

Kingdom of Cambodia
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**CAMBODIA'S NATIONAL PORTFOLIO
FORMULATION EXERCISE (NPFE) DOCUMENT**

**THE CAMBODIA'S PRIORITIES FOR
GEF-5 UNDER STAR-FUNDING PROJECTS
NATIONAL PROJECT PRIORITIZATION
(July 2010 – June 2014)**

Prepared by: The Ministry of Environment
Funded by: Global Environment Facility (GEF)
Submitted to: Global Environment Facility (GEF)

Phnom Penh
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This document, was prepared by **Mr. Kan Vibol**, National Consultant with administrative and technical support from the technical working group and facilitated by the GEF Focal Point, and financed by the GEF through the Ministry of Environment with in-kind contributions from the Royal Government of Cambodia.

This NATIONAL PORTFOLIO FORMULATION EXERCISE (NPFE) is published in English only by the Ministry of Environment, the Royal Government of Cambodia to provide information of priority projects related to the CDB, UNCCD, UNFCCC, and other focal areas including NIP on POPs, NCSA, International Waters, Ozone Depleting Substances, and issues associated with specific the GHS of classification and labeling of chemicals.

Copies of this NPFE have been made available to interested stakeholders such as governmental officers, relevant ministries, civil organizations, libraries, universities, regional and international governments, the public, and the media. This publication may be freely copied or reprinted or can be extracted through the below address. For further information regarding this NPFE, please refer to the contact names and address provided as below.

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FOREWORD

I welcome the publication of this NATIONAL PORTFOLIO FORMULATION EXERCISE (NPFE) in Cambodia. I have felt for this time that this is a very good project prioritization document in Cambodia have focused mainly on the implementation of the GEF-5 STAR Funded and its provision.

One of the positive sides, the NATIONAL PORTFOLIO FORMULATION EXERCISE (NPFE) is now in Cambodia with technical and financial support from the GEF and opportunity to implement priority projects should be provided by STAR Funding and result as a part of enormous addition environmental protection for Cambodian people.

The present NPFE was prepared by "Mr. Kan Vibol, Local Consultant with assisting and supporting from counterparts of relevant ministries and the Inter Ministerial Technical Working Group in particular supported by GEF. The Inter Ministerial Technical Working Group examined the comments and took them into account when preparing a revised document for submission to the consultative meeting and workshop on August 17 and December 30, 2011.

This NPFE brings together a commitment to implement the GEF-5 STAR Funding. This NPFE in brief, of course, had been through much discussion among Technical Working Group from link ministries and the stakeholders.

I hope that, this NPFE will be precisely to bring priority environmental concerns, issues and projects into main consideration, attention, and full implementation of those prioritized projects under funds enable from GEF resource programming covering the GEF-5 period. It is important to note that for Cambodia will submit the NPFE application soonest. I hope that, the GEF Secretariat can make the approval any GEF-5 projects of Cambodia on time.

Phnom Penh February 27, 2012
H.E. Lonh Heal



Director General
The GEF Operational Focal Point

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The GEF Focal Person for formulation of the NATIONAL PORTFOLIO FORMULATION EXERCISE (NPFE) in Cambodia is deeply indebted to the stakeholders for review and comments and in particular to Mr. Kan Vibol, National Consultant for his valuable contribution in the preparation of this NPFE.

In particular is indebted to H.E. Dr. Mok Mareth, Senior Minister, Minister for the Environment for strongly support and to H.E. Lonh Heal, Director General of General Directorate for the Ministry of Environment, the GEF Operational Focal Point for his commitment and provided the direction and coordination for preparation of this NPFE.

In particular, I would like to express my sincere appreciation to the GEF for coordinating and for funding. Specials thanks for views and comments on the document were made by representatives of the governmental institutions, project team, national working group, private sector and other stakeholders and participants at consultative meeting and workshops in Phnom Penh, Cambodia on August 17, 2011 and December 30, 2011.

