importance placed on agriculture by the government and the increasing mainstreaming of environmental and natural resource protection in national development strategies.*

Cambodia depends heavily on farming and resource extraction. Agriculture is recognized in both the Socio-Economic Development Plan (SEDPII 2001-05) and National Poverty Reduction Strategy (2003-05) to contribute significantly to economic development and livelihood. Sustainable natural resources management and conservation has become an integral part of the RGC's strategy for sustainable economic growth and development. The RGC recognizes that sustainable economic growth and development can not be achieved without the wise management and conservation of the country's renewable and non-renewable natural resources (SEDPII 2001-05).

The Government's Rectangular Strategy launched in July 16, 2004 calls for strengthening the agriculture sector through improved production and land and forestry reform. The RGC Political Platform for the third mandate of the Assembly emphasizes the needs for natural resource management and environment protection. To achieve these objectives, the government seeks to widen community-based management, aquaculture production, and protection of forest cover and reforestation. In agricultural improvement, physical infrastructure development including irrigation system is envisioned.

The government recognizes that poverty reduction, food security and socio-economic development are linked to effective protection and sustainable use of natural resources (SEDPII, 2001-05). Forest management is recognized as a basic element of sustainable social, economic and environmental development (Forest Law, 2002). Rational and sustainable management, use and development of natural resources are encouraged in the Law on Environmental Protection and Natural Resource Management (1996). The needs for measures to protect endangered animal species for various purposes are stated in Article 49 of the Forest Law (2002).

The Land Law (2001) defines areas where land titles can or cannot be granted such as forest protection areas, fish sanctuary, and Protected Areas. Penalties are stipulated against officials who collaborate in illegal activities involving natural resources. It defines property rights on non-mobile assets to ensure the protection of these rights in line with the Constitution of 1993. Similarly, Article 37 of the Forestry Law (2002) states the rights of local and indigenous people in practicing their traditional knowledge on state forestland outside of permanent forest reserves.

The current Forestry Law (2002) prescribes and provides for the management framework, harvesting, use, development and conservation of forests in Cambodia, including on forest plantations under the jurisdiction of the MAFF. Article 34 focuses on the trade of wild seeds and plants which is placed under the control of the Forest Administration.

The Law on Environment Protection and Natural Resource Management (1996) promotes public participation in the protection of natural resources and environment, in which Article 9 requires cooperation with relevant agencies for Environmental Impact Assessment (EIA).

Protected Areas have been recently recognized as a tool for measuring the effectiveness of governance reform (PAD, 2003). (This is in the area of resource conservation.) PAs and other forms of designation have been established. There are today 23 PAs in Cambodia. They cover 3.3 M ha (or 18% of the country's territory)<sup>2</sup>. In addition, 8 Conservation Sites (for biodiversity, genetic resources and as wildlife habitats) had been designated. They cover 1.48 M ha and set to be administered by MAFF. The Tonle Sap lake system (1,393,339 ha) has been designated for protection and sustainable use under the framework of the Biosphere Reserve Network<sup>3</sup>, and three areas have been listed as Ramsar sites<sup>4</sup>.

The current fishery law (enacted in May 2006) has been promulgated. It sets elaborates guidance on fishery resource exploitation and management including the designation of certain fishing grounds as fish sanctuaries and for different uses according to the scale and type of fishing. The fishery Master Plan and Fishery Policy and Strategy (2004) stipulate specific guidelines on the sustainable use and conservation of fishery resources (see also the MAFF's Action Plan, 2004-08). Apart from this, there are relevant legal instruments in handling fishery resources and use such as Sub-decree on management of fisheries by local communities (2005) that participates in both conservation of fisheries and poverty reduction.

Implementing regulations have been issued to strengthen environmental law enforcement. For example, following Prakas No. 1 by Prime Minister to curb illegal logging, an implementing Prakas was issued by the Minister of Environment as mechanism for monitoring and recording forest crimes in PAs (#429, dated 24/03/1999).

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<sup>2</sup> Royal Decree on Creation and Designation of Protected Areas, 1993

<sup>3</sup> Royal Decree on Creation and management of Tonle Sap Biosphere Reserve No. 0401/070

<sup>4</sup> Three Ramsar Site covering 54,600 ha designated upon Cambodia's accession the Convention on Wetlands that was entered into force for Cambodia in Oct. 1999.

Other mechanisms to strengthen environmental enforcement include the joint proclamation by MOE and MOJ (#40/2002, dated 10/10/2002) on the *Application of Guidelines for Conflict Resolution*, which authorize relevant officials of the MOE to function as justice police.

The sub-decree on EIA (1999) requires that private and public projects (which may also cover the commercialization and handling of LMOs) submit EIA reports for review by the MOE. It defines the types, scales, and activities of projects needing to be assessed for environmental impacts and encourages public participation in the EIA process.

A number of government units have been established to respond to the needs for conservation of resources such as the Coordinating Unit for the Tonle Sap, the Research and Development Institutes for Fisheries, Forestry and Agriculture under MOE, DOF, FA and MAFF, respectively.

Through collaborative efforts among the ministries, various management tools have been developed and tested to minimize the threats to biodiversity. For example, a significant component of the Biodiversity and Protected Area management scheme in Virachey NP is the development and testing of ways to involve local communities in forest protection.

Other conditions **INHIBIT** the build-up of the pertinent capacities in Cambodia:

6. *The present of the civil service that is still struggling to re-establish itself after it had been effectively dismantled for years prior to the 1990s.*

Civil service does not have full competency. The promotion and reward system in the civil service is not quite autonomous (but intimately linked to) the system of political accommodations. However, state has sent hundreds of civil servants to overseas for short term and long term training including Japan, Australia, Singapore, China, USA, Canada, EU, Vietnam, Thailand etc. as an effort or incentives to promote their motivation.

7. *Capacity and activities to address environmental issues.*

Cambodia has the government that was born by the election in 1993. The political leadership has to initially focus its attention on rebuilding the political infrastructure and on building up the legitimacy of the State and of the government. Environmental matters like biodiversity conservation, climate change, and land degradation become, effectively, *residual concerns* of the political leadership.

This *de facto* low importance given by the political leadership on environment – notwithstanding its having established the Ministry of Environment, its having enacted laws and regulations on natural resources and environmental protection, and its having accepted a number of ODAs on environmental concerns – is not lost to the general Cambodian public.

Consequently, *national* attention on environmental concerns is likewise low, at best sporadic. Investments on building up capacities to address environmental concerns are neither widespread nor intense even though the government has integrated environmental curriculum into college and academic institutions.

8. *The administrative systems and mechanisms in the RGC.*

Administrative systems and mechanisms like checks-and-balance systems, governance controls, salary and reward systems, telecommunications, data bases, information systems and networks, reporting systems, even record systems, are yet being slowly built up in Cambodia.

But these systems and mechanisms are fundamental to consolidating capacities in Cambodia. Their continued weakness is eroding the ability of the RGC to muster the capacities that might be available, however modestly, from different sources and sectors in the country.

*These constraints influence the sufficiency, efficiency and sustainability of the human, financial, organizational and public support components of national capacities to address domestic environmental concerns that are also the concerns of the conventions.*

*They interplay to drive or deter capacity build-up in Cambodia.*

*The degree they do so either way is nested on how the country is able to attend to – and acquire the capacities to address – certain issues that are either common or cross-cutting the capacities to address the obligations to the three conventions.*



## CHAPTER THREE

### ASSESSMENT RESULT OF COMMON AND CROSS-CUTTING ISSUES AND CAPACITY NEEDS

#### 3.1 COMMON ISSUES AND CAPACITY NEEDS IN ALL CAMBODIAN CAPACITIES TO FULFILL ITS OBLIGATIONS TO THE THREE U.N. CONVENTIONS

Ten (10) common issues and eleven (11) corresponding capacity needs are identified in this assessment at individual, institutional and systemic level.

At the INDIVIDUAL LEVEL the issues pertain to the technical and organizational skills of the staff and personnel of focal agencies and other convention-related organizations in Cambodia.

- *Technical Skills*

Most staff engaged in executing mandates to address environmental concerns in Cambodia has generally poor levels of technical preparation and training. While there are experts in different ministries and related organizations in the country (some with post-Baccalaureate degrees like Master's degrees or Doctoral degrees) they are by far too few or, because of their credentials, they are overloaded with administrative work.

A large proportion of the staff and personnel of convention-relevant offices in the technical ministries (like MOE and MAFF), have minimum skills to do biodiversity conservation, adaptation and vulnerability assessment, or land degradation and drought mitigation. Only a few have the correct technical preparation and expertise, and those that do are more easily prone to leave government service to work with IOs or NGOs. The many that remain are hardly able to understand the science behind their jobs, the policies and legal framework of what they do, nor even, among some, the terms of reference of their employment.

These affect several capacities required in the three conventions, mainly:

1. Capacities to develop and execute programs;
2. Capacities to incorporate thematic concerns in national plans;
3. Capacities to prepare reports and communications on Cambodia's progress to fulfill the obligations;

Capacities to collaborate with others on addressing the thematic concerns of the conventions.

- *Organizational Skills*

Organizational skills include the ability to work with others, coordinate actions with others who are doing related work, network with other groups and entities, negotiate and compromise, and mitigate or resolve conflicts among those engaged in the work being done. Most personnel in the relevant agencies and organizations doing work on the concerns of the three conventions have low levels of these skills.

This condition affects at least three kinds of capacities required in all three conventions:

1. Capacities to engage and share information with other agencies;
  2. Capacities to engage, share information and negotiate with stakeholders;
  3. Capacities to coordinate with other sectors (business, academe, research institutions, NGOs) to achieve a complementation of capacities to address the concerns of the conventions.
- *Capacity Needs*

At least three capacities are needed to address these two individual-level issues in Cambodia:

1. The capacity to upgrade the *technical skills* of all the staff in the relevant agencies and other organizations, who are engaged in biodiversity conservation, climate change adaptation and mitigation, and on combating land degradation and drought. This includes the highest technical leaderships in these agencies and organizations and their policy, program and field staff. The skills to be upgraded include skills to understand and track (a) progress on the science behind what they are doing, (b) the technologies that are emerging, (c) the policies and legislation pertinent to their mandates, (d) progress on similar skills being developed elsewhere, and (e) the research and development issues that pertain to their work.
2. The capacity to upgrade the *organizational skills* of the staff and personnel of focal agencies and organizations. These include skills in communication, networking, coordination, information management, negotiations and conflict management, among others. These also include establishing in focal agencies and organizations effective mechanisms to monitor, evaluate, and to either reward or correct good or bad performance among their staff and personnel.
3. The capacity to *procure* the trained personnel, the funding, the organizational commitment and the public support to upgrade the technical and organizational skills of the staff and personnel of focal agencies and organizations. These include the capacities to negotiate with (a) different ministries and other institutions in Cambodia that may already have the expertise on upgrading science skills or organizational development, (b) donors for technical and funding assistance for specialized training, human-power development, fellowships, formal studies, and cross-visits in centers of excellence elsewhere, and (c) local academic and research institutions to grant special tuition support, fellowships, and special accommodations (like night classes or on-the-job training) for the involved personnel.

At the **INSTITUTIONAL LEVEL** the common issues revolve around two topics: agency mandates and the monitoring and evaluation of agency performance.

- *Agency mandates*

Three issues are identified: (1) insufficient mandates to implement existing laws, (2) insufficient laws to enable the full execution of mandates, and (3) overlapping mandates leading to confusion in the implementation of programs and policies. These affect convention-related capacities that involve governments being expected to implement policies, execute actions, and to provide the lead initiatives, to address biodiversity conservation, climate change, and land degradation.

- *Monitoring and Evaluation*

The performance of the focal ministries, other relevant ministries, and other organizations in Cambodia that similarly address biodiversity conservation, climate change-related topics, and land degradation and drought, are not regularly nor properly monitored. This affects all convention-related capacities that involve (a) reporting on progress made in Cambodia toward fulfilling the obligations, and (b) coordinating across sectors to address the concerns of the three conventions.

- *Capacity Needs*

At least five capacities are needed to address these institution-level issues in Cambodia:

1. The capacity to *strengthen sectoral laws and regulations* (on biodiversity conservation, climate change, and land degradation) toward ensuring that they are clear, comprehensive and supportive of the objectives, mandates and goals of the focal ministries and related agencies;
2. The capacity to develop strong, concise and implementable policies, plans and guidelines, for fostering a *synergy of missions and mandates* among the focal ministries (MOE and MAFF);
3. The capacity to *review the mandates* of (and pertinent regulations on) the focal ministries and related agencies, toward reducing their overlaps on the concerns of the three conventions;
4. The capacity to improve the implementation (or design, if necessary) of the existing mechanism for *monitoring and evaluating* the convention-related performance of focal and other concerned ministries (MOE, MAFF, MoWRAM, MRD, MIME, MLMUPC);
5. The capacity to *procure* the trained personnel, the funding, the organizational commitment and the public support to develop the preceding four capacities in Cambodia, including the capacities to negotiate with other ministries and institutions in the country that may already have related expertise to develop them, and with donors for relevant technical and funding assistance.

At the **SYSTEMIC LEVEL** the common issues relate to networking and information sharing and to coordination among the focal agencies and their relevant departments.

- *Networking and information sharing*

There is hardly any sharing of convention-pertinent information among the focal ministries (MOE and MAFF). The system to network the generators and users of the information across the two ministries (and their relevant departments) is not well-developed, at least to a point in which coordination among them can be facilitated. This issue affects the convention-related capacities that require coordination among agencies and organizations in both inside and outside of government, to mainstream biodiversity conservation, climate change adaptation, and combating land degradation and the effects of drought, in national development plans and programs.

- *Coordination among ministries and departments*

This is presently low, aggravated by (a) constant bickering for political space and ascendancy, (b) upstaging mandates, and (c) overlapping functions. MOE and MAFF are at odds as to which ministry will prevail over certain convention-relevant functions (in particular biodiversity conservation, mitigating climate change vulnerabilities in different ecosystems, and on controlling land degradation). The delineation of their functions are not harmonized. *E.g.*, MAFF has ascendant control of biodiversity conservation in forest areas and MOE over forests in declared Protected Areas. These foster confusion and, because they often extend to having their actions supported by higher political leaders, also avoidance and aversion to coordinating actions among them, their departments, or with other agencies and organizations. This issue affects all convention-related capacities that require coordinated government actions to address the concerns of the three conventions.

- *Capacity Needs*

At least three capacities would be needed to address these two system-level issues in Cambodia:

1. The capacity to develop and implement standardized methods, approaches and tools for fostering *inter- and intra-agency data and information sharing*, particular among MOE and MAFF as focal agencies of the conventions, among pertinent departments in the two ministries, and with other agencies that have mandates related to the conventions;
2. The capacity to establish and maintain effective *means and tools of communication and coordination* (e.g., websites, CHM, BCH and CC-website) between MOE and MAFF (and their relevant departments) and among other convention-relevant agencies and organizations in Cambodia.
3. The capacity to *procure* the trained personnel, the funding, the organizational commitment and the public support to develop the preceding two capacities in Cambodia, including the capacities to negotiate with other ministries and institutions in the country that may already have related expertise to develop them, and with donors for relevant technical and funding assistance.

### 3.2 THE CROSS-CUTTING ISSUES AND CAPACITY NEEDS THAT AFFECT ALL CAMBODIAN CAPACITIES TO FULFILL ITS OBLIGATIONS TO THE THREE U.N. CONVENTIONS

The assessment identifies twenty-one (21) cross-cutting issues and fourteen (14) corresponding capacity needs (see Table 3.2, “Summary of Cross-Cutting Issues and Capacity Needs”).

The issues are spread across different categories of capacities (individual, institutional, systemic), and dimensions of sustainable development (environment, economy, socio-political).

The **INDIVIDUAL LEVEL** issues revolve around the value and incentives for environmental expertise in the public sector.

- *Value of environmental expertise*

There is no particular and sufficiently premium placed on environmental expertise in the government. In fact, the MOE is considered among the politically weakest ministries in the country and budget allocated for the ministry is limited to undertake its mandate covering a wide range of concerns (like natural resource degradation, genetic conservation, pollution, and environmental impacts of development) which eventually affect the food security and security of communities in many parts of the country. Moreover, relevant ministries dealing with environment have not adequately strengthened capacity in addressing environmental problems. It is not surprising that, in general, the government is unable to procure high quality trained and experienced staff to execute its technical mandates and to provide effective leaderships in implementing its technical programs, including on the environment. This situation affects all convention-relevant capacities that involve government undertaking technically-sound measures to address the concerns of the conventions, and taking the lead in multisector efforts to address the obligations.

- *Incentives for environmental expertise*

This follows the poor value placed on environmental expertise. But in this case, it involves government’s basic inadequacy to make it attractive for trained personnel to join (and stay in) the public service, or to be “out there” where the real problems are. It includes the poor premium on allocating opportunities for professional growth for technical experts in government, or to provide them with necessary support (like access to information). This inadequacy extends to those doing environmental work and so either they do not bother to enter government service, or if they do, they stay in central offices in Phnom Penh (and hardly do field work), or they quickly leave at the first sight of better opportunities elsewhere. This situation also affects all convention-relevant capacities that involve government consolidating technically competent responses to the concerns of the conventions.

- *Capacity Needs*

At least four capacities are needed to address these individual-level issues in Cambodia:

1. The capacity to upgrade the *value and rewards* for technical and environmental professionals in the public service;

2. The capacity to expand and improve the system of *allocating opportunities* for professional growth for technical personnel, while in the public service; this includes the capacity to systematize, make more equitable, and rationalize the allocation of the opportunities and to improve the level of human resource development and management in the public sector; this also includes the capacity to design and continuously operate in-service technical training for public sector personnel;
3. The capacity to upgrade the *technical and political support systems* for leaders in technical agencies including MOE and MAFF
4. The capacity to *procure* support to build up the 3 preceding capacities

The **INSTITUTIONAL LEVEL** issues revolve around natural resources management and the delivery of public service.

- *Natural resources management*

As a sector, natural resources fall under the purview of many ministries. Principal of these are the MOE and MAFF. As noted earlier, their mandates are not always harmonized, nor are their actions always coordinated on the ground. These result to confusion on managing the nation's natural wealth, and to the erosion of government control over access to these resources including land. The enforcement of regulations is also weakened and so also the controls on the adverse impacts of development on natural resource systems and communities (including indigenous peoples). This situation affects all convention-related capacities involving government taking the lead in undertaking multisector action to address the concerns of the conventions.

- *Delivery of public service*

The Cambodian civil service has yet to fully recover from prior years of dismantling and neglect. The bureaucracy in many ways is still infantile (in that it experienced rebirth only less than a decade ago). Essential services are still to be delivered well, if at all. With so much needs competing for attention by a scarcely endowed government, environmental services (and the delivery of services to address environmental concerns) are quite low in the totem poles of priority services by government. The budget for the environment sector is low, and so also the ability of the environment-related ministries to enforce environmental regulations, to inform the public and decision makers in all levels of government about these regulations (and the problems they seek to address), and to involve communities and stakeholders in actions to address the problems. This present inadequacy of government affects all convention-related capacities that require the public sector to consolidate general support for meeting the obligations.

- *Capacity Needs*

Five capacities are needed to address these institutional-level issues in Cambodia:

1. The capacity to develop and enforce *national master plans* on land use and natural resources management; this includes the capacity to improve (systematize, make more equitable, and rationalize) the tenure systems over

lands and natural resources; the plans are to be properly supported by budget and shall extend to (and involve) the lowest levels of government in Cambodia;

2. The capacity to develop and implement *economic and other incentives* to motivate resource users and managers to adopt sustainable practices; this includes the capacity to strengthen existing *environmental laws* to promote more public participation on government efforts to protect and conserve the environment.
3. The capacity to upgrade *multi-agency and multi-sector partnerships* on addressing environmental concerns in the country, including on producing integrated plans and strategies to manage natural resources and developing more local investments on the environment; this is to achieve higher complementation of efforts among the sectors and transparency of actions to address environmental problems;
4. The capacity to strengthen and intensify the *enforcement* of existing regulations against corruption and other practices that weaken the delivery of public services;
5. The capacity to *procure* support to build up the 4 preceding capacities.

At the **SYSTEMIC LEVEL** the issues pertain to the state of the environment and of development in Cambodia.

- *State of the environment in Cambodia*

Two environmental conditions (prevailing in the country as a whole) play into the capacities to address the concerns of the three conventions: (a) widespread deterioration of biophysical systems, and (b) population.

Large areas of the country have lost their once robust environmental systems. Riparian areas around the Tonle Sap, along the Mekong, and in coastal areas in the South, have been exposed to intense pressures for human settlements and agriculture. The Cardamom is losing wildlife due to poaching. It is also losing forests because of land conversion for human habitation and for agriculture, and because of illegal cuttings for sap, resins and timber. Desertification is occurring in Seam Reap and soil fertility has declined to very low levels in Kampong Speu. Soil acidity has been rising in Svay Rieng and so is soil salinity in Kampot.

Population fluxes are much too high to lend to better planning and control of resource uses. Fertility and mortality rates are high, as are the mobility and migration rates within and across the country. Population pressures on already fragile environments are becoming more intense and fluid.

These conditions affect convention-related capacities that involve addressing these issues and involving affected communities and stakeholders. The severity of the problems and the fluidity of the portions of the population that are affected, will increase the over-all costs of solving them, or of mitigating their impacts. It also increases the costs of adapting to even more severe pressures from global environmental change.

- *State of development in Cambodia*

While environment is indeed a prominent element of national development plans and programs (e.g., Cambodia Agenda 21, the Rectangular Strategy, the National Poverty Reduction Strategy, SEDP II, and also now III), environmental governance (including policy making and resource management systems) have yet to be fully mainstreamed in actual actions of the government. Budget support for environmental policy making and planning has yet to be elevated to substantive levels. The procedures for achieving high levels of interagency and multisector coordination in producing environmental policies and resource management strategies have yet to be made clear and institutionalized. This situation affects convention-related capacities that require coordinated government actions to integrate the obligations to the conventions with national development plans.

- *Capacity Needs*

At least five capacities are needed to address these systemic level issues in Cambodia:

1. The capacity to develop and execute strategies to engage different sectors on addressing environmental issues in all levels of government in the country; this involves mustering a nationwide effort to arrest environmental degradation and to improve the quality of the environment;
2. The capacity to stabilize population fluxes in all areas of the country; this includes widening livelihood opportunities for the poor to stabilize migration and mobility rates across Cambodia; this includes as well intensifying efforts to deliver reproductive health services to vulnerable mothers and infants in order to stabilize the fertility and mortality rates among the poor;
3. The capacity to develop clear procedures, systems and tools on forming environmental policies and on selecting natural resources management strategies; this includes generating and updating data and information on environmental systems and on sharing them with different users and decision makers.
4. The capacity to stimulate the build-up of local capital and investments (e.g., venture capital, endowment funds, securities) to support environmental initiatives and resource regeneration in the country;
5. The capacity to *procure* support to build up the 4 preceding capacities.

### **3.3 THE COMMON AND CROSS-CUTTING ISSUES, AND INVEST ON DEVELOPING THE COMMON AND CROSS-CUTTING CAPACITY NEEDS IN CAMBODIA**

Addressing the common issues would translate to efficient investments on developing the thematic capacities. Each unit of effort to address a common issue ends up addressing the obligations to the three conventions together. Investing on developing a common capacity need is an investment to address the three conventions, all at the same time.

This could be important to Cambodia where public assets to attend to the many needs of the country are persistently low. It can focus its efforts to develop the capacities that are common for the three conventions and thus achieve a higher value and utility of its investments.

Addressing the cross-cutting issues will ultimately end up improving all the thematic capacities, at the same time. Cross-cutting issues impinge on all the capacities and yet are for the most part beyond the mandates and ability of the focal ministries to address by themselves. A total RGC effort to address them would translate to improving all the capacities to fulfill the obligations to the three conventions.

In general, developing the common and cross-cutting capacity needs will eventually translate to strengthening the thematic capacities to do biodiversity conservation, climate change adaptation and mitigation, and land degradation prevention in Cambodia. These are, ultimately, important to Cambodia because:

1. They put substance to the Rectangular Strategy, the National Poverty Reduction Strategy (NPRS), and the SEDPs, which seek to use environmental capital to support the uplifting of peoples' conditions in the country.
2. They are directly relevant to the well-being and welfare of the majority of Cambodians, many of them poor, which the government seeks to upgrade in line with its commitment to the Millennium Development Goals (MDGs).

The extent that good environmental practice translate to improved incomes, improved water and food supplies, better health of women and children, more children in schools, better resilience of ecosystems to pests and diseases, and improved conditions of natural resources, the capacities to address the conventions will eventually also allow Cambodia to meet most (if not all) of its MDG targets.

3. They strengthen the country's ability to meet the agreements contained in the Plan of Implementation (PI) of the World Summit on Sustainable Development (WSSD). Cambodia would be better able to contribute to achieving the scheduled targets of the PI, among which are: to reduce threats to global biodiversity, mitigate and adapt to climate change, combat land degradation, mitigate the effects of drought, improve the conditions of the poor, improve food security, and secure the health and well-being of persons worldwide.

Developing the capacities in Cambodia to fulfill its obligations under the three UN conventions does pose far-reaching and wide strategic value to the country.

*A total effort to develop Cambodia's capacities to fulfill its obligations under the CBD, UNFCCC and UNCCD, will require a wide range of actions.*

*It would require building up both the thematic and cross-cutting capacity needs of the country for doing biodiversity conservation, climate change adaptation, vulnerability assessments, land degradation prevention, and drought mitigation.*

*Common capacity needs offer significant opportunities for efficiently building up the thematic capacities.*

*An **Action Plan** follows this report and it presents a schedule of undertakings to develop pertinent capacities in Cambodia in the short- (1-3 years), medium (4-6 years), and long- (7-10 years) terms.*

# CHAPTER FOUR

## ACTION PLAN

### A. PRIORITIZING CAPACITY DEVELOPMENT IN CAMBODIA

#### 4.1 REASONS FOR PRIORITIZING CAPACITY DEVELOPMENT IN CAMBODIA

The range of Convention-related capacities needed to be developed in Cambodia is extensive. All are crucial to the country's ability to effectively address the thematic concerns of the Conventions. Yet, they need to be prioritized in terms of which ones require more immediate attention than the others. For two reasons:

1. The environment and sustainability is still a challenge for Cambodia at present and in the future. They need attending to more urgently than the others. The capacities to address them pose greater impacts on national life in Cambodia than the other capacity needs.
2. Cambodia continues to face serious problems on its national life. The resources it can muster for capacity development is limited. While its needs for Convention-related capacities are urgent, so is its need to carefully balance the commitment of its limited resources across its many other urgent problems to attend to. It is imperative that the development of needed capacities in the country be prioritized accordingly.

#### 4.2 WHAT ARE BEING PRIORITIZED?

Part II of this document shows that existing thematic capacities in Cambodia are severely lacking, over-all. Capacities to attend to the thematic concerns and meet the obligations to all three Conventions are almost all weak. They hardly lend to being prioritized in that all are needed the soonest time they can be acquired. What needs prioritizing is the development of the dimensions of the capacities (human, financial, organizational, public support) in ways that will address the most number of thematic capacity needs of the country. This is the case for the biodiversity conservation, addressing climate change concerns and land degradation capacity needs and, too, the common capacity needs among them.

In the case of the cross-cutting capacity needs which are to address broad national conditions of the economy and socio-political system of Cambodia that constrain the thematic capacities, they are essentially for the highest levels of government and Cambodian society to attend to. In this instance, they would seem best addressed as aggregates of capacity needs at the individual, institutional and systemic levels and so they are prioritized accordingly (in three tiers of capacity needs) in time frames that, if addressed within that time, they can be expected to lessen their inhibiting effects on the thematic capacities that are being developed.

#### 4.3 HOW ARE THE PRIORITIES DETERMINED?

Five (5) criteria are used to determine the priorities for developing in Cambodia the different dimensions of capacity needs identified in Part II of this document. The priorities are categorized in three:

- Short-term (to be developed in 1-3 years)
- Medium-term (to be developed in 4-6 years)
- Long-term (to be developed in 7-10 years)

The criteria are:

1. *Applicability.* The development of the indicated dimension of capacity within the particular priority period has wide use and value in Cambodia, not only to the focal ministries and national organizations attending to the thematic concerns, but also to the many sites and places in the country where the concerns are actually occurring and are constraining local and national development.
2. *Relevance.* The development of the indicated dimension of capacity within the particular priority period will positively contribute to achieving the national agenda for sustainable development in Cambodia.
3. *Multiple Effects.* The development of the indicated dimension of capacity within the particular priority period has a wide range of effects on the different thematic concerns of the three Conventions.
4. *Urgency.* The dimension of capacity is presently severely lacking in Cambodia.
5. *Promotes Participation.* The development of the indicated dimension of capacity within the particular priority period will encourage wider public engagement and collaboration in addressing the thematic concerns in Cambodia.

Prioritization is achieved using a five-scale “degree of fit” to each criterion:

- 1 = least fit
- 2 = poor fit
- 3 = moderate fit
- 4 = high fit
- 5 = very high fit.

The scoring is done through a collective process involving the NCSA team of technical experts and staff of the NCSA participating ministries. The resulting list classified in three timeframes of capacity development (short, medium and long terms) is validated in a national stakeholders’ workshop represented by relevant agencies and institutions, a National Biodiversity Steering Committee meeting, then, further, at the level of the Council of Ministers.

#### **4.4 CAPACITY NEEDS ARE TO BE DEVELOPED IN THE SHORT, MEDIUM AND LONG-TERMS**

##### **4.4.1 Biodiversity Conservation**

###### **A. Short-term (1-3 years)**

- **Human Capabilities**

Improve the skills of the technical staff of key institutions in the following areas of competence:<sup>5</sup>

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<sup>5</sup> “Technical staff” refers to science, policy and management experts. “Key institutions” are government ministries and non-government organizations in all levels of social organization and governance in Cambodia, which are

1. Competence on the Political and Legal Contexts of Biodiversity Conservation in Cambodia. Increase their awareness and understanding of the political and legal contexts of biodiversity conservation in Cambodia. Includes understanding the features and value of biodiversity, their status, threats, risks and vulnerabilities, and their importance to the sustainable development of the country. (Key agencies: MOE, MAFF, MRD; Relevant to CBD 1, 3, 4, 5, 6, 10).<sup>6</sup>
2. Competence on Handling and Disseminating Information. Increase their knowledge and ability to disseminate information (e.g., through Clearing House mechanisms) on the ecological, social and economic impacts of genetic technologies and their uses. (Key agencies: MOE, Relevant to CBD 9, 12, 13).
3. Competence to Do Resource Assessments. Expand their skills to:
  - 3.1 Do resource inventory and assessments
  - 3.2 Identify biological resources needing to be conserved in different scales of biodiversity (ecosystem, habitat, species, genetic)
  - 3.3 Map conservation areas
  - 3.4 Identify ecosystems needing rehabilitation

(Key agencies: MOE, MAFF; Relevant to CBD 2, 3, 5).

4. Competence to Collaborate. Improve and strengthen their ability to carry out and facilitate interagency actions (including to strengthen legislation and the implementation of the NBSAP) to support *in-situ* and *ex-situ* conservation. (Key agencies: MOE, MAFF; Relevant to CBD 1, 2, 3, 5).

- **Financial Capabilities**

5. Improve Funding Support for Biodiversity Conservation. Elevate the level of public sector financial commitment to fulfilling the obligations to the CBD through raising decision-makers' awareness and understanding of national interests on biodiversity conservation. (Key agencies: MOE, MAFF; Relevant to CBD 9, 10).

- **Organizational Commitments**

Develop common frameworks and tools for key institutions and ministries to:

6. Conserve Biological Resources. Define, identify, locate and sustainably manage the biological resources of Cambodia (moreso the vulnerable ones)

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addressing the thematic concerns of the conventions. This, because the unit of capacity development under the NCSA is Cambodia as a whole. Government ministries are critical to leading initiatives to develop each capacity need. Key agencies are identified and listed in parenthesis.

<sup>6</sup> The Convention (CBD) and numbers refer to the obligations under the convention as listed in Part II of this document and which are being addressed by this capacity need. Similar references to numbers are used to refer to the obligations under UNFCCC and UNCCD.

and protect the ecological functions of soil and water resources. (Key agencies: MOE, MAFF; Relevant to CBD 3, 6).

7. Handle and Share Data and Information. Operate databases and information sharing arrangements on biodiversity and biodiversity conservation. (Key agencies: MOE, MAFF; Relevant to CBD 2, 9).
8. Undertake Research. Institute scientific studies (including assessments, field surveys, monitoring, data analysis, systematic map interpretation) on:
  - 8.1 The status and vulnerability of biological resources
  - 8.2 The fragility of habitats
  - 8.3 The pressures and threats to biodiversity
  - 8.4 Ecologically sound, participatory and socially acceptable methods for biodiversity conservation and sustainable use
  - 8.5 Economic valuation of alternative resource uses
  - 8.6 Improving agricultural production
  - 8.7 Integrated Pest Management (IPM)

(Key agencies: MOE, MAFF, MOWRAM, RUA, MRD; Relevant to CBD 2, 3, 6, 7, 9, 11).

9. Protect Indigenous Knowledge. Identify and design measures to preserve indigenous knowledge, traditional resource uses and customary farming practices. (Key agencies: MOE, MAFF, MRD; Relevant to CBD 4, 6, 7).
10. Ensure Equitable Access to and Benefit Sharing from Biological Resources. Develop, adopt and enforce policies and regulations on equitable access to biological resources and on sharing benefits from the commercialization of genetic stocks. (Key agencies: MOE, MAFF; Relevant to CBD 6, 8, 12).
11. Conduct Continuing Education and Training. Design and execute continuing education and training programs on biodiversity conservation, management, planning, administration, fund development, and research, and on mobilizing public support for biodiversity conservation. (Key agencies: MOE, MAFF; MoEYS and Academe, Relevant to CBD 3, 9).

- **Public Support**

12. Public Involvement. Intensify and widen the extent that NGOs, academe, peoples' organizations and private businesses are supporting and participating in biodiversity conservation undertakings in Cambodia. (Key agencies: MOE, MAFF; Relevant to CBD 2, 3, 6, 7, 8, 12).

**B. Medium-term (4-6 years)**

- **Human Capabilities**

Improve the skills of the technical staff of key institutions in the following areas of competence:

1. Competence on the Political and Legal Contexts of the Safe Handling of Living Modified Organisms (LMOs). Widen their awareness and understanding of the harmful effects and safe handling of LMOs and of the political and legal systems associated with the introduction and use of LMOs in Cambodia. (Key agencies: MOE, MAFF, MOC, MOH, MEF; Relevant to CBD 10, 13).
2. Competence on Handling and Disseminating Information on LMOs. Improve and strengthen their ability to design, develop, operate and maintain databases and information networks pertinent to regulating and releasing LMOs. (Key agencies: MOE, MAFF, Relevant to CBD 13).
3. Competence on Policy Strengthening. Improve and strengthen their ability to analyze, develop options, and strengthen national policies, plans and programs to promote and monitor biodiversity conservation and sustainable use; includes providing economic incentives for these actions and to recover endangered species and rehabilitate degraded habitats. (Key agencies: MOE, MAFF, MRD, MOWRAM; Relevant to CBD 1, 3, 5, 8).
4. Research. Improve and strengthen their ability to do scientific studies on:
  - 4.1 Ecologically sound, participatory and socially acceptable methods of biodiversity conservation and sustainable use
  - 4.2 Enhancing agricultural productivity including on lessons from applying IPM
  - 4.3 The propagation of native plant and animal species in agriculture
  - 4.4 Biodiversity risk monitoring and management including on handling LMOs
  - 4.5 Ecosystem interactions and their impacts on biodiversity conservation
  - 4.6 Integrated farming practices
  - 4.7 Monitoring the status and threats to biological resources including threats to vulnerable species, habitats and ecosystems
  - 4.8 Rehabilitation of degraded ecosystems
  - 4.9 Managing protected areas
  - 4.10 Managing soil and water interactions

(Key agencies: MOE, MAFF, MRD, MOWRAM, MOC, MOH, MEF, MOI; Relevant to CBD 2, 3, 6, 7, 9, 10,).

5. Competency on Developing Economic Incentives. Improve and strengthen their ability to design, develop and implement economic incentives for:
  - 5.1 Enhancing species management and recovery
  - 5.2 Rehabilitating degraded habitats
  - 5.3 Promoting biodiversity conservation and sustainable uses
  - 5.4 Controlling the risks to biodiversity

(Key agencies: MOE, MAFF, MEF; Relevant to CBD 3, 6, 8).

6. Functional Competencies. Improve and strengthen their ability to carry out specialized duties on biodiversity conservation and management, including:

- 6.1 Protected area planning
- 6.2 Boundary demarcation
- 6.3 Public awareness and participation
- 6.4 Coordination and mobilization of public participation
- 6.5 Conflict prevention, mitigation and resolution
- 6.6 Law enforcement
- 6.7 Recovery and sustainable management of vulnerable resources
- 6.8 Conserving the ecological functions of soil and water resources
- 6.9 Promoting IPM
- 6.10 Protection and propagation of native plant and animal species
- 6.11 Documentation and conservation of indigenous knowledge
- 6.13 Documentation and conservation of traditional resource uses and farming practices
- 6.14 Safe handling and use of LMOs

(Key agencies: MOE, MAFF, MLMUPC, MOI, MOWRAM, MRD; Relevant to CBD 3, 4, 6, 7, 9, 10).

- **Financial Capabilities**

- 7. Increase Financial Returns from Biodiversity Conservation. Increase the revenues from the sustainable uses of biological resources, and the budget commitments to biodiversity conservation of critical ministries (especially the MOE and MAFF). Link the budget commitments of the ministries to revenues from biological resources and their real value to the Cambodian economy, society and environment. (Key agencies: MOE, MAFF, MEF; Relevant to CBD 3, 5, 8).

- **Organizational Commitments**

Develop common frameworks and tools for key institutions and ministries to:

- 8. Institutionalize Biodiversity Valuation. Establish the correct and real value of biodiversity conservation and sustainable use to the Cambodian economy, society and environment, including the value of foregone production and consumption opportunities arising from their non-sustainable uses and balancing this value with other urgent concerns of Cambodia. (Key agencies: MOE, MAFF, MOF, MEF; Relevant to CBD 1, 3).
- 9. Institutionalize Biodiversity Conservation and Sustainable Use. Strengthen institutional programs and undertakings on:
  - 9.1 Widening and intensifying biodiversity conservation and sustainable use in Cambodia
  - 9.2 Strengthening the legal, political and institutional mechanisms in the country for controlling the harmful effects of LMOs and ensure their safe handling
  - 9.3 Establishing in more comprehensive terms the functions, values and status of ecosystem services from biodiversity

- 9.4 Identifying and rehabilitating degraded habitats and ecosystems
- 9.5 Enhancing the biological viability of Cambodian agriculture
- 9.6 Establishing linkages on biological diversity conservation within and outside Cambodia

(Key agencies: MOE, MAFF, MRD, MOWRAM, MOC, MFIC MEF; Relevant to CBD 6, 7, 9, 10, 13).

- **Public Support**

- 10. Public Awareness and Participation. Widen and intensify public awareness of the importance and value of Cambodian biodiversity toward achieving national development objectives in Cambodia, in particular poverty alleviation. Further widen the level of public participation in biodiversity conservation and related efforts of key institutions and ministries including on:

- 10.1 Identifying vulnerable species and habitats
- 10.2 Rehabilitating vulnerable habitats
- 10.3 Conserving vulnerable species
- 10.4 IPM
- 10.5 Sustainable agriculture
- 10.6 Enhancing the ecological functions of soil and water
- 10.7 Safe handling and use of LMOs
- 10.8 Controlling the risks associated with LMOs or their use

(Key agencies: MOE, MAFF, MRD, MOP; Relevant to CBD 3, 4, 6, 7, 9, 10).

- C. *Long-term (7-10 years)*

- **Human Capabilities**

Improve the skills of the technical staff of key institutions in the following areas of competence:

- 1. Competence on LMO Policy Development. Improve and strengthen their ability to develop policies that ensure equitable benefit sharing and revenues from the commercialization of genetic resources (Key agencies: MOE, MAFF, MEF; Relevant to CBD 8).
- 2. Competence on Genetic Conservation. Improve and strengthen their ability to develop and establish specialized mechanisms for conserving biodiversity; includes gene banks and botanical gardens for ex-situ conservation of critical species. (Key agencies: MOE, MAFF; Relevant to CBD 5, 9).
- 3. Competence on the Integration of Indigenous Knowledge. Improve and strengthen their ability to integrate local and indigenous knowledge with scientific initiatives to promote sustainable resource uses and farming practices. (Key agencies: MOE, MAFF, MRD, MOJ; Relevant to CBD 3, 6, 7).

4. Competence on Economic Valuation. Improve and strengthen their ability to develop methods, tools and techniques of economic valuation of biodiversity (in relation to comparing the benefits and costs of alternative uses of biodiversity and of committing lands for biodiversity or other uses). (Key agencies: MOE, MAFF, MEF, MLMUPC; Relevant to CBD 3, 8, 11).
5. Competence on Promoting Equitable Sharing of Benefits from Biodiversity. Improve and strengthen their ability to develop and enforce tools that ensure equitable benefit sharing of revenues from the commercialization of genetic stocks (Key agencies: MOE, MAFF, MEF, MOC; Relevant to CBD 6, 9).
6. Research Competence. Improve and strengthen their ability to undertake systematic studies on effective policy and legal frameworks in support of fair and equitable access to genetic resources (including LMOs). (Key agencies: MOE, MAFF, MEF; Relevant to CBD 12).
7. Competence on Regulatory Enforcement. Improve and strengthen their ability to enforce laws to rescue protected species and combat their trade. (Key agencies: MOE, MAFF, MOC, MOJ, MOI; Relevant to CBD 5).
8. Competence on Participatory Approaches. Improve and strengthen their ability to design and promote ecologically sound, participatory and socially acceptable approaches to restore and stabilize degraded lands; undertake land-use capability analysis (as basis for land-use planning and decision making) and harmonize competing uses of lands & promote their sustainable use; and formalizing local initiatives in sustainable resource uses and farming practices. (Key agencies: MOE, MAFF, MRD, MLMUPC; Relevant to CBD 1, 3, 4, 6).
9. Competence on Executive Initiatives. Improve and strengthen their ability to implement legislative, policy and administrative measures (e.g., permitting, licensing and monitoring systems) that:
  - 9.1 Promote fair and equitable sharing of the results of research and development on biodiversity and biotechnology
  - 9.2 Promote fair and equitable sharing of the benefits from the commercial and other uses of genetic resources
  - 9.3 Define the requirements and conditions for access to Cambodia's biodiversity
  - 9.4 Regulate and control the risks relating to the use, movement and release of LMOs
  - 9.5 Strengthen compliance to labeling LMO products

(Key agencies: MOE, MAFF, MOC, MOH; Relevant to CBD 3, 6, 12, 13).

- **Financial Capabilities**

10. Promote Private Investments on Biodiversity Conservation. Improve and strengthen the investment climate on conserving and sustainably using the biodiversity of Cambodia and expand private sector investments on and use

of these resources. (Key agencies: MOE, MAFF, MEF; Relevant to CBD 3, 5, 7).

- **Organizational Commitments**

Develop common frameworks and tools for key institutions and ministries to:

10. Build-up Physical Plants. Intensify institutional efforts to build up critical infrastructure and physical assets (facilities, equipment) to support and sustain biodiversity conservation in Cambodia. (Key agencies: MOE, MAFF, MRD, MPWT, MEF. (Relevant to CBD 3, 5, 6).
11. Improve Physical Planning. Widen and intensify institutional efforts to zone, demarcate, and protect critical ecosystems; strengthen the management of protected areas; and monitor, recover, protect and manage vulnerable species and habitats. (Key agencies: MOE, MAFF, MLMUPC, MOI; Relevant to CBD 3, 6).

- **Public Support**

12. Participatory Conservation and Management of Biodiversity. Develop and promote national policies and actions that widen and strengthen public involvement in protecting biodiversity and on identifying the issues attending its protection and sustainable use. (Key agencies: MOE, MAFF; Relevant to CBD 1).

#### 4.4.2 Climate Change

A. *Short-term (1-3 years)*

- **Human Capabilities**

Improve the skills of the technical staff of key institutions in the following areas of competence:

1. Competence on Climate Change Issues and Related Matters. Improve and strengthen their ability to understand the technical, economic, social, political and policy issues and imperatives on climate change vulnerability and adaptation and related matters, and what must be done e.g., inter-agency undertakings) to protect Cambodian interests relating to them. (Key ministry: MOE; Relevant to all 8 obligations).
2. Data and Information Systems. Improve and strengthen their ability to develop, update and utilize climate change-related observations, databases and data management systems, analyze and interpret data, and produce and disseminate educational materials, information, tool kits, brochures, booklets, informational articles, media coverage and other materials relating to climate change. (Key agencies: MOE, MAFF, MOWRAM; Relevant to UNFCCC 2, 3, 4, 5, 7).

3. Competence on GHG Management. Improve and strengthen their ability to:
  - 3.1 Understand in-depth the technical aspects of GHGs<sup>7</sup>
  - 3.2 Undertake GHG inventory
  - 3.3 Do mitigation analysis and promote inter-agency collaboration on mitigations
  - 3.4 Undertake vulnerability and adaptation assessments
  - 3.5 Develop energy data (e.g., using demand analysis and forecasting)
  - 3.6 Develop and improve GHG emission factors by sector
  - 3.7 Use projection methods of GHG emission and removal
  - 3.8 Apply determinant factors to project crop growth and production variability

(Key agencies: MOE, MAFF, MOWRAM, MIME, MPWT; Relevant to UNFCCC 2, 3, 4, 7).

4. Competence on Enabling Mechanisms. Improve and strengthen their ability to adopt appropriate technologies and sustainable development programs like CDM and cogeneration. (Key agencies: MOE, MAFF, MIME; Relevant to UNFCCC 6).
5. Competence on Environmental Diplomacy. Improve and strengthen their ability to advance Cambodian national interests on climate change matters in international fora and negotiations, and to represent Cambodia in regional and global networks on climate change mitigation and adaptation. (Key agencies: MOE, MAFF, MFA, MOWRAM, MIME, MPWT; Relevant to UNFCCC 1, 6, 7, 8).

- **Financial Capabilities**

6. Improve Funding Support for Climate Change Activities. Elevate the level of public sector financial commitment to fulfilling the obligations to the UNFCCC through raising decision-makers' awareness and understanding of national interests on biodiversity conservation. (Key agencies: MOE, MAFF; Relevant to UNFCCC 8).

- **Organizational Commitments**

Develop common frameworks and tools for key institutions and ministries to:

7. Improve Commitments to Addressing Climate Change Matters. Widen and intensify institutional commitments to:
  - 7.1 Attend to climate change vulnerability and adaptation issues in Cambodia
  - 7.2 Prioritize and mainstream climate change matters and activities in national and sectoral plans and sustainable development strategies in the country

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<sup>7</sup> Greenhouse gases include CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>.

- 7.3 Develop and procure needed infrastructure, facilities and equipment to strengthen national capacities to respond to climate change vulnerabilities and to take measures to adapt to climate change
- 7.4 Harmonize and integrate national policies and international climate change agreements into national and sectoral actions on climate change
- 7.5 Strengthen international collaboration on climate change matters

(Key agencies: MOE, MAFF, MOP, MFA, MPWT; Relevant to UNFCCC 1 to 8).

- 8. Impact Forecasting. Intensify institutional commitments to systematic observations and forecasting impacts of climate change on Cambodia. (Key agencies: MOE, MAFF, MOWRAM; Relevant to UNFCCC 6).
- 9. Promote Energy Efficiency. Expand programs and activities to design and promote energy efficiency and the use of renewable energy in Cambodia. (Key agencies: MOE, MAFF, MIME, MPWT; Relevant to UNFCCC 3, 4, 6).
- 10. Widen Public Awareness and Actions. Intensify institutional undertakings to increase public awareness and understanding of weather and climate issues and trends (e.g., ENSO); help communities use correct climate and weather information for their benefits; and advance Cambodia's national interests on adapting to climate change. (Key agencies: MOE, MAFF, MOWRAM, MRD; Relevant to UNFCCC 3, 7).

- **Public Support**

- 11. Level of Public Awareness, Support and Participation. Build up and broaden public awareness of issues related to climate change and increase their level of ownership of alternative options to adapt to climate change. (Key agencies: MOE, MOWRAM, MAFF; Relevant to UNFCCC 7).

**B. Medium-term (4-6 years)**

- **Human Capabilities**

Improve the skills of the technical staff of key institutions in the following areas of competence:

- 1. Competence on Climate Change Information Systems. Improve and strengthen their ability to:
  - 1.1 Estimate the impacts of climate change (e.g., projecting malaria cases)
  - 1.2 Use or otherwise develop methods and techniques to estimate the impacts of climate change by sector: e.g. modeling using COMAP, Markal, LEAP, MAGICC/SCENGEN, Crystalball, Holdridge Life Zone classification)
  - 1.3 Do systematic observations, develop data bases and interpret climate data
  - 1.4 Provide the public with information to improve their understanding of climate change matters (e.g., ENSO) and relevant laws and institutions attending to them

(Key agencies: MOE, MAFF, MOH, MOP, MRD, MOWRAM, MIME, MPWT; Relevant to UNFCCC 2, 3, 4, 7).

2. Competence to Undertake Climate Change Related Activities. Improve and strengthen their ability to promote energy efficiency; the use of renewable energy; do systematic observations and climate change R&D; execute GHG reductions; and promote effective waste disposal and management. (Key agencies: MOE, MAFF, MIME, MPWT; Relevant to UNFCCC 3, 5, 8)
  3. Competence on Policy Development. Improve and strengthen their ability to develop coherent sectoral policies and plans that address climate change and sustainable development issues; promote the exploration, development and use of appropriate technologies and programs like CDM and cogeneration; and encourage sound environmental management of traffic, roads and transportation. (Key agencies: MOE, MAFF, MIME, MRD, MPWT, MOWRAM; Relevant to UNFCCC 6, 8)
  4. Competence on Negotiations and Networking. Improve and strengthen their ability to negotiate with international donors and organizations to support climate change projects in Cambodia including systematic observations and climate change research. (Key agencies: MOE, MAFF, MIME, MOWRAM; Relevant to UNFCCC 1, 5, 8).
- **Financial Capabilities**
  - 5. Establish Financial Support for Climate Change Activities. Expand sustainable financing systems to support and sustain climate change activities in Cambodia including vulnerability assessments and adaptation. (Key agencies: MOE, MAFF, MOF; Relevant to UNFCCC 1, 2, 3, 4, 5, 6, 7, 8).
  - **Organizational Commitments**

Develop common frameworks and tools for key institutions and ministries to:

6. Design and Operate Data Bases and Information Systems. Improve, strengthen, manage and operate:
  - 6.1 Climate change data collection systems (including from systematic observations)
  - 6.2 Climate change activity reporting systems
  - 6.3 Climate change data bases and information sharing systems
  - 6.4 Climate change information centers and facilities
  - 6.5 Climate change advocacy networks and demonstration sites to increase public and policy makers' understanding and commitments to addressing climate change issues, particularly to reducing GHG emissions, climate change vulnerabilities, and adapting to climate change.

(Key agencies: MOE, MAFF, MOWRAM, MIME, MPTW; Relevant to UNFCCC 1, 7, 8).

7. Strengthen Regulatory Support Systems. Develop legal instruments that promote climate change actions in Cambodia including actions to capture and reduce GHG emissions and promote energy efficiency and use of renewable energy. (Key agencies: MOE, MAFF; Relevant to UNFCCC 4, 6).
8. Strengthen Enabling Instruments. Create a positive policy environment in Cambodia for promoting climate change actions and relevant activities; includes developing policy options and encouraging effective sectoral responses to climate change vulnerabilities and risks; integrating climate change considerations in national and sector policies and plans; and improving the efficiency of climate change responses across institutions and sectors (i.e., ensuring that climate change issues are adequately addressed and the efforts to do so are not redundant). (Key agencies: MOE, MAFF, MOWRAM, MOP, MIME, MPWT; Relevant to UNFCCC 8).
9. Strengthen International Cooperation. Maintain, keep institutional memories of, and sustain the country's representation in international negotiations on climate change. (Key agencies: MOE, MAFF, MFA; Relevant to UNFCCC 1).

- **Public Support**

10. Widen Public Awareness of the Impacts of Climate Change. Raise the level of public awareness on the potential impacts of climate change in the context of urgent and fundamental socio-economic development and poverty reduction concerns and objectives in Cambodia. (Key agencies: MOE, MRD, MAFF, MOP, MEF; Relevant to UNFCCC 7, 8).

C. *Long-term (7-10 years)*

- **Human Capabilities**

Improve the skills of the technical staff of key institutions in the following areas of competence:

1. Competence on Long-Term Climate Change Data Collection, Management and Information Systems. Improve and strengthen their ability to formalize and standardize the collection of systematic observation data and data from climate change-related activities nationwide. (Key agencies: MOE, MAFF, MOWRAM, MEF, MOF, MPWT; Relevant to UNFCCC 2).
2. Competence on Technology Development and Transfer. Improve and strengthen their ability to (a) do climate change-relevant technology assessments, (b) develop new and appropriate technologies, and (c) transfer technologies to different users. (Key agencies: MOE, MAFF, MOWRAM, MIME, MPWT; Relevant to UNFCCC 6).
3. Competence on Strengthening Institutional and Legal Frameworks. Improve and strengthen their ability to strengthen Cambodia's institutional and legal frameworks for acquiring, developing, applying and transferring new technologies to respond and to adapt to climate change vulnerabilities in the country. (Key agencies: MOE, MAFF; Relevant to UNFCCC 6, 8).

4. Continuing Competence on Climate Change Fundamentals. Improve and strengthen their ability to update, store and convey to successor generations their knowledge of the environmental and economic aspects of climate change and climate change impacts in Cambodia. (Key agencies: MOE, MAFF; Relevant to UNFCCC 7).

- **Financial Capabilities**

5. Establish Sustainable and Domestically-Based Financing Mechanisms. Develop sustainable financing mechanisms to support climate change activities in Cambodia and which are based on domestically generated assets and resources in the country. (Key agencies: MOE, MAFF, MOF; Relevant to UNFCCC 1, 2, 3, 4, 5, 6, 7, 8).

- **Organizational Commitments**

Develop common frameworks and tools for key institutions and ministries to:

6. Institutionalize Impact Estimation and Forecasting Activities. Improve and formalize impact forecasting of climate change in Cambodia including estimating sectoral risks and vulnerabilities of industries and agricultural production. (Key agencies: MOE, MAFF; Relevant to UNFCCC 6).
7. Institutionalize Public Awareness Programs. Coordinate multisector efforts to expand public awareness and dissemination of information on weather and climate events (e.g., climate variability like ENSO) at all levels in Cambodia. (Key agencies: MOE, MAFF; Relevant to UNFCCC 7, 8).
8. Institutionalize Research Programs. Strengthen institutional capabilities to undertake climate change-related science studies, systematic observations, and vulnerability assessments; develop adaptation measures; develop, utilize and transfer appropriate technologies; and monitor climate change impacts on industries and agriculture. (Key agencies: MOE, MAFF; Relevant to UNFCCC 1, 2, 3, 4, 5, 6, 7, 8).

- **Public Support**

9. Strengthen Public Support and Participation in Climate Change Activities. Raise the level of public support for and participation in climate change activities including on undertaking systematic observations, vulnerability assessments, instituting adaptation measures, technology development and transfers, and monitoring the impacts of climate change in Cambodia. (Key agencies: MOE, MAFF, MOI; Relevant to UNFCCC 7, 8).

#### 4.4.3 Land Degradation

- A. *Short-term (1-3 years)*

- **Human Capabilities**

Improve the skills of the technical staff of key institutions in the following areas of competence:

1. Competence on Policy Integration. Improve and strengthen their ability to integrate land, soil and water management in national and sectoral policies and activities, to promote and achieve sustainable agriculture, livelihoods, production and development in Cambodia. (Key agencies: MAFF, MOE; Relevant to UNCCD 1, 2, 4)
2. Competence on Monitoring and Evaluation of Thematic Activities. Improve and strengthen their ability to track the progress and status of activities to address land degradation and mitigate the effects of drought in Cambodia. This, in relation to:
  - 2.1 Doing collaborative research on effective control of land degradation and best practices on water resource management
  - 2.2 Developing technologies to combat soil erosion and the adverse effects of drought (including on crop and various adaptations to altered soil and water regimes)
  - 2.3 Widening and intensifying public awareness of land degradation and drought
  - 2.4 Improving agricultural practices and agri-based livelihoods
  - 2.5 Conducting training on land and water care and management
  - 2.6 Improving early warning systems on threats to soil fertility and on drought
  - 2.7 Sharing information on best practices on soil and water management

(Key agencies: MAFF, MOE; Relevant to UNCCD 1 to 10).

3. Competence in Environmental Education. Improve and strengthen their ability to incorporate and integrate land, soil and water care and management in the curriculum of secondary and higher education in Cambodia. This, with the view of:
  - 3.1 Expanding the corps of land and water experts in Cambodia
  - 3.2 Institutionalizing land degradation and drought concerns in national education
  - 3.3 Expanding public awareness of land degradation and drought and of the social, economic and environmental costs of failure to attend to them
  - 3.4 Institutionalizing land, soil and water care and management research and technology development among different agencies in Cambodia
  - 3.5 Improving the corps of experts to negotiate Cambodia's interests on land, soil and water care in international negotiations and networks.

(Key agencies: MAFF, MOE, MOEY; Relevant to UNCCD 1 to 10)

- **Financial Capabilities**

4. Expand Funding Soil and Water Conservation Activities. Establish a Soil and Water Conservation Fund and encourage multisector participation in building up, sustaining and managing the fund to achieve sustainable soil

and water care in Cambodia. (Key agencies: MAFF, MEF, MLMUPC; Relevant to UNCCD 1 to 10).

- **Organizational Commitments**

Develop common frameworks and tools for key institutions and ministries to:

5. Institutionalize Cooperation and Coordination. Improve their system of cooperation and coordination on land, soil and water care activities (e.g., on setting up a land, soil and water care coordinating committees; coordinate their field, research and public mobilization activities; exchange relevant information; and do collaborative decision making). (Key ministry: MAFF; Relevant to UNCCD 6, 7, 8, 9, 10).
6. Cooperate and Collaborate on Mapping. Undertake joint and collaborative identification and mapping of degraded lands and drought-vulnerable areas, and analyzing the impacts of land degradation and drought on industries, ecosystems and agriculture. (Key agencies: MAFF, MOE; Relevant to UNCCD 8, 9, 10).

- **Public Support**

7. Widen Public Awareness and Participation. Set up mechanisms and programs to widen, intensify and sustain public awareness of land degradation and drought issues at all levels of social organization and governance in Cambodia; expand the participation of farmers' groups, civil society and agri-businesses in activities to:
  - 7.1 Improve soil fertility, reduce soil erosion, and control soil and water pollution
  - 7.2 Rehabilitate degraded lands and improve crop and various adaptations
  - 7.3 Protect and conserve water resources
  - 7.4 Do systematic observation of weather and water regimes

(Key agencies: MAFF, MOE, MOI; Relevant to UNCCD 1 to 10).

**B. *Medium-term (4-6 years)***

- **Human Capabilities**

Improve the skills of the technical staff of key institutions in the following areas of competence:

1. Competence on Fertilizer and Pesticide Control. Improve and strengthen their ability to inspect and enforce regulations on the importation, labeling and use of chemical fertilizers and pesticides. (Key agencies: MAFF, MOC; Relevant to UNCCD 2).

- **Financial Capabilities**

2. Expand Public Investments on Land Quality. Incorporate and highlight activities to combat land degradation and mitigating the effects of drought into the public investment programs:
  - 2.1 Research and development (including risk assessments and mitigation)
  - 2.2 Public awareness, education and training programs
  - 2.3 Development of local expertise on land care and water management
  - 2.4 Mapping vulnerable areas
  - 2.5 Improving various and crop adaptation to altered soil and water regimes
  - 2.6 Development of data bases and land and water management information systems
  - 2.7 Technology development, utilization and transfer
  - 2.8 Enforcement (e.g., of the importation, labeling and use of chemical fertilizers and pesticides)
  - 2.9 Water impoundment and conservation
  - 2.10 Reforestation and watershed rehabilitation
  - 2.11 Flood control
  - 2.12 Soil and water pollution control
  - 2.13 Soil enrichment and water quality enhancement
  - 2.14 Desiltification of waterways and water bodies
  - 2.15 Networking and international collaboration

(Key agencies: MAFF, MOE, MEF; Relevant to UNCCD 1 to 10).

- **Organizational Commitments**

Develop common frameworks and tools for key institutions and ministries to:

3. Strengthen Cambodian Collaboration in Regional Undertakings. Strengthen Cambodian governmental participation in the implementation of programmes and activities under the SRAP to combat desertification in Southeast Asian nations. (Key agencies: MAFF, CDC, MFA; Relevant to UNCCD 8, 9, 10).
4. Standardize Monitoring and Assessment Methods. Design and adopt harmonized methods and procedures for monitoring and assessing changes in the quality of land and soil resources. (Key agencies: MAFF, MOE, MLMUPC; Relevant to UNCCD 5, 6, 7, 8, 9, 10).
5. Upgrading Data Base, Benchmarks, and Information Systems. Improve and make more robust existing databases, software systems, benchmarks and information sharing systems with stakeholders on land, soil and water resources and management in and outside Cambodia. (Key agencies: MAFF, MOE; Relevant to UNCCD 5, 6, 7, 8, 9, 10).

- **Public Support**

6. Expand Public Initiatives. Widen the extent that the farmers' organizations, agri-businesses, local governments and civil society organizations are taking

initiative to combat land degradation and mitigate the effects of drought in different parts of the country. Includes their engagement in:

- 6.1 Reducing soil erosion
- 6.2 Improving soil fertility
- 6.3 Conserving water
- 6.4 Rehabilitating and improving watersheds (including reforestation)
- 6.5 Doing systematic observations on land and water resources
- 6.6 Monitoring the threats to land and water resources and their vulnerabilities
- 6.7 Improving the care of land and water resources
- 6.8 Instituting early warning systems on the threats to soil and water resources including on adverse weather and climate events
- 6.9 Widening and intensifying public awareness and actions to address soil and water concerns in different levels of social organization and governance in Cambodia
- 6.10 Data collection and studies on good soil and water care practices
- 6.11 Crop and various adaptations to altered soil and water regimes
- 6.12 Developing, using and transferring technologies and alternative energy sourcing
- 6.13 Policy assessment and formulation
- 6.14 Domestic and international networks and collaboration on soil and water conservation and R&D

(Key agencies: MAFF, MOE; Relevant to UNCCD 1, 2, 3, 4, 5, 6, 7, 8, 9, 10).

**C. Long-term (7-10 years)**

• **Human Capabilities**

Improve the skills of the technical staff of key institutions in the following areas of competence:

1. Competence on Promoting Sustainable Agriculture. Improve and strengthen their ability to promote organic farming and integrated farming practices among local communities; includes widening farmers' knowledge and skills on these systems and practices and their understanding of the multi-functional synergy of agriculture and soil and water conservation and management. (Key agencies: MAFF, MOE, MRD; Relevant to UNCCD 1, 2, 3, 4).
2. Competence to Build-up Capital Assets. Improve and strengthen their ability to rehabilitate and improve existing soil and water laboratories, conservation and research facilities, and support infrastructure and materials to sustain operational activities to combat land degradation and mitigate drought in the long-term. (Key agencies: MAFF, MOE; Relevant to UNCCD 6, 7, 8, 9, 10).
3. Competence on Managing and Sustaining Soil and Water R&D. Improve and strengthen their ability to systematize soil and water R&D nationwide including providing material, professional and social incentives and rewards

for outstanding research work on soil and water care in the country. (Key agencies: MAFF, MOE, MEF; Relevant to UNCCD 6, 7, 8, 9, 10).

4. Competence on Extension Work. Improve and strengthen their ability to provide extension assistance to farmers and agri-industries, to:
  - 4.1 Improve agricultural and agri-business production (including various adaptation to altered soil and water regimes)
  - 4.2 Improve soil and water practices among farmers and agro-industries
  - 4.3 Improve public awareness of land & water concerns and public reporting on them
  - 4.4 Improve the systems and procedures of fertilizer and pesticide companies to ensure that their products are used properly and correctly, and to monitor the impacts of their products on soil and water resources
  - 4.5 Improve farmers' utilization of fertilizer and pesticides (promote correct practices) and minimize their adverse effects on soil and water resources

Includes training, seminars and workshops; media campaigns; field demonstrations; and conducting cross visits to farms and agro-industries doing good soil and water care and management practices.

(Key agencies: MAFF, MOE, MRD; Relevant to UNCCD 1, 2, 3, 5, 8, 9, 10).

5. Competence on Donors' Coordination. Improve and strengthen their ability to coordinate with donors on developing national capacities on land use and water care and management and related undertakings. (Key agencies: MAFF, MOE, MFA, MLMUPC, MPWT; Relevant to UNCCD 1, 2, 3, 4, 5, 6, 7, 8, 9, 10).

- **Financial Capabilities**

6. Increase Private Investments in Soil and Water Conservation. Expand private sector investments in soil and water care and conservation in different levels of social organization and governance in Cambodia (farms, villages, provinces, national); includes investments in:
  - 6.1 Soil and water R&D, data collection and systematic observations
  - 6.2 Widening public awareness and engagement of communities
  - 6.3 Training and capacity development
  - 6.4 Developing and transferring technologies
  - 6.5 Developing alternative energy sources other than fuelwoods
  - 6.6 Rehabilitating watersheds
  - 6.7 Soil fertility enrichment
  - 6.8 Erosion control
  - 6.9 Water conservation and management
  - 6.10 Capacity development on crop and various adaptation to altered soil and water regimes

6.11 Networking and collaborative undertakings to combat land degradation and mitigate the effects of drought

(Key agencies: MAFF, MOE, MEF; Relevant to UNCCD 1 to 10).

7. Intensify Project Development. Develop proposals and negotiate for their funding by public agencies, private industries, civil society organizations, and donors, of projects to promote soil and water conservation in different levels of social organization and governance in Cambodia; includes projects relating to:

7.1 Expanding public awareness of land and water concerns in Cambodia

- 7.2 Developing, using and disseminating appropriate technologies to combat land degradation and mitigate the effects of drought
- 7.3 Training on good soil and water care and management and on alternative energy sourcing (composting, etc).
- 7.4 Promoting alternative livelihoods for land-dependent earners
- 7.5 Training on land, soil and water data collection, processing and management
- 7.6 Systems and mechanisms to collect, analyze and exchange information on land degradation and drought with other countries and international institutions
- 7.7 Developing early warning and advance planning systems on climate variations
- 7.8 Accelerating and improving R&D systems for research and development on soil fertility improvement, sustainable agricultural practices, better varieties adapted to altered states of ecological systems, and on land degradation prevention
- 7.9 Promoting public participation in addressing land and water issues
- 7.10 Promoting technical and scientific cooperation (including on research) among national, sub-regional, regional and global bodies dedicated to combating land degradation and to mitigating the effects of drought

(Key agencies: MAFF, MOE; Relevant to UNCCD 1 to 10).

8. Encourage Community Funding. Provide incentives for local communities to develop budget plans for soil and water conservation projects. (Key agencies: MAFF, MOE, MEF; Relevant to UNCCD 1, 4).
9. Improve Enabling Policies. Strengthen and expand policies that are supportive of public and private investments in activities to rehabilitate degraded lands, improve soil and water conservation, encourage adaptation measures, support R&D, and promote multisector and multi-level collaboration and networking on these concerns. (Key agencies: MAFF, MOE, MEF; Relevant to UNCCD 1 to 10).

- **Organizational Commitments**

Develop common frameworks and tools for key institutions and ministries to:

10. Promote Institutional Cooperation, Collaboration and Participation. Promote and strengthen multisector and multilevel cooperation, collaboration and participation in land use and water care and management and related undertakings among institutions within and outside Cambodia. (Key agencies: MAFF, MOE, MFA, MLMUPC, MPWT; Relevant to UNCCD 1 to 10).
  11. Institutionalize Sustainable Agriculture. Strengthen national policies and plans that encourage organic farming (IPM, the use of organic sources of energy, and other measures that promote sustainable agriculture) and support crop and various adaptations to altered soil and water regimes. (Key agencies: MAFF, MOE, MRD; Relevant to UNCCD 2, 4).
  12. Institutionalize R&D. Make soil and water R&D a permanent fixture and undertaking of many sectors and institutions in Cambodia; this, in support of related measures to combat land degradation and mitigate drought in the country. (Key agencies: MAFF, MOE; Relevant UNCCD 1 to 10).
- **Public Support**
13. Intensify Public Participation. Strengthen national policies that promote public participation in combating land degradation and drought; includes promoting public awareness and public initiatives to execute adaptation measures, participate in R&D, develop and transfer technologies, and pursue domestic and international cooperation. (Key agencies: MAFF, MOE; Relevant to UNCCD 1 to 10).

#### 4.4.4 Common Capacity Needs

(Unlike the thematic capacities, common capacities address the concerns of more than one Convention. Unless otherwise stated, the following prioritized common capacity needs are deemed relevant to all three Conventions.)

##### A. *Short-term (1-3 years)*

- **Human Capabilities**

Improve the skills of the technical staff of key institutions in the following areas of competence:

1. Competence on Facilitating Interagency Coordination and Collaboration. Improve and strengthen their ability to set-up and operate mechanisms that promote and facilitate joint undertakings by ministries and other organizations to address the thematic concerns of the three Conventions.<sup>8</sup> (Key agencies: MOE, MAFF).

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<sup>8</sup> Addressing the thematic concerns includes undertaking measures to alter their degree of occurrence in Cambodia (e.g., reducing biodiversity threats and losses, reducing climate change-related vulnerabilities and adapting to climate change, and improving soil fertility, reducing erosion, or mitigating the effects of drought). It also includes doing the related activities to attend to the concerns, e.g., R&D, assessments, operating data bases

2. Competence on Integration. Improve and strengthen their ability to develop and execute integrated approaches to:
  - 2.1 Land use planning
  - 2.2 Water management
  - 2.3 Reducing environmental risks to and vulnerabilities of production systems (natural resources, agriculture and agro-industries)
  - 3.4 Enhancing the productivity of natural resources, agriculture and agro-industries
  - 3.5 Deploying science and indigenous knowledge in environmental management and agro-industrial production
  - 3.6 Developing and implementing measures to address biodiversity conservation, climate change vulnerabilities, and land degradation and drought

(Key agencies: MOE, MAFF, MOI, MOWRAM, MOP, MLMUPC, MRD)

3. Competence on Participatory Approaches. Improve and strengthen their ability to promote and execute participatory approaches to addressing the thematic concerns of the three Conventions. (Key agencies: MOE, MAFF, MLMUPC, MOI, MRD, MOWRAM).
4. Competence on Promoting Sustainable Resource Use and Practices. Improve and strengthen their ability to conceptualize, analyze, promote, and integrate into national policies and strategic plans sustainable resource uses and environmentally friendly production and resource management practices. Includes competence on:
  - 4.1 Developing approaches to rehabilitate degraded lands and ecosystems
  - 4.2 Reducing stresses to biodiversity, soils and water resources
  - 4.3 Conducting land-use capability analysis as input to land-use, biodiversity conservation and climate change adaptation planning and decision making
  - 4.4 Harmonizing competing needs for and uses of natural resources
  - 4.5 Conserving and sustaining biodiversity and land and water resources
  - 4.6 Assessing and responding to climate change impacts on biota, soils and water
  - 4.7 Assessing and responding to how changes in biodiversity and on soil and water resources mitigate or exacerbate their vulnerabilities to altered ecosystems
  - 4.8 Promoting local initiatives on sustainable resource uses and farming practices.

(Key agencies: MOE, MAFF, MRD, MLMUPC, CDC, MOWRAM, MOP).

5. Competence on Human Resource Development. Improve and strengthen their ability to conduct training needs analysis and to formulate and execute Conventions-relevant human resource development programs. (Key agencies: MOE, MAFF, RUA, MOEYS, RUPP, MRD, MOWRAM).
- **Financial Capabilities**
6. Promote Efficiency. Adopt policies and guidelines encouraging sustainable resource utilization, energy saving, and use of renewable energy. (Key agencies: MOE, MEF, MIME and MAFF).
- **Organizational Commitment**

Develop common frameworks and tools for key institutions and ministries to:

7. Promote Information Sharing. Develop and enforce protocols and mechanisms for information dissemination and sharing among them and with stakeholders of the Conventions. (Key agencies: MOE, MAFF).
8. Coordinate Human Resource Development. Develop and implement harmonized and non-duplicative HRD plans to meet their short-, medium-, and long-term technical staffing needs. (Key agencies: MOE, MAFF, MRD, MOP, RUA, RUPP).
9. Coordinate and Collaborate on the Execution of Measures. Develop and strengthen mechanisms for coordinated and collaborative institutional actions to:
  - 9.1 Restore and stabilize degraded lands and habitats
  - 9.2 Minimize the risks to production systems, species, habitats and areas vulnerable to climate change
  - 9.3 Do land-use capability analysis to guide land-use, biodiversity conservation and adaptation planning and decisions
  - 9.4 Improve the synergy between competing resource uses and conserving them

Includes standardizing the operational procedures and codes of conduct of ministries and non-governmental institutions when addressing the thematic concerns of the three Conventions. (Key agencies: MAFF, MOE, MLMUPC, Council of Ministers).

- **Public Support**

10. Promote Public Partnerships. Build up public, civil society, academic, local government and private sector partnerships and enhance multisector and multilevel collaboration and communication with concerned stakeholders when attending to biodiversity conservation, climate change matters, and land degradation and drought. (Key agencies: MOE, MFA, MAFF).
11. Build-up Stakeholders' Ownership of Undertakings. Expand stakeholders' awareness and ownership of the range of issues and actions to address

biodiversity threats and objectives, climate change vulnerabilities, and land degradation and drought; this, through public information using media, public fora, seminars, training, and public campaigns. (Key agencies: MOE, MAFF, MOI).

**B. *Medium-term (4-6 years)***

• **Human Capabilities**

Improve the skills of the technical staff of key institutions in the following areas of competence:

1. Competence to Support and Strengthen Stakeholders' Actions. Enhance their ability to design and execute measures that will improve and strengthen the capacities of relevant stakeholders to control and protect biodiversity and other natural resources, address the vulnerabilities associated with climate change, and improve the quality of lands, soils, and water resources. (Key agencies: MOE, MAFF, MRD).
2. Competence on Institutional Matters. Improve and strengthen their ability to:
  - 2.1 Develop, review and analyze relevant laws, regulations and policies and develop options to strengthen them in relation to addressing biodiversity conservation, climate change vulnerabilities, and land degradation and drought
  - 2.2 Translate country obligations under different international agreements into a harmonized system of national and sectoral laws
  - 2.3 Identify options to improve the effectiveness, implementability and harmony of relevant laws
  - 2.4 Conduct institutional analyses to strengthen and harmonize national and sectoral policies and plans to address biodiversity conservation, climate change vulnerabilities, and degradation and drought

(Key agencies: MOE, MAFF, MIME, MEF, MoC, MFA, MOWRAM, Council of Ministers).

3. Competence on Research and Development. Improve and strengthen their ability to conduct R&D on the thematic concerns. Includes the ability to:
  - 3.1 Set R&D priorities
  - 3.2 Involve academe and civil society organizations
  - 3.3 Design research procedures relating to understanding the factors affecting the effectiveness and efficiency of protection and conservation measures of biodiversity, soils and water, and of measures to adapt to climate change
  - 3.4 Design data procurement mechanisms, analyze data, report results, document findings, and set up mechanisms and systems to disseminate and share information with other institutions and stakeholders of the thematic concerns of the three Conventions

- 3.5 Plan surveys, inventories, vulnerability assessments and systematic observations
- 3.6 Set up logistical support systems for R&D
- 3.7 Document, assess, and share data and information on indigenous and traditional knowledge and practices on biodiversity conservation and sustainable use, adaptation to climate change, farming, and on the use and management of soil and water resources

(Key agencies: MOE, MAFF, MRD).

- 4. Competence on Economic Tools. Expand and intensify their understanding and knowledge of the concepts, approaches, and effects of different economic tools and incentives (e.g., tax incentives, standardization of green products, user-fees and royalties) and related principles (like access right restrictions and customary access rights) on biodiversity conservation, climate change adaptation, and combating land degradation and mitigating drought. (Key agencies: MEF, MAFF, MOE, MOT, MOWRAM, MOC).
- 5. Competence on Participatory Approaches. Expand and intensify their awareness and understanding of the value and principles underlying participatory approaches to integrate biodiversity conservation, climate change adaptation, land-use and water-use planning. Includes:
  - 5.1 Engaging holders of indigenous knowledge and practitioners of traditional farming methods in resource use and management planning
  - 5.2 Engaging individual experts from other sectors and non-governmental institutions in policy development and planning
  - 5.3 Engaging different sectors in efforts to mainstream and harmonize policies, legal instruments and institutional mandates
  - 5.4 Engaging communities and individuals to undertake conservation, climate change adaptation and land use management and protection activities
  - 5.5 Negotiating for equitably distributing benefits and costs associated with biodiversity conservation, climate change adaptation, and combating land degradation and drought
  - 5.6 Resolving conflicts over natural resources and benefits and costs associated with their conservation and use
  - 5.7 Establishing systems and mechanisms to widen and sustain communications, partnerships and dialogues
  - 5.8 Coordinating the efforts and activities of institutions, sectors and individuals within and outside Cambodia to address the thematic concerns of the three Conventions with Cambodian and international stakeholders on the three Conventions

(Key agencies: MAFF, MOE, MLMUPC, MRD, MOWRAM, MFE, MOF, MIME, MPWT, MOP).

- 6. Competence on Integration of Sustainable Development in National Policies and Plans. Widen and strengthen their ability to conceptualize and analyze sustainable resource use and environmentally friendly practices and

integrate these into policies, developmental guidelines and strategic planning. Includes the ability to:

- 6.1 Harmonize and synergize competing resource uses and needs with conservation and sustainable resource use objectives
- 6.2 Develop plans that integrate ecologically sound, participatory and socially equitable land-use principles
- 6.3 Define and manage sustainable uses of biological, soil and water resources including vulnerable species and habitats
- 6.4 Integrate in national development policies and strategies the strengthening of the ecological functions of soil and water resources, the rehabilitation of degraded ecosystems, protection of climate change-vulnerable sites, and the enhancement of agricultural and industrial production through sound and effective land and water protection and uses

(Key agencies: MOE, MAFF, MRD, MOWRAM).

7. Competence on Identifying Monitoring Indicators. Sharpen their ability to identify and establish technical, environmental and socio-economic indicators for monitoring the state and conditions of Cambodian biodiversity (species and habitats), the use and handling of LMOs, the effectiveness of measures to adapt to climate change, and land degradation and drought. Includes the ability to develop and operate Early Warning Systems to respond to climate hazards such as drought and flooding events, and on planning for how best local communities and farmers in vulnerable areas are able to respond to these events. (Key agencies: MOE, MOP, MAFF, MRD, MOWRAM).
8. Competence on Continuing Education and Training. Improve and strengthen their ability to design and conduct training needs assessments and to formulate and execute human resource development plans relating to national capacity needs for conserving biodiversity, adapting to climate change, and combating land degradation & drought. (Key agencies: MOE, MAFF, MRD, MOWRAM, MPWT, MIME).
- **Financial Capabilities**
9. Coordinate Funding Development. Institute and enforce policies and guidelines governing the implementation of fund generation programs to support and sustain biodiversity conservation, climate change adaptation, and combating land degradation and drought in Cambodia. Includes programs to generate revenues and incomes from the sustainable use of natural resources in the country. (Key agencies: MEF, MAFF, MOT, MOWRAM, MOE).
10. Employment of Economic Instruments. Design and establish economic instruments that enable government to maintain existing Conventions-related infrastructure and equipment (and to meet new needs), from out of the sustainable use of biodiversity, land, soils and water resources, and from

successful adaptations to climate change. (Key agencies: MEF, MAFF, MRD, MOWRAM, MOE).

11. Mobilization of Financial Resources. Intensify the development of funding sources to support activities to address the thematic concerns of the three Conventions. Includes:
  - 11.1 Setting transparency, accountability and participatory mechanisms in developing and managing the funds, to encourage broad multisector support and contributions to their build-up
  - 11.2 Involving resource users and consumers in building up the funds and on managing their use and deployment to support thematic activities
  - 11.3 Strengthening the planning, execution and monitoring systems on using the funds
  - 11.4 Strategizing and harmonizing the use of the funds to support and sustain the thematic activities as well as the participation of financial institutions, civil society organizations and donors in setting up and managing the funds
  - 11.5 Setting up matching mechanisms
  - 11.6 Diversifying funding sources and providing incentives for sources
  - 11.7 Improving staff effectiveness and reliability in handling and managing the funds

(Key agencies: MEF, MAFF, MRD, MOWRAM, MOE).

- **Organizational Commitments**

Develop common frameworks and tools for key institutions and ministries to:

12. Strengthen Information Sharing Arrangements. Develop and implement approaches for inter- and intra-agency arrangements that will widen their access to information relating to the thematic concerns including on relevant local and indigenous knowledge and practices relating to them. Includes arrangements to:
  - 12.1 Ensure inter- and intra-agency collaboration to assess the information
  - 12.2 Identify and satisfy the information needs of agencies and sectors
  - 12.3 Share information to stakeholders and the private sector particularly on biodiversity and its impacts on agriculture and industries (including the safe use and handling of LMOs), vulnerabilities to climate change, and the status of soils and water resources
  - 12.4 Manage the flow and use of information to improve Early Warning Systems on adverse climate events and to track the status of biodiversity, land and water resources in different parts of Cambodia

(Key agencies: MOE, MAFF, MOWRAM, MRD).

13. Strengthen Decentralization and De-concentration. Develop and implement decentralized and de-concentrated mechanisms and procedures promoting participatory and accountable planning, decision-making, negotiation skills

and conflict resolution pertinent to addressing biodiversity conservation, climate change matters, and land degradation and drought. (Key agencies: MOE, MAFF, MRD, MEF).

14. Intensify Integration and Collaborative Planning. Develop and implement coordinated planning and harmonize ministry and sectoral policies and plans relating to resource management and in addressing the thematic concerns. Includes:
  - 14.1 Coordinating and harmonizing the plans, programs and actions of research institutions, the private sector, international organizations and NGOs, to achieve a high and efficient complementation of their undertakings
  - 14.2 Promoting coordinated actions among ministries and sectors to develop forests and protected areas and promote multi-cropping systems, agro-forestry, good land and water care systems, and effective adaptation to climate change
  - 14.3 Collaboratively developing, adopting and disseminating appropriate technologies to support, boost, and sustain primary production systems

(Key agencies: MOE, MAFF, MRD, MIME, MOP).

- **Public Support**

15. Strengthen Networking Among Stakeholders. Develop linkage mechanisms and networks of stakeholders to widen public participation in promoting sustainable natural resource uses and management and in activities to conserve biodiversity, adapt to climate change, and combat land degradation and drought. Includes formal mechanisms like Memoranda of Understanding and Memoranda of Agreements between relevant ministries and agencies of government with donors, civil society organizations, local governments, community organizations, and academic and research institutions. (Key agencies: MOE, MAFF, MOWRAM, MRD, CNMC).

C. *Long-term (7-10 years)*

- **Human Capabilities**

Improve the skills of the technical staff of key institutions in the following areas of competence:

1. Competence on Policy Development. Improve and strengthen their ability to develop effective, concise and easily implementable policies, plans, and guidelines to address the thematic concerns of the three Conventions. Includes the ability to:
  - 1.1 Harmonize and synergize the missions and mandates of relevant agencies to achieve a high complementation of government efforts to address the concerns

- 1.2 Integrate local initiatives, indigenous knowledge and sustainable practices into government planning, decision-making and implementation processes
- 1.3 Apply ecologically sound, participatory and socially equitable principles and methods of land-use capability analysis to guide rational land- and resource-use planning and decisions, and strategies to address vulnerabilities from biodiversity loss, climate change, land degradation and drought
- 1.4 Design and use innovative approaches in facilitating the implementation of policies, plans and legal instruments to address the thematic concerns of the three Conventions
- 1.5 Develop and apply economic instruments, the precautionary principles and related mechanisms and incorporate these in policies and plans to promote biodiversity conservation, measures to adapt to climate change, and measures to combat land degradation and drought
- 1.6 Design and implement policies that promote the adoption of technical innovations to strengthen sustainable production systems across different ecological regimes and land-use types in Cambodia
- 1.7 Design and implement resource-use policies and land-use plans to rehabilitate degraded ecosystems, develop forests, improve the quality of protected areas and agricultural lands, strengthen the ecological functions of soils and water, and promote effective measures to adapt to climate change
- 1.8 Improve and strengthen policies and programs that promote participatory approaches to resource- and land-use planning and management, and policies and plans to promote participatory (multisector, multiscale) actions to conserve biodiversity, adapt to climate change, and combat land degradation and drought

(Key agencies: MOE, MAFF, MOWRAM, MRD, MOT, CNMC).

- **Financial Capabilities**

2. Expand and Diversify Funding Sources for Convention-Related Activities. Increase and diversify the sources of funds to support biodiversity conservation, climate change adaptation, and combating land degradation and drought in Cambodia. Includes:
  - 2.1 Providing incentives to expand and intensify private sector, civil society, donors' and community participation in funding the activities
  - 2.2 Institutionalizing revenue generation from resource uses
  - 2.3 Improving the transparency, accountability and participatory mechanisms for developing, managing and deploying funds for the activities
  - 2.4 Strengthening inter- and intra-agency and multisector collaborative planning to enhance fund generation for the activities

(Key agencies: MEF, MOE, MAFF, MEF, MOWRAM).

- **Organization Commitments**

Develop common frameworks and tools for key institutions and ministries to:

3. Improve Policy Implementation. Develop approaches to facilitate the effective implementation of policies, plans and legal instruments (including economic instruments, user-pay systems, and precautionary principles) relevant to biodiversity conservation, climate change matters, and to combating land degradation and drought. (Key agencies: MOE, MAFF, MEF, MRD).
4. Integrate the Institutional Management of Resources. Develop and implement mechanisms to synergize and integrate the mandates and actions of government agencies to manage critical ecosystems (e.g., watersheds, coastlines and riparian zones, water bodies, protected areas, agricultural areas). This, to enhance the effectiveness of the conservation and value of the resources and to maximize their productivity and quality of ecosystem services that they produce. Includes integrating the regulatory and incentive systems to achieve these objectives including planning systems and the use of economic instruments. (Key agencies: MOE, MAFF, MEF, MRD, MOWRAM, MOP).
5. Improve Institutional Incentives for Enhancing the Quality and Performance of Component Personnel. Develop and implement motivation mechanisms (salary and benefit systems, continuing education and training, scholarships, good equipment support, awards and rewards) to ensure quality staff procurement and performance in addressing biodiversity conservation, climate change, and land degradation and drought. (Key agencies: MOE, MAFF, MIME, MOWRAM, MRD).
6. Institutionalize Monitoring Activities. Conduct regular socio-economic surveys to monitor the effectiveness of resource management systems and technologies (e.g., LMOs) and their impacts on state and quality of natural resources (including lands and water), the risks and vulnerabilities from climate change, and poverty levels in different in Cambodia. (Key agencies: MOE, MAFF, MRD).
7. Improve the Communication and Implementation of Policies and Laws. Review relevant laws, regulations and policies relating to biodiversity conservation, climate change matters, and land degradation and drought, to:
  - 7.1 Clarify and communicate their intents and provisions to different publics
  - 7.2 Improve the degree they support different programs and actions that address the thematic concerns of the three Conventions
  - 7.3 Strengthen regulatory enforcement nationwide

Includes policies and laws on environmental impact assessment and on surveillance and monitoring of compliance to them.

(Key agencies: MOE, MAFF, MRD, MOP).

- **Public Support**
8. Widen Public Participation. Develop and implement mechanisms for improving the extent and quality of stakeholders' participation in biodiversity conservation, climate change adaptation, and combating land degradation and drought. (Key agencies: MOE, MAFF, MRD).

#### 4.4.5 Cross-Cutting Capacity Needs

(As had been stressed earlier [in paragraph 2 section 4.2 page 58 above], cross-cutting capacity needs attend to broad national constraints on the thematic capacities. They encompass fundamental economic and governance issues which in the situation in Cambodia today, only the Council of Ministers, the Legislative Assembly, the Judiciary and the Monarchy itself, in tandem and together, could provide the lead to initiate the reforms and measures to address them. Unless indicated, key agencies involving in the implementation of specified capacities are the Council of Ministers and all relevant ministries. The prioritization of cross-cutting capacity needs below involve addressing their aggregate at the individual, institutional and systemic tiers of capacity in the short-, medium- and long-terms. The object is to weaken their inhibiting effects on the thematic capacities as they get developed in the same period.)

##### A. *Short-term (1-3 years)*

- **Individual**

Address the following issues affecting the civil service and human resources in Cambodia:

1. Upgrade the Salary Systems and Incentives in the Civil Service. Provide higher salaries, wages, benefits and retention incentives for personnel in the civil service, particularly the technical staff of service delivery agencies. Includes providing technical personnel with opportunities for professional growth and upgrading their technical support systems (e.g., laboratories), political security (e.g., tenure) and public backing (e.g., giving them awards). (Key agencies: COM, MEF and Secretariat for Public Civil Service)
2. Upgrade the Technical Expertise and Competence of the Civil Service. Elevate the level of technical expertise and professional competence of the civil service, particularly in agencies engaged in the delivery of critical services: e.g., health, education, livelihoods, support for agricultural and industrial activities, environmental protection, delivery of infrastructure, and development planning and administration. Includes expertise on:
  - 2.1 Evaluating and strengthening policies and policy enforcement
  - 2.2 Expertise in research and systematic observations
  - 2.3 Promoting public participation in the undertakings of the government (including in research, systematic observations, monitoring environmental conditions, and activities to address threats and vulnerabilities to economic, social and environmental systems)

- 2.4 Promoting collaborative activities by the public, private and civil society sectors
  - 2.5 Protecting and assessing the value and applicability of indigenous and traditional knowledge and practices
  - 2.6 Promoting ecologically-sound and socially-acceptable resource-use practices.
3. Understanding Sustainable Development. Widen the understanding of sustainable development and sustainable development issues among Cambodians, particularly among those in the public service. Includes understanding issues related to:
- 3.1 Sustainable consumption and resource uses (including conservation, waste management, pollution control, control of GHG emissions)
  - 3.2 Sustainable agriculture and production systems
  - 3.3 Environmental risks and vulnerabilities to human, biotic and ecological health (including from environmental degradation like deforestation and pollution, and risks due to ecosystem changes and from chemicals and LMOs)
  - 3.4 Actions to mitigate environmental risks and vulnerabilities (including the safe use and handling of chemicals and pollutants; institution of biosafety measures to safely use and handle LMOs; reforestation, agro-forestry and forest protection; IPM, multi-cropping, and organic and integrated agriculture; and adapting to ecosystem changes like to extended drought periods using drought-resistant crops, water impounding, rainfall sequestration devices and water conservation)
  - 3.5 The value of transparency, accountability and participation in successful endeavors to attain sustainable development
  - 3.6 Policies, laws and regulations to promote sustainable development in Cambodia
- (Key agencies: MOE,MAFF, MIME, MRD, MOH, MOC)

- **Institutional**

4. Institutionalize Human Resource Development. Embed in existing policies and regulations of the RGC requiring public agencies to commit resources and to undertake programs to enhance the level of expertise and professional quality of their staff. Includes upgrading salaries and incentives for technical personnel. (Key agencies: COM, MEF).
5. Institutionalize Public and Stakeholders' Participation. Require all public agencies to commit resources and set up mechanisms for regularly involving the private and civil society sectors, academe and local governments, in the exercise of their mandates and in planning and implementing their activities. (Key agencies: COM, MEF, MOP)
6. Institutionalize Collaborative and Integrated Planning and Management of Critical Resources. Require all public agencies to commit resources and to undertake programs to collaboratively develop with their stakeholders integrated master plans and management systems of natural resources and

public assets (e.g., water systems, infrastructure, land, water bodies). (Key agencies: COM, MEF, MOP and relevant agencies).

7. Develop and Strengthen Policies, Regulations and Programs. Require all public agencies to collaborate with other sectors and their stakeholders to review, formulate options, strengthen, and execute policies, regulations and programs that will:

- 7.1 Enhance sustainable production and consumption practices in Cambodia
- 7.2 Widen public participation in government undertakings (e.g., in constructing and maintaining critical infrastructure like dams, roads, bridges and water systems; managing pollution and solid wastes; promoting biosafety; reducing GHG emissions; controlling population fluxes; and encouraging sustainable agriculture)
- 7.3 Enhance community participation and the engagement of local authorities in sustainable development planning and implementation
- 7.4 Engage indigenous peoples in sustainable development activities
- 7.5 Promote equitable access to infrastructure, social services and public assets by communities and groups in urban and rural areas, in different economic and social circumstances
- 7.6 Expand alternative livelihoods
- 7.7 Provide economic incentives and other incentives for good resource use practices
- 7.8 Strengthen tenure systems over critical resources and assets

(Key agencies: COM)

8. Monitor the Progress of Programs and Interventions. Require all public agencies to collaborate with other sectors and their stakeholders to regularly track the progress of their programs and undertakings, particularly those that address sustainable development concerns in Cambodia. (Key agencies: COM)

- **Systemic**

9. Strengthen Public Governance. Require all public agencies to institute measures that will improve the quality of their performance. Includes measures to curtail and eliminate corruption and graft within their ranks. Involves:

- 9.1 Instituting effective accountability systems on the use of public funds
- 9.2 Increasing the transparency of decision making and actions
- 9.3 Widening the participation by stakeholders in planning and executing programs particularly on addressing environmental, economic and social issues
- 9.4 Possibly setting up a transparency and accountability committee composed of representatives from Cambodian academe, civil society, media and professionals, to regularly audit the quality of services rendered by the agencies.

(Key agencies: COM)

10. Improve the Effectiveness of Population Management. Improve incentives for good population management, improve the delivery of reproductive health care services, improve the quality of the population, and control migration and population concentrations across Cambodia. (Key agencies: COM)
11. Strengthen Funding Commitments and Support for Sustainable Development. Set up funding mechanisms to support sustainable development programs in the long-term. Expand public and private sector support and investments in sustainable development programs by embedding in all public undertakings measures to allow for multisector participation, collaboration and complementation in their planning and execution. (Key agencies: COM)

**B. *Medium-term (4-6 years)***

- **Individual**

1. Enhance the Competence of the Civil Service to Adopt Sustainable Development Strategies from Elsewhere. Improve and strengthen the ability of civil service personnel, particularly the technical staff of key institutions and ministries including local governments, to understand, re-tailor, adopt and apply in Cambodia successful sustainable development practices that have worked in other countries.
2. Enhance the Competence of Technical Personnel in Regulatory Agencies to Promote and Regulate the Adoption, Use and Transfers of New Technologies. Improve and strengthen the ability of civil service personnel, particularly the technical staff of key institutions and ministries including local governments, to promote and regulate the adoption and use of appropriate and environmentally sound technologies. Includes technologies on processing, packaging and value adding to local products and to support SMEs.
3. Enhance the Competence of the Civil Service on Technical Matters. Improve and strengthen the ability of civil service personnel, particularly the technical staff of key institutions and ministries including local governments, to standardize and systematize data collection, review, analysis and interpretation, and on storing and managing them in robust data bases. Includes information on natural resources and environmental conditions, new technologies (like LMOs) and their handling (e.g., biosafety) and the ability to develop and interpret maps and share information with users and stakeholders.
4. Enhance the Competence of the Civil Service on Policy, Regulatory and Institutional Matters. Improve and strengthen the ability of civil service personnel, particularly the technical staff of key institutions and ministries including local governments, to assess policies and regulations and improve their execution and enforcement and strengthen the institutional foundations

of sustainable development. Includes policies and regulations on agro-chemicals, food safety, biosafety, land management, waste management, GHG emissions and sinks, and responding to climatic and environmental risks and vulnerabilities; credits and incentives to promote integrated and ecologically sound farming practices and value added activities to local farmers; and on strengthening environmental governance and multisector collaboration and decentralization.

5. Enhance the Competence of Other Sectors, Communities and Local Governments to Collaborate in Government Undertakings. Improve and strengthen the ability of civil service personnel, particularly the technical staff of key institutions and ministries including local governments, to design and operate mechanisms and incentives for sectors and institutions to cooperate and collaborate on achieving sustainable development in Cambodia. Includes the ability to design and develop mechanisms and incentives for the personnel and staff of different institutions, agencies and local governments to collaborate on:

- 5.1 Deploying development volunteers and extension workers to promote sustainable practices across urban and rural areas in Cambodia (Key agencies: MRD, MAFF, MOE, MOH, MOI)

- 5.2 Training and educating farmers on integrated agricultural technologies and ecologically-sound farming practices (Key agencies: MAFF, MOE, MRD, MIME, and Local Authority)

- 5.3 Enhancing the competence of the general Cambodian public to effectively cope with and respond to environmental risks (Key agencies: MoE, MAFF, MRD, NCDM, and Local Authority)

- 5.4 Instituting biosafety protocols and other regimens to safely handle and use new technologies like LMOs (Key agencies: MoE, MAFF)

- 5.5 Developing the skills and competence of Cambodian to pursue livelihoods in different landscapes and environmental conditions in the country (Key agencies: MAFF, MRD, MOE, MRD, and Local Authority)

- **Institutional**

6. Strengthen Policies and Programs on Sustainable Development. Review, refine and strengthen the enforcement of existing laws and regulations on natural resources and environmental management to address new trends and issues on development in Cambodia and to promote the adoption of new technologies and techniques that might be appropriate for the country (e.g., IPM, organic agriculture). Includes laws and regulations on the importation and distribution of chemical-laced agro-products and LMOs and on their safe use and handling. Also, policies and budget programs for research to improve existing technologies (e.g., seeds, IPM, crop resistance, climate and weather observations, soil fertility improvement, drought mitigation). (Key agencies: CDC, MOP, MOE, MAFF, MOC, MOT, MIME, MOEYS)

7. Widen Public Participation in Sustainable Development Programs. Expand programs that encourage the participation of academe, civil society, industry

and local governments in sustainable development initiatives, and their collaboration on each others' undertakings. Empower rural poor communities and indigenous peoples to participate in sustainable development initiatives (Key agencies: MoE, MAFF, MRD, MIME, and local authority)

8. Expand Domestic Funding Support for Sustainable Development. Increase public sector funding commitments to sustainable development activities and incentives for private sector investments on sound environmental practices, use of appropriate technologies, and on promoting the equitable distribution of the benefits and costs of development (Key agencies: MEF, MAFF, MOE)
  9. Develop Harmonized Systems for Monitoring Sustainable Development. Design and establish harmonized procedures and protocols for multisector and multiscale tracking of sustainable development initiatives and issues in Cambodia.
- **Systemic**
10. Expand Good Governance Practices in the Public and Private Sectors. Develop and establish standards of good governance (transparency, accountability, participatory processes, and predictability) and promote their use among public and private institutions in Cambodia. Includes:
    - 10.1 The promotion of inter-agency coordination, cooperation and collaboration
    - 10.2 The establishment of multisector communication networks
    - 10.3 The promotion, strengthening and maintenance of robust regional and international cooperation arrangements and linkages like among Mekong riparian countries
    - 10.4 Securing indigenous and customary rights and powers over planning and decision-making on managing and using natural resources in local communities
  11. Expand Population Management Initiatives of the Public and Private Sectors. Widen the coverage of programs and incentives to promote good population management and improvements in population quality in Cambodia. Includes programs and incentives to promote good reproductive health practices and to control population fluxes and concentrations in the country. (Key agencies: MOI, MOH, MOP and local authority)
  12. Expand the Incentives for Public and Private Sector Investments on Sustainable Development. Promote and encourage private and public investment in natural resource conservation and management. Increase RGC budget allocations for reforestation, forest conservation and management. Promote the participation of local communities, local governments, civil society, indigenous peoples, academe and stakeholders in environmental and sustainable development initiatives. (Key agencies: CDC, MAFF, MIME, MOE, and local authority)

C. *Long-term (7-10 years)*

- **Individual**

1. Enhance the Competence of the Civil Service to Develop Innovative Approaches to Achieve Sustainable Development in Cambodia. Enhance the skills of the technical staff of RGC agencies to collaborate with other sectors on developing new and more appropriate strategies and methods to pursue sustainable development in Cambodia.
2. Enhance the Competence of the Technical Personnel of Regulatory Agencies to Promote and Regulate the Development, Use and Transfers of Appropriate Technologies and Techniques. Enhance the skills of the technical staff of RGC agencies to collaborate with other sectors on setting up incentives and regulatory mechanisms for promoting the development, use, and dissemination of appropriate technologies and techniques to achieve sustainable development in Cambodia. Includes:
  - 2.1 Techniques on delineating the boundaries of critical ecosystems (Key agencies: MAFF, MOE, MLMUPC)
  - 2.2 Protocols for demarcating important sites hosting resources for vulnerable communities (Key agencies: MOE, MAFF, MLMUPC)
  - 2.3 Techniques to correctly delineate assets subject to tenure claims (Key agencies: MOE, MAFF, MLMUPC)
  - 2.4 Tenure strengthening methods and procedures (Key agencies: MLMUPC, MOE, MAFF and local authority)
  - 2.5 Technologies and techniques for advanced and targeted R&D (e.g., to develop national biosafety and food safety standards or national biotechnology programs) (Key agencies: MOE, MAFF, MOH, MOC, MIME, CDC)
3. Establish Mechanisms to Sustain Technical Competence in the Civil Service. Set up and institutionalize skills enhancement and incentive programs to sustain the highest possible levels of technical and professional competence in the civil service.
4. Establish Mechanisms to Sustain the Policy, Regulatory and Institutional Competence in the Civil Service. Set up and institutionalize skills enhancement and incentive programs to sustain the highest possible levels of competence on policy, regulatory and institutional development among the staff and personnel in the civil service. Includes competence to promote broad multisector participation and private and community investments on sustainable development initiatives like promoting sustainable farming, watershed rehabilitation, protected area management, tree plantations, good soil and water care practices, regular resource inventories, and environmental auditing.
5. Establish Mechanisms to Sustain Civil Service Competence on Promoting Multisector and Multiscale Collaborations. Institutionalize skills enhancement and incentive programs to build up and sustain the competence of the civil service to design and execute multi-agency and multisector collaborative undertakings.

- **Institutional**

6. Assess and Broadened Sectoral Policies on Sustainable Development. Develop and enforce national migration policy and regulation. Develop additional legal instruments to meet the needs for natural resource management and environmental protection (Key agencies: CSD, MOI, MLMUPC, MOE, MAFF)
7. Initiate New Programs on Sustainable Development. Undertake multiagency and multisector initiatives at different tiers of social organization and governance in Cambodia, to design new programs and undertakings to pursue sustainable development in the country. Includes programs on addressing vulnerabilities to production systems like draught and flood early warning systems. (Key agencies: MOWRAM, CNMC, MAFF, MOE, NCDM)
8. Intensify Public Participation in Sustainable Development Programs. Expand and institutionalize the participation of local governments, civil society organizations, academe and industry in sustainable development undertakings in Cambodia. Include mechanisms for effective prevention, mitigation and resolution of conflicts over natural resources like biodiversity, lands, minerals, and water. (Key agencies: MOE, MAFF, MIME, MRD)
9. Institutionalize Expanded Funding Support for Sustainable Development. Embed in national policies and in the regular programs of the RGC mechanisms to increase public and private funding support for sustainable development initiatives. Includes mechanisms to improve the enforcement of policies and guidelines for ecologically sound investments by public agencies, private firms, local governments, civil society, communities and academe. Also strategies to sustain the mobilization of resources for sustainable development planning and implementation. (Key agencies: CDC, MAFF, MOE, MIME, MOC)
10. Institutionalize Harmonized Systems for Monitoring Sustainable Development. Embed in national policies and programs uniform standards and procedures for systematically tracking the progress of initiatives to pursue sustainable development in Cambodia.

- **Systemic**

11. Institutionalize Good Governance Practices in the Public and Private Sectors. Set up and enforce policies, regulations and mechanisms for tracking the good governance practices of public agencies and other sectors. Includes regular audits and evaluation of the performance, professional competence and integrity of civil servants.
12. Institutionalize Population Management Initiatives of the Public and Private Sectors. Embed in national policies and in the regular programs of the RGC mechanisms and incentives for good population management in Cambodia. Includes programs and incentives to control internal migrations and the concentration of populations in vulnerable areas. (Key agencies: CDC, MAFF, MOE, MIME, and local authority)

13. Institutionalize the Incentives for Public and Private Sector Investments on Sustainable Development. Embed in national policies and in the regular programs of the RGC mechanisms and incentives to promote multisector and multistakeholder investments on good sustainable development practices including on, among others:

- 13.1 Sustainable development R&D and policy development (Key agencies: CDC, MEF, MAFF, MOE, MIME, MOT)
- 13.2 Solid waste management (Key agencies: MOE, and local authority)
- 13.3 Promoting sustainable agriculture and good land and water care practices (Key agencies: MAFF, MOWRAM, MOE, CNMC)
- 13.4 Promoting biodiversity conservation, biosafety, food safety, and the safe use and handling of LMOs and chemical products (Key agencies: MOE, MAFF, MOC, MIME)
- 13.5 Promoting the use of alternative fuels and energy sources (Key agencies: MIME, MOE, MAFF, MRD)
- 13.6 Adaptations to altered states of ecosystems (Key agencies: MOE, MAFF, MRD, MIME, NCDM)
- 13.7 Good environmental and development governance practices

#### **4.5 CAPACITY DEVELOPMENT PRIORITIES IN IMPROVING THE OVER-ALL CAPACITY OF CAMBODIA**

The development of the preceding dimensions of thematic (and common) capacities cover all tiers of capacity at the individual, institutional and systemic levels. That is, to the extent that the human, financial, organizational and public support dimensions of Cambodia's capacity needs are strengthened, the country's individual, institutional and systemic capacity needs are addressed as well. This, because strengthening each dimension also strengthens the capacities of organizations and sectors, as does strengthening institutions and sectors likewise translates to improving the quality and effectiveness of personnel, funding systems, organizational commitments and public support for attending to the thematic concerns and the obligations. The over-all effect of this synergy, to the extent it occurs and is sustained, will be to improve the institutional and systemic capacities of Cambodia (as a country) to attend to the thematic concerns and obligations to CBD, UNFCCC and UNCCD.

Meanwhile, attending to the cross-cutting capacity needs, albeit requiring efforts that extend beyond the ability of the thematic agencies to undertake, will reduce pressures against the development of the thematic and common capacity needs of Cambodia.

#### **4.6 THE STRATEGIES TO DEVELOP THE NEEDED THEMATIC CAPACITIES IN CAMBODIA**

There can be two strategies to develop the needed thematic capacities in Cambodia:

##### **4.6.1 Develop the thematic capacity needs individually and separately**

Each of the identified capacity development priorities listed in 4.4.1 (on biodiversity conservation: 12 short-terms; 10 medium-terms; 12 long-terms), 3.3.2 (on climate change: 11 short-terms; 10 medium-terms; 9 long-terms) and 3.3.3 (on land degradation

and drought: 7 short-terms; 6 medium-terms; 13 long-terms) may be made into separate and individual capacity development undertakings. Each undertaking will be planned and executed by their principal (or focal) ministries. Each will be administered separate from the others and funded separately as well.

This strategy will make each capacity development activity stand-alone from the rest. The failure of any one activity need not translate to failures to develop other capacity needs. Correspondingly, successes in developing certain capacity needs will not necessarily ensure success in developing the others. This strategy runs the risk of duplicating similar or related capacity development efforts.

#### **4.6.2 Develop the thematic capacity needs collectively**

This strategy focuses mainly on the common capacity needs listed in 3.3.4 (11 short-terms; 15 medium-terms; and 8 long-terms). Each common need is to be attended to and developed but encompassing in the undertaking the related thematic capacities that are listed in 4.4.1, 4.4.2, and 4.4.3. Each undertaking to develop a common need is to be designed so as to have always at least three components relating to the thematic capacity needs on biodiversity conservation, climate change and combating land degradation and drought. This way, the development activity is comprehensive and encompassing.

For example, the common capacity needs to develop the research competence of Cambodian experts in key institution and ministries may be designed to include as among its components research competence on biodiversity conservation (e.g., doing resource inventories , identifying endangered species and vulnerable habitats), climate change (e.g., doing systematic observations, assessing vulnerabilities, identifying adaptation measures), and combating land degradation and drought (e.g., doing soil and water analyses and developing techniques to combat soil erosion and to improve water sequestration and percolation in critical watersheds).

Similar approaches can be taken in efforts to develop the common capacity needs for competence in policy, regulatory and institutional strengthening; promoting public participation in thematic activities; developing funding and other support systems for attending to the obligations under the three Conventions.

This strategy requires that capacity development undertakings be carefully designed and planned so as to capture as much of the thematic capacities that could be encompassed in the activity. This requires, too, close inter-ministry cooperation and collaboration to develop the capacities.

But, over-all, this strategy is probably more cost-effective in the short to long terms than the first strategy.

## 4.2 Summary Estimated Budget for Implementing the 53 Priority Actions in the Short-term (1-3 years)

No. Priority	Priority Actions	Months	In USD
<b>Biodiversity Conservation</b>			
1	Increase their awareness and understanding of the political and legal contexts of biodiversity conservation in Cambodia. Includes understanding the features and value of biodiversity, their status, threats, risks and vulnerabilities, and their importance to the sustainable development of the country. (Key agencies: MOE, MAFF, MRD; Relevant to CBD 1, 3, 4, 5, 6, 10).	24	400.000
2	Increase their knowledge and ability to disseminate information (e.g., through Clearing House mechanisms) on the ecological, social and economic impacts of genetic technologies and their uses. (Key agencies: MOE, Relevant to CBD 9, 12, 13).	20	50.000
3	Expand their skills to: <ul style="list-style-type: none"> <li>3.1 Do resource inventory and assessments</li> <li>3.2 Identify biological resources needing to be conserved in different scales of biodiversity (ecosystem, habitat, species, genetic)</li> <li>3.3 Map conservation areas</li> <li>3.4 Identify ecosystems needing rehabilitation</li> </ul> (Key agencies: MOE, MAFF; Relevant to CBD 2, 3, 5).	36	300.000
4	Improve and strengthen their ability to carry out and facilitate interagency actions (including to strengthen legislation and the implementation of the NBSAP) to support <i>in-situ</i> and <i>ex-situ</i> conservation. (Key agencies: MOE, MAFF; Relevant to CBD 1, 2, 3, 5).	18	200.000
5	Elevate the level of public sector financial commitment to fulfilling the obligations to the CBD through raising decision-makers' awareness and understanding of national interests on biodiversity conservation. (Key agencies: MOE, MAFF; Relevant to CBD 9, 10).	20	200.000
6	Define, identify, locate and sustainably manage the biological resources of Cambodia (moreso the vulnerable ones) and protect the ecological functions of soil and water resources. (Key agencies: MOE, MAFF; Relevant to CBD 3, 6).	16	50.000
7	Operate databases and information sharing arrangements on biodiversity and biodiversity conservation. (Key agencies: MOE, MAFF; Relevant to CBD 2, 9).	14	100.000
8	13. Institute scientific studies (including assessments,	36	1.500.000

	<p>field surveys, monitoring, data analysis, systematic map interpretation) on:</p> <p>8.1 The status and vulnerability of biological resources</p> <p>8.2 The fragility of habitats</p> <p>8.3 The pressures and threats to biodiversity</p> <p>8.4 Ecologically sound, participatory and socially acceptable methods for biodiversity conservation and sustainable use</p> <p>8.5 Economic valuation of alternative resource uses</p> <p>8.6 Improving agricultural production</p> <p>8.7 Integrated Pest Management (IPM)</p> <p>(Key agencies: MOE, MAFF, MOWRAM, RUA, MRD; Relevant to CBD 2, 3, 6, 7, 9, 11).</p>		
9	Identify and design measures to preserve indigenous knowledge, traditional resource uses and customary farming practices. (Key agencies: MOE, MAFF, MRD; Relevant to CBD 4, 6, 7).	16	50.000
10	Develop, adopt and enforce policies and regulations on equitable access to biological resources and on sharing benefits from the commercialization of genetic stocks. (Key agencies: MOE, MAFF; Relevant to CBD 6, 8, 12).	18	100.000
11	Design and execute continuing education and training programs on biodiversity conservation, management, planning, administration, fund development, and research, and on mobilizing public support for biodiversity conservation. (Key agencies: MOE, MAFF; MoEYS and Academe, Relevant to CBD 3, 9).	14	50.000
12	Intensify and widen the extent that NGOs, academe, peoples' organizations and private businesses are supporting and participating in biodiversity conservation undertakings in Cambodia. (Key agencies: MOE, MAFF; Relevant to CBD 2, 3, 6, 7, 8, 12).	12	50.000
	<b><u>Subtotal Required Budget for Biodiversity Conservation</u></b>		<b>3.050 million</b>
<b>Climate Change</b>			
1	Improve and strengthen their ability to understand the technical, economic, social, political and policy issues and imperatives on climate change vulnerability and adaptation and related matters, and what must be done e.g., inter-agency undertakings) to protect Cambodian interests relating to them. (Key ministry: MOE; Relevant to all 8 obligations).	18	100.000
2	Improve and strengthen their ability to develop, update and utilize climate change-related observations, databases and data management systems, analyze and interpret data, and produce and	18	100.000

	disseminate educational materials, information, tool kits, brochures, booklets, informational articles, media coverage and other materials relating to climate change. (Key agencies: MOE, MAFF, MOWRAM; Relevant to UNFCCC 2, 3, 4, 5, 7).		
3	Improve and disseminate educational information, guidelines, brochures, booklets, newsletters related to climate change. (Key agencies: MOE, MAFF, MOWRAM, MIME).	16	100.000
4	Improve and strengthen their ability to: <ul style="list-style-type: none"> <li>3.1 Understand in-depth the technical aspects of GHGs</li> <li>3.2 Undertake GHG inventory</li> <li>3.3 Do mitigation analysis and promote inter-agency collaboration on mitigations</li> <li>3.4 Undertake vulnerability and adaptation assessments</li> <li>3.5 Develop energy data (e.g., using demand analysis and forecasting)</li> <li>3.6 Develop and improve GHG emission factors by sector</li> <li>3.7 Use projection methods of GHG emission and removal</li> <li>3.8 Apply determinant factors to project crop growth and production variability.</li> </ul> (Key agencies: MOE, MAFF, MOWRAM, MIME, MPWT; Relevant to UNFCCC 2, 3, 4, 7).	28	500.000
5	Improve and strengthen their ability to adopt appropriate technologies and sustainable development programs like CDM and cogeneration. (Key agencies: MOE, MAFF, MIME; Relevant to UNFCCC 6).	26	300.000
6	Improve and strengthen their ability to advance Cambodian national interests on climate change matters in international fora and negotiations, and to represent Cambodia in regional and global networks on climate change mitigation and adaptation. (Key agencies: MOE, MAFF, MFA, MOWRAM, MIME, MPWT; Relevant to UNFCCC 1, 6, 7, 8).	36	500.000
7	Elevate the level of public sector financial commitment to fulfilling the obligations to the UNFCCC through raising decision-makers' awareness and understanding of national interests on biodiversity conservation. (Key agencies: MOE, MAFF; Relevant to UNFCCC 8).	18	200.000
8	Widen and intensify institutional commitments to: <ul style="list-style-type: none"> <li>7.1 Attend to climate change vulnerability and adaptation issues in Cambodia</li> <li>7.2 Prioritize and mainstream climate change matters and activities in national and sectoral</li> </ul>	30	300.000

	<p>plans and sustainable development strategies in the country</p> <p>7.3 Develop and procure needed infrastructure, facilities and equipment to strengthen national capacities to respond to climate change vulnerabilities and to take measures to adapt to climate change</p> <p>7.4 Harmonize and integrate national policies and international climate change agreements into national and sectoral actions on climate change</p> <p>7.5 Strengthen international collaboration on climate change matters</p> <p>(Key agencies: MOE, MAFF, MOP, MFA, MPWT; Relevant to UNFCCC 1 to 8).</p>		
9	Intensify institutional commitments to systematic observations and forecasting impacts of climate change on Cambodia. (Key agencies: MOE, MAFF, MOWRAM; Relevant to UNFCCC 6).	20	200.000
10	Expand programs and activities to design and promote energy efficiency and the use of renewable energy in Cambodia. (Key agencies: MOE, MAFF, MIME, MPWT; Relevant to UNFCCC 3, 4, 6).	18	150.000
11	Intensify institutional undertakings to increase public awareness and understanding of weather and climate issues and trends (e.g., ENSO); help communities use correct climate and weather information for their benefits; and advance Cambodia's national interests on adapting to climate change. (Key agencies: MOE, MAFF, MOWRAM, MRD; Relevant to UNFCCC 3, 7).	16	100.000
12	Build up and broaden public awareness of issues related to climate change and increase their level of ownership of alternative options to adapt to climate change. (Key agencies: MOE, MOWRAM, MAFF; Relevant to UNFCCC 7).	12	50.000
	<b><u>Subtotal Required Budget for Climate Change</u></b>		<b>2.60 million</b>
<b>Land Degradation</b>			
1	Improve and strengthen their ability to integrate land, soil and water management in national and sectoral policies and activities, to promote and achieve sustainable agriculture, livelihoods, production and development in Cambodia. (Key agencies: MAFF, MOE; Relevant to UNCCD 1, 2, 4)	20	150.000
2	Improve and strengthen their ability to track the progress and status of activities to address land degradation and mitigate the effects of drought in Cambodia. This, in relation to: 2.1 Doing collaborative research on effective	36	500.000

	<p>control of land degradation and best practices on water resource management</p> <p>2.2 Developing technologies to combat soil erosion and the adverse effects of drought (including on crop and various adaptations to altered soil and water regimes)</p> <p>2.3 Widening and intensifying public awareness of land degradation and drought</p> <p>2.4 Improving agricultural practices and agro-based livelihoods</p> <p>2.5 Conducting training on land and water care and management</p> <p>2.6 Improving early warning systems on threats to soil fertility and on drought</p> <p>2.7 Sharing information on best practices on soil and water management</p> <p>(Key agencies: MAFF, MOE; Relevant to UNCCD 1 to 10).</p>		
3	<p>Improve and strengthen their ability to incorporate and integrate land, soil and water care and management in the curriculum of secondary and higher education in Cambodia. This, with the view of:</p> <p>3.1 Expanding the corps of land and water experts in Cambodia</p> <p>3.2 Institutionalizing land degradation and drought concerns in national education</p> <p>3.3 Expanding public awareness of land degradation and drought and of the social, economic and environmental costs of failure to attend to them</p> <p>3.4 Institutionalizing land, soil and water care and management research and technology development among different agencies in Cambodia</p> <p>3.5 Improving the corps of experts to negotiate Cambodia's interests on land, soil and water care in international negotiations and networks.</p> <p>(Key agencies: MAFF, MOE, MOEY; Relevant to UNCCD 1 to 10)</p>	18	100.000
4	<p>Establish a Soil and Water Conservation Fund and encourage multisector participation in building up, sustaining and managing the fund to achieve sustainable soil and water care in Cambodia. (Key agencies: MAFF, MEF, MLMUPC; Relevant to UNCCD 1 to 10).</p>	18	200.000
5	<p>Improve their system of cooperation and coordination on land, soil and water care activities (e.g., on setting up a land, soil and water care coordinating committees; coordinate their field, research and public</p>	24	300.000

	mobilization activities; exchange relevant information; and do collaborative decision making). (Key ministry: MAFF; Relevant to UNCCD 6, 7, 8, 9, 10).		
6	Undertake joint and collaborative identification and mapping of degraded lands and drought-vulnerable areas, and analyzing the impacts of land degradation and drought on industries, ecosystems and agriculture. (Key agencies: MAFF, MOE; Relevant to UNCCD 8, 9, 10).	30	400.000
7	Set up mechanisms and programs to widen, intensify and sustain public awareness of land degradation and drought issues at all levels of social organization and governance in Cambodia; expand the participation of farmers' groups, civil society and agri-businesses in activities to: <ul style="list-style-type: none"> <li>7.1 Improve soil fertility, reduce soil erosion, and control soil and water pollution</li> <li>7.2 Rehabilitate degraded lands and improve crop and various adaptations</li> <li>7.3 Protect and conserve water resources</li> <li>7.4 Do systematic observation of weather and water regimes</li> </ul> (Key agencies: MAFF, MOE, MOI; Relevant to UNCCD 1 to 10).	25	300.000
	<b><u>Subtotal Required Budget for Land Degradation</u></b>		<b>1.95 million</b>
<b>Common Capacity Needs</b>			
1	Improve and strengthen their ability to set-up and operate mechanisms that promote and facilitate joint undertakings by ministries and other organizations to address the thematic concerns of the three Conventions. (Key agencies: MOE, MAFF).	15	100.000
2	Improve and strengthen their ability to develop and execute integrated approaches to: <ul style="list-style-type: none"> <li>2.1 Land use planning</li> <li>2.2 Water management</li> <li>2.3 Reducing environmental risks to and vulnerabilities of production systems (natural resources, agriculture and agro-industries)</li> <li>3.4 Enhancing the productivity of natural resources, agriculture and agro-industries</li> <li>3.5 Deploying science and indigenous knowledge in environmental management and agro-industrial production</li> <li>3.6 Developing and implementing measures to address biodiversity conservation, climate change vulnerabilities, and land degradation and drought</li> </ul> (Key agencies: MOE, MAFF, MOI, MOWRAM,	26	500.000

	MOP, MLMUPC, MRD)		
3	Improve and strengthen their ability to promote and execute participatory approaches to addressing the thematic concerns of the three Conventions. (Key agencies: MOE, MAFF, MLMUPC, MOI, MRD, MOWRAM).	15	100.000
4	<p>Improve and strengthen their ability to conceptualize, analyze, promote, and integrate into national policies and strategic plans sustainable resource uses and environmentally friendly production and resource management practices. Includes competence on:</p> <ul style="list-style-type: none"> <li>4.1 Developing approaches to rehabilitate degraded lands and ecosystems</li> <li>4.2 Reducing stresses to biodiversity, soils and water resources</li> <li>4.3 Conducting land-use capability analysis as input to land-use, biodiversity conservation and climate change adaptation planning and decision making</li> <li>4.4 Harmonizing competing needs for and uses of natural resources</li> <li>4.5 Conserving and sustaining biodiversity and land and water resources</li> <li>4.6 Assessing and responding to climate change impacts on biota, soils and water</li> <li>4.7 Assessing and responding to how changes in biodiversity and on soil and water resources mitigate or exacerbate their vulnerabilities to altered ecosystems</li> <li>4.8 Promoting local initiatives on sustainable resource uses and farming practices.</li> </ul> <p>(Key agencies: MOE, MAFF, MRD, MLMUPC, CDC, MOWRAM, MOP).</p>	25	500.000
5	Improve and strengthen their ability to conduct training needs analysis and to formulate and execute Conventions-relevant human resource development programs. (Key agencies: MOE, MAFF, RUA, MOEYS, RUPP, MRD, MOWRAM).	15	200.000
6	Adopt policies and guidelines encouraging sustainable resource utilization, energy saving, and use of renewable energy. (Key agencies: MOE, MEF, MIME and MAFF).	18	200.000
7	Develop and enforce protocols and mechanisms for information dissemination and sharing among them and with stakeholders of the Conventions. (Key agencies: MOE, MAFF).	12	50.000
8	Develop and implement harmonized and non-duplicative HRD plans to meet their short-, medium-,	15	100.000

	and long-term technical staffing needs. (Key agencies: MOE, MAFF, MRD, MOP, RUA, RUPP).		
9	<p>Develop and strengthen mechanisms for coordinated and collaborative institutional actions to:</p> <p>9.1 Restore and stabilize degraded lands and habitats</p> <p>9.2 Minimize the risks to production systems, species, habitats and areas vulnerable to climate change</p> <p>9.3 Do land-use capability analysis to guide land-use, biodiversity conservation and adaptation planning and decisions</p> <p>9.4 Improve the synergy between competing resource uses and conserving them</p> <p>Includes standardizing the operational procedures and codes of conduct of ministries and non-governmental institutions when addressing the thematic concerns of the three Conventions. (Key agencies: MAFF, MOE, MLMUPC, Council of Ministers).</p>	26	500.000
10	Build up public, civil society, academic, local government and private sector partnerships and enhance multisector and multilevel collaboration and communication with concerned stakeholders when attending to biodiversity conservation, climate change matters, and land degradation and drought. (Key agencies: MOE, MFA, MAFF).	16	100.000
11	Expand stakeholders' awareness and ownership of the range of issues and actions to address biodiversity threats and objectives, climate change vulnerabilities, and land degradation and drought; this, through public information using media, public fora, seminars, training, and public campaigns. (Key agencies: MOE, MAFF, MOI).	18	100.000
	<b><u>Subtotal Required Budget for Common Capacity Needs</u></b>		<b>2.450 million</b>
<b>Cross-Cutting Capacity Needs</b>			
1	Provide higher salaries, wages, benefits and retention incentives for personnel in the civil service, particularly the technical staff of service delivery agencies. Includes providing technical personnel with opportunities for professional growth and upgrading their technical support systems (e.g., laboratories), political security (e.g., tenure) and public backing (e.g., giving them awards). (Key agencies: COM, MEF, Secretariat for Public Civil Service)	20	300.000
2	Elevate the level of technical expertise and professional competence of the civil service,	36	500.000

	<p>particularly in agencies engaged in the delivery of critical services: e.g., health, education, livelihoods, support for agricultural and industrial activities, environmental protection, delivery of infrastructure, and development planning and administration. Includes expertise on:</p> <ul style="list-style-type: none"> <li>2.1 Evaluating and strengthening policies and policy enforcement</li> <li>2.2 Expertise in research and systematic observations</li> <li>2.3 Promoting public participation in the undertakings of the government (including in research, systematic observations, monitoring environmental conditions, and activities to address threats and vulnerabilities to economic, social and environmental systems)</li> <li>2.4 Promoting collaborative activities by the public, private and civil society sectors</li> <li>2.5 Protecting and assessing the value and applicability of indigenous and traditional knowledge and practices</li> <li>2.6 Promoting ecologically-sound and socially-acceptable resource-use practices.</li> </ul> <p>(Key agencies: COM, MEF).</p>		
3	<p>Widen the understanding of sustainable development and sustainable development issues among Cambodians, particularly among those in the public service. Includes understanding issues related to:</p> <ul style="list-style-type: none"> <li>3.1 Sustainable consumption and resource uses (including conservation, waste management, pollution control, control of GHG emissions)</li> <li>3.2 Sustainable agriculture and production systems</li> <li>3.3 Environmental risks and vulnerabilities to human, biotic and ecological health (including from environmental degradation like deforestation and pollution, and risks due to ecosystem changes and from chemicals and LMOs)</li> <li>3.4 Actions to mitigate environmental risks and vulnerabilities (including the safe use and handling of chemicals and pollutants; institution of biosafety measures to safely use and handle LMOs; reforestation, agro-forestry and forest protection; IPM, multi-cropping, and organic and integrated agriculture; and adapting to ecosystem changes like to extended drought periods using drought-resistant crops, water impounding, rainfall sequestration devices and water conservation)</li> <li>3.5 The value of transparency, accountability and</li> </ul>	12	100.000

	<p>participation in successful endeavors to attain sustainable development</p> <p>3.6 Policies, laws and regulations to promote sustainable development in Cambodia (Key agencies: MOE,MAFF, MIME, MRD, MOH, MOC)</p>		
4	Embed in existing policies and regulations of the RGC requiring public agencies to commit resources and to undertake programs to enhance the level of expertise and professional quality of their staff. Includes upgrading salaries and incentives for technical personnel. (Key agencies: COM, MEF).	16	200.000
5	Require all public agencies to commit resources and set up mechanisms for regularly involving the private and civil society sectors, academe and local governments, in the exercise of their mandates and in planning and implementing their activities. (Key agencies: COM, MEF, MOP)	18	200.000
6	Require all public agencies to commit resources and to undertake programs to collaboratively develop with their stakeholders integrated master plans and management systems of natural resources and public assets (e.g., water systems, infrastructure, land, water bodies). (Key agencies: COM, MEF, MOP and relevant agencies).	15	100.000
7	<p>Require all public agencies to collaborate with other sectors and their stakeholders to review, formulate options, strengthen, and execute policies, regulations and programs that will:</p> <p>7.1 Enhance sustainable production and consumption practices in Cambodia</p> <p>7.2 Widen public participation in government undertakings (e.g., in constructing and maintaining critical infrastructure like dams, roads, bridges and water systems; managing pollution and solid wastes; promoting biosafety; reducing GHG emissions; controlling population fluxes; and encouraging sustainable agriculture)</p> <p>7.3 Enhance community participation and the engagement of local authorities in sustainable development planning and implementation</p> <p>7.4 Engage indigenous peoples in sustainable development activities</p> <p>7.5 Promote equitable access to infrastructure, social services and public assets by communities and groups in urban and rural areas, in different economic and social circumstances</p> <p>7.6 Expand alternative livelihoods</p>	30	500.000

	<p>7.7 Provide economic incentives and other incentives for good resource use practices</p> <p>7.8 Strengthen tenure systems over critical resources and assets</p> <p>(Key agencies: COM)</p>		
8	<p>Require all public agencies to collaborate with other sectors and their stakeholders to regularly track the progress of their programs and undertakings, particularly those that address sustainable development concerns in Cambodia. (Key agencies: COM)</p>	20	200.000
9	<p>Require all public agencies to institute measures that will improve the quality of their performance. Includes measures to curtail and eliminate corruption and graft within their ranks. Involves:</p> <p>9.1 Instituting effective accountability systems on the use of public funds</p> <p>9.2 Increasing the transparency of decision making and actions</p> <p>9.3 Widening the participation by stakeholders in planning and executing programs particularly on addressing environmental, economic and social issues</p> <p>9.4 Possibly setting up a transparency and accountability committee composed of representatives from Cambodian academe, civil society, media and professionals, to regularly audit the quality of services rendered by the agencies.</p> <p>(Key agencies: COM)</p>	26	500.000
10	<p>Improve incentives for good population management, improve the delivery of reproductive health care services, improve the quality of the population, and control migration and population concentrations across Cambodia. (Key agencies: COM)</p>	36	500.000
11	<p>Set up funding mechanisms to support sustainable development programs in the long-term. Expand public and private sector support and investments in sustainable development programs by embedding in all public undertakings measures to allow for multisector participation, collaboration and complementation in their planning and execution. (Key agencies: COM)</p>	30	500.000
	<p><b><u>Subtotal Required Budget for Cross-Cutting Capacity Needs</u></b></p>		<b>6.10 million</b>
<p><b><u>Required budget for implementing 53 priority action in the short-term</u></b></p>			<b>16.15 million</b>

### 4.3 MONITORING AND EVALUATION (M&E) PLAN

#### 4.3.1 CAPACITY FOR M&E PLAN

Capacity development is a process. It involves doing a set of activities to achieve a desired outcome. And it involves costs in time, money and organization. It is to the interest of the RGC – and Cambodians as a whole – that its investments on capacity development (whether involving donor assistance or from local sources) are cost-effective and meet the expectations on the capacities to be gained from them. This requires a robust system to track the progress of capacity development enterprises being done in the country, to determine how they are achieving the desired capacities to be gained in Cambodia.<sup>9</sup>

#### 4.3.2 THE FEATURES OF A GOOD M&E PLAN TO TRACK THE PROGRESS OF CAPACITY DEVELOPMENT IN CAMBODIA

The same as those of a good RMP. A good M&E Plan is:

4.3.2.1 Simple. It is readily comprehensible and its procedures are clear and can be readily understood by its users and implementers.

4.3.2.2 Readily recognizable. It involves methods and mechanisms that are already being used in Cambodia and which are familiar to many Cambodians.

4.3.2.3 It is technically and legally feasible. It involves procedures that are technically sound and not violative of law.

4.3.2.4 It has good practical and theoretical basis. It is based on sound empirical and theoretical groundings.

4.3.2.5 Doable. It involves procedures that are easily implementable and executable. They require readily available expertise in Cambodia.

4.3.2.6 It promotes national ownership of the capacities to be developed. It strengthens Cambodian authority, control and sovereignty over the capacity development process being tracked.

#### 4.3.3 THE M&E PLAN

The M&E plan calls for a 4-step process to track the progress of capacity development in Cambodia:

##### **Step 1: Identification of Capacity Development Indicators**

Indicators of capacity build-up shall be identified. (Indicators are measurable and empirically verifiable events.). The process will involve relevant ministries and representatives from other stakeholder institutions (academe, local governments, industry, civil society and peoples' organizations like farmers' groups) collaboratively identifying, defining, selecting, and finally agreeing on two sets of indicator of capacity

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<sup>9</sup> From the UNDP's Handbook on "The Monitoring and Evaluation Framework": monitoring aims at providing data on early indications of progress, or lack thereof, in the achievement of the desired results (outputs and outcomes) of an activity. Evaluation is a process to systematically and objectively assess progress towards the achievement of the desired results. Evaluation is not a one-time event, but an exercise involving assessments of different scope and depth carried out at several points in time in response to evolving needs for knowledge and learning of how intended results are or are not being achieved. Monitoring provides the raw data to answer questions. But in and of itself, it is a useless and expensive exercise. Evaluation is putting those data to use and thus giving them value. Evaluation is where the learning occurs, questions answered, recommendations made, and improvements suggested. Yet without monitoring, evaluation would have no foundation, have no raw materials to work with, and be limited to the realm of speculation. Monitoring and evaluation are two linked processes.

development in Cambodia. The first, on capacity development at the individual, institutional and systemic tiers of social organization and governance in the country, and the second on the development of the human, financial, organizational and public support dimensions of needed capacities. The first set includes:<sup>10</sup>

1. *Output indicators*, which measure completion levels, timeliness of delivery, efficiency of delivery, and quality of outputs. (Outputs are physically perceptible objects and events produced by a project including reports, infrastructure, manuals, guides, inventories, and altered levels of human competence resulting from education and training.) These indicators include data on production, delivery and quality of the outputs. E.g.,
  - Target outputs versus accomplished outputs
  - Actual output quality versus set standards
  - Actual quality of the processes to produce the outputs versus set standards
  - Actual dates of delivery of outputs versus the target dates of their completion.
2. *Effect indicators*, which measure the immediate effects (+ or -) of the project. They measure the immediate changes created by project outputs or resulting from the use of these outputs. E.g.,
  - Changes in technical competence
  - Changes in financial capability
  - Changes in institutional commitment
  - Changes in political support
3. *Impact indicators*, which measure the extent that a capacity development project is meeting its stated goals and objectives. These gauge the long-term benefits brought about by the project's outputs and effects). E.g.,
  - Social goal and objectives versus actual accomplishments
  - Economic goals and objectives versus actual accomplishments
  - Environment goals and objectives versus actual accomplishments
4. *Sustainability indicators*, which measure whether or not (and to what extent) the impacts of a capacity development project or the changes brought about by it are sustained (i.e., manifested continually through time). E.g.,
  - Interventions are internalized by recipient organizations (the project is sustained so that regular agency staff are implementing it and funding is committed to it in a continuous basis)
  - Effects are sustained through time (the changes in technical competence, financial capability, organizational commitments, and breadth of public support are continuing even after the project has ended)
5. *Equitability indicators*, which measure the justness of the distribution of benefits among target organizations and entities. They determine whether or

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<sup>10</sup> From the Philippines' NCSA Document.

not (and to what extent) the impacts of the project are more or less evenly distributed among its stakeholders. E.g.,

- Collaborating organizations and different sectors are given equal opportunity to avail of and access capacity development programs
- Gender equity in capability development
- Regional, provincial and local (municipal and city) offices are given equal opportunity to avail of, participate, or execute capacity development programs
- Stakeholders are given equal opportunities to avail of the programs

The second set (on the human, financial, organizational and public support dimensions of capacities) shall include standard statistics showing increment differences from the baselines established in the Stock Taking phase of this NCSA process.

### **Step 2: Review of the Progress of NBSAP, NAP and NACC Implementation in Relation to the NCSA Findings**

Reports and documents on the progress of the implementation of the NBSAP, NAP and NACC shall be made to determine which ones and how much of the capacity needs identified in this NCSA are already being attended to under these sectoral activities. This would be critical in order to capture in the M&E the capacities being developed under these sectoral undertakings.

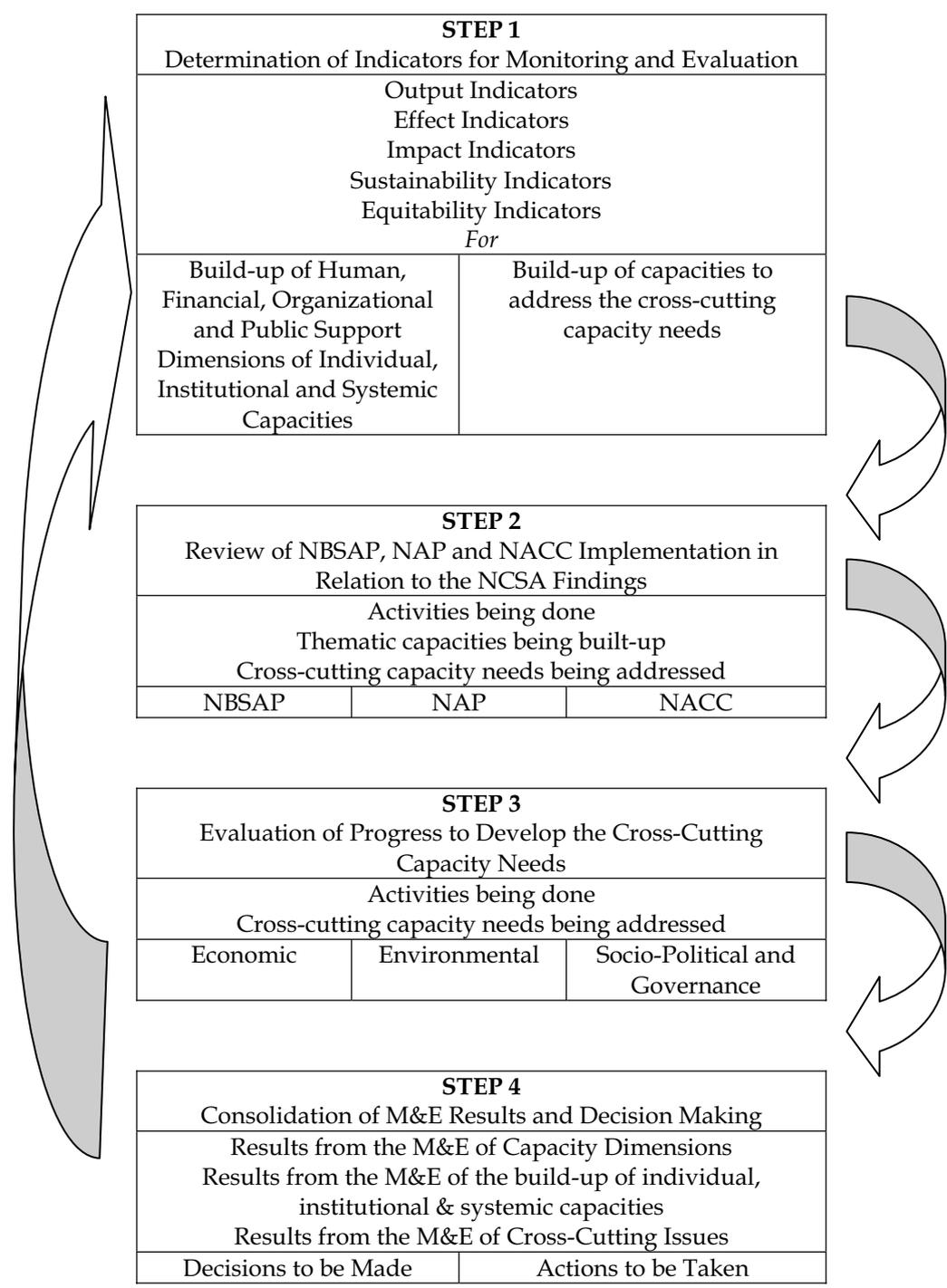
### **Step 3: Evaluation of Progress to Develop the Cross-Cutting Capacity Needs**

This focuses on tracking progress of projects to address the cross-cutting capacity needs. The indicators in this case (output, effects, impacts, sustainability and equitability) shall be defined in terms of the degree that the projects address the cross-cutting capacity needs identified in 4.3.5. It includes capacity needs to address economic, environmental and socio-political issues like improvements in transparency, accountability, participation and predictability in the governance of environment and development in Cambodia. This step looks at the over-all national situation in Cambodia and the extent major states of affair constrain thematic capacities in the country.

### **Step 4: Consolidation of the M&E Results and Decision-Making**

This involves analyzing, interpreting and understanding the unity of the findings and results of the first three steps. From this, recommendations shall be formulated for consideration by RGC decision-makers and by the leaderships of relevant stakeholder institutions. Recommendations will include how to further sharpen the M&E procedures and what decisions and actions are necessary (a) to improve the tracking of capacity development in the country, and (b) to respond better to the constraints on it.

Monitoring and evaluations may be done by individual ministries and stakeholder institution. Or they may collaborate on them. But data and results shall be shared by all concerned and a central repository of the M&E results shall be established in the MOP. All Key agencies and stakeholder institutions shall be given full and free access to the repository. Figure 2.1 shows the systemic structure of this M&E plan.



**Figure 2.1.** Systemic structure of the Cambodian NCSA M&E plan.



# CHAPTER FIVE

## SUMMARY AND RECOMMENDATIONS

### A. SUMMARY

The NCSA process in Cambodia uses the incremental approach of capacity self-assessment described in the GEF-UNDP NCSA Resource Kit. It uses the method of data triangulation to establish the current state of Cambodian capacities to attend to the thematic concerns of the CBD, UNFCCC and UNCCD, and to meet the country's obligations to these three Conventions. It involves the extensive participation of technical personnel from Key agencies attending to the thematic concerns and stakeholders from academe, other government ministries, civil society organizations, industry, and local governments. Data and findings are subjected to repeated rounds of validation involving different aggregations of the NCSA process participants.

The assessment finds that except for some isolated bright spots in which certain dimensions (i.e., human, financial, organizational and public support) of the thematic capacities are found slightly above "severely lacking", the capacities in the country to attend to the thematic concerns and to the obligations are low ("extremely lacking" to "lacking"), over-all.

Five groupings of capacity needs are identified, three to attend to the thematic concerns and obligations, one on capacity needs that are common to all three thematic areas, and one, cross-cutting, which pertain to the general state and conditions of Cambodia's economy, environment, and socio-political (governance) systems that affect the degree to which the country is able to muster and develop its thematic capacities. The cross-cutting needs relate to issues that the Cambodian government (RGC) and society as a whole need to address collectively, over and beyond attending to the thematic capacity needs.

The capacity needs are identified in terms of the degree to which the human, financial, organizational and public support dimensions of the required capacities to address the thematic concerns and the obligations would need to be upgraded to "sufficient" levels. They cover capacities in three tiers of social organization and governance in Cambodia: individual, institutional, and systemic.

The capacity needs are prioritized as to which are required in Cambodia in the short- (1-3 years), medium- (4-6 years), and long- (7-10 years) terms. Their numbers are as follows: priority actions in the short term, medium term and long term is 53, 53 and 54 respectively.

A Resource Mobilization Plan is presented for procuring the funds and other resources to support and sustain the build-up of the needed capacities in Cambodia in the short-, medium-, and long-terms.

A Monitoring and Evaluation Plan is described as a mechanism for tracking the progress of capacity development in Cambodia in the short-, medium-, and long-terms, in all levels of development in the country: local, provincial, national; or individual, institutional and systemic.

## B. RECOMMENDATIONS

1. Develop and execute short-term capacity development projects immediately. This assessment describes the urgency of Cambodia's needs for effectively attending to the thematic concerns. Biodiversity threats and losses remain ineffectively curtailed. Climate change matters are scarcely addressed. Land degradation is spreading and the threats to water resources are intensifying. Addressing them touches on the core of development issues and possibilities in Cambodia. It is to the country's interest that it develops the capacities to address the thematic concerns at the soonest possible time.
2. Use the second strategy of developing capacities (which is to design projects around the common capacity needs and incorporate all relevant thematic capacity needs into components of the project). Design and develop two types of capacity development projects. The first type is projects to develop the thematic capacity needs. The second type is projects to address the cross-cutting capacity needs.

The first type is to be executed by the focal ministries in partnership with other relevant ministries and key institutions in the civil society, academic, local government and private sectors that have stakes on the thematic concerns and obligations.

The second type is to be pursued by higher RGC authorities. This is because these projects involve making fundamental reforms of the Cambodian economy, environment, and socio-political (and governance) systems.

It is recommended that the first type of projects be designed around the common capacity needs described in 4.4.4. Each project shall have three components, one each on biodiversity conservation, climate change, and on combating land degradation and drought. The components shall encompass the thematic capacity needs described in 4.4.1 (on biodiversity conservation), 4.4.2 (on climate change) and 4.4.3 (on land degradation and drought), to the extent that they are related to the coverage of the common need.

As to the cross-cutting needs, it is recommended that they be addressed individually and at the instance of the highest authorities of the RGC. This is because it can be anticipated that their development would require the extensive deployment of political will and goodwill on the part of the RGC to initiate the needed reforms attending that development of the capacities. It can be anticipated further that the RGC might choose to carefully calibrate its actions on addressing the cross-cutting needs against unfolding situations and opportunities for reform in Cambodia. It can be anticipated last that the development of the cross-cutting needs might proceed at a pace that would be different to the development of the thematic needs mainly because the latter is occasioned by the need to attend to the thematic concerns and the obligations in any economic, environmental and socio-political circumstance of Cambodia, while the latter is occasioned by the need for reforms as would be perceived by the RGC, essentially independent of the need to address the thematic concerns or the obligations to the three UN Conventions.

3. Initiate active multisector and multilevel advocacy for the RGC to act on the cross-cutting issues and develop the capacities to address them. Rather than wait for the RGC to act on the cross-cutting capacity needs on its own pace, however, it is deemed necessary to actively impress on top RGC authorities

that the cross-cutting needs constrain thematic capacities in Cambodia and that they need to be developed in order to improve the effectiveness and value of, and the benefits from, developing the thematic capacities. Recognizing particularly the inhibiting effects of cross-cutting issues on the thematic capacities, it is recommended that sustained and deliberate efforts be actively pursued to solicit actions from top RGC authorities to attend to the cross-cutting capacity needs.

4. Immediately embark on building up the financing mechanisms and the M&E systems. Ensuring that there are funds to support and sustain capacity development, and that good tracking systems on how much capacities are being developed over time, are two fundamental requirements for capacity development undertakings. They are the basic foundations of capacity development programs because they ensure that the programs are successfully and effectively pursued. It is recommended that the RMP and M&E plan described in 4B and 4C in Part III of this document be immediately set up and undertaken in tandem with projects that address the financial and related thematic and common capacity needs described in 4.4.1, 4.4.2, 4.4.3, and 4.4.4.
5. Attend to possible risks to long-term capacity development in Cambodia. Capacity development over the short- to long-term, which involves undertaking a sustained effort to acquire the needed capacities over a significant stretch of time (from 3 to 10 years), has its inherent risks. The activities to develop Convention-related capacities can be hampered, cut short, or not sustained because of conditions relating to the political stability of the country, its relationships with donors, the donors' policies on debt relief and development assistance, and the long-term viability and consistency of the Conventions themselves.<sup>11</sup>
  - *Political stability of the Cambodia.* This relates to Cambodia's ability to maintain a consistent structure and behavior of its basic institutions and political processes. It includes establishing a regime of predictable institutional behavior consistent with the aspirations and interests of the Cambodian people. If these become weak, then long-term capacity development in the country is at risk of being aborted.
  - *Cambodia's relationships with donors.* It is anticipated that the bulk of the initial funds and resources for developing Cambodia's capacities would come from donors. This is because of the present fiscal condition of the government that severely limits its ability to embark on new spending. This places a strategic value to how Cambodia is able to maintain its relationships with donors, in ways that would be beneficial to both. Donors' interests on capacity development in the country will affect how capacity development programs can take off and progress in the short to long terms.

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<sup>11</sup> Similar references to these risks are made in the Philippines' NCSA Document. These are recognized to be similarly applicable to Cambodia. Thus, they are adopted in this Document.

- *Donors' policies on debt relief and development assistance.* To the extent that capacity development programs in Cambodia will rely on donors' assistance, donor policies on debt relief and ODAs will play a strong hand on the long-term viability and tenability of the programs. Debt relief policies directly affect how much the country is able to do the programs on its own. ODA policies will directly affect the stability of the programs in terms of the sufficiency and reliability of ODA as support system for the programs. A sudden scaling down of ODA by donors could immediately translate to downsizing the programs that would be at that time dependent on ODA.
- *Long-term viability and consistency of the three UN Conventions.* The development of the commitments is long-term and yet the Conventions are fundamentally political acts of their parties that are subject to quick and sudden reconsiderations when exigencies unacceptable to the parties arise. The degree to which the Conventions will hold is highly dependent on the complex of bilateral and multilateral relationships of the constituent countries that can get often dominated by how their interests jibe at any given moment. It is always possible that the parties to the Conventions will rather scale down on their commitments to the Conventions so that the political viability and technical soundness and tenability of spending on capacity development in Cambodia can drop.

The risks will be there. But there is probably one strategy to mitigate these risks, and that is for government and the focal agencies and key institutions in the country to closely maintain robust and open communication lines with donors and stakeholders within and outside Cambodia.

- Expectations on each capacity development undertaking need to be fully leveled off between the lead and participating ministries and collaborating institutions. This is for all scales of undertaking (local to national).
- The choice of resource and financial mechanisms to support and sustain the capacity development activities of different sectors in different tiers of social organization and governance and on different themes would be a potentially contentious economic, political and social issue spanning far beyond the thematic concerns; close communication with stakeholders and their participation in making the decisions on which mechanisms to tap, would be critical and advisable.
- It would be crucial to sustaining an effective M&E system if its design, development and operation widely and intensively involved different stakeholders on the thematic concerns and the Convention obligations.

It might be said that the entire NCSA process will result in either productive gains of capacities for Cambodia, or abject failure, unless laid on a solid foundation of open communications between government, donors, and thematic stakeholders from different sectors within and outside the country.

**Capacity Assessment Biodiversity Conservation**

**Capacity Assessment on Climate Change**



**Capacity Assessment on Land Degradation**