Phnom Penh, February 27, 2012

Mr. Long Rithirak



**Deputy Director General, MOE
GEF Council Member**

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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
AIDs	Acquired Immune Deficiency Syndrome
BAT	Best Available Techniques
BD	Biodiversity
BEP	Best Environmental Practice
CBD	Convention on Biological Diversity
CBO(s)	Community Based Organization(s)
CC	Climate Change
CEO	Chief Executive Officer
CDM	Clean Development Mechanism
CITES	Convention on International Trade in Endangered Species
CTA	Chief Technical Advisor
CMDGs	Cambodia Millennium Development Goals
D&D	Decentralization and Deconcentration
EA	GEF Enabling Activity Projects
EE	Energy Efficiency
ESM	Environmental Sound Management
FA	GEF Focal Area
FAO	Food and Agriculture Organization
FSPs	GEF Full Size Projects
GAP	Governance Action Plan
GEF	Global Environment Facility
GEF/SGP	Global Environment Facility - Small Grants Programme
GHG	Green House Gas
GHS	Global Harmonized System
GMOs	Genetically Modified Organisms
GMS	Greater Mekong Sub-region
H	High
HPMP	Hydro-Chlorofluorocarbon Phase-out Management Plan
IFAD	International Fund for Agriculture Development
IFC	International Finance Corporation
INC	Initial National Communication to the UNFCCC
IW	International Waters
IUCN	World Conservation Union
LD	Land Degradation
LDCF	Least Developed Countries' Fund
LMOs	Living Modified Organisms
M	Million
MDGs	Millennium Development Goals
MEF	Ministry of Economy and Finance
M&E	Monitoring and Evaluation
MOE	Ministry of Environment
MIME	Ministry of Industry, Mines and Energy
MLMUPC	Ministry of Land Management, Urban Planning and Construction
MoP	Ministry of Planning

MoWRM	Ministry of Water Resource Management
MPA	Marine Protected Area
MPWT	Ministry of Public Work and Transport
MSP	GEF Medium Size Project
MRC	Mekong River Commission
NA	Non Available
NAPBB	National Action Plan on Biosafety and Modern Biotechnology
NBSAP	National Biodiversity Action Plan
NCC	National Coordinating Committee
NCSA	National Capacity Self Assessment
NGOs	Non-Government Organizations
NIP	National Implementation Plan
NPRS	National Poverty Reduction Strategy
NDSP	National Development Strategic Plan
NSDP	National Strategy Development Plan
NPFE	Nation Portfolio Formulation Exercise
ODS	Ozone Depleting Substances
PA(s)	Protected Area(s)
PAM	Protected Areas Management
PBAs	Programme-Based Approaches
PCBs	Polychlorinated Biphenyl
PIF	Project Initiation Form
POPs	Persistent Organic Pollutants
RA	Risk Assessment
RAF	Resource Allocation Framework
RGC	Royal Government of Cambodia
SCCF	Special Climate Change Fund
SEDP	Second Socio-Economic Development Plan
SGP	Small Grants Programme
SPs	GEF Strategic Programmes
STAP	Scientific and Technical Advisory Panel
STAR	System for a Transparent Allocation of Resources
SWAPs	Sector-wide approaches
TWG	Technical Working Group
UN	United Nations
UNCBD	United Nations Convention on Biological Diversity
UNCCD	UN Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	UN Framework Convention on Climat Change
UNIDO	United Nations Industrial Development Organization
WB	World Bank
WWF	Worldwide Fund for Nature

EXECUTIVE SUMMARY

This document was developed and prepared as part of a Financial and Technical Assistance facilitated by the GEF focal point, and financed by the GEF through a project on NPFE. The purpose of the project was to strengthen the capacity within the Ministry of Environment to incorporate environmental protection including the protected area and biodiversity conservation, climate change and land degradation into national priority planning for STAR funding.

The NPFE summarizes and extracted the information and concept notes provided by the relevant departments under the Ministry of Environment and other Ministries as mentioned in bibliography of this document. The NPFE combined with policy and legal frame, action plans, practical exercises, consultation and discussion among relevant institutions in Cambodia and with field case studies and on-the-job application from other line departments and general departments and different project both inside GEF focal area and GEF outside focal area.

The NPFE has seven sections:

Section 1 provides an overview of the background in establishment of the Technical Working Group focused on the objective and background information related to role and responsibility of the TWG.

Section 2 provides the basic principles of consultation process of the NPFE and presents a "methodology" showing how to do consultation with the public and GEF.

Section 3 covers the fundamentals of environmental issues and management policy and planning including NSDP, CMDGs, New Approach to Planning Development Assistance, global priority issues in biodiversity policy, climate change policy and land degradation policy in Cambodia. In this section also mentioned about specific issues founded in some previous projects including POPs, National Capacity Self Assessment Project, International Water, Ozone Depleting Substances and GHS.

Section 4 addresses the background of GEF-4 and its systematic programmes in Cambodia. This section has shown relation between proposed projects for GEF-4 STAR funding and new proposed project for GEF-5 STAR funding.

Section 5 provides activities and projects regarding the priority area for regional cooperation such as Mekong river basin wetland biodiversity conservation and utilization of the resources, reversing degradation trends in the South China Sea, prevention and management of marine pollution in the East. This section also covered the development and implementation of the East Asian Seas Region and building partnership for the environmental protection and conservation.

Section 6 describes possibility to get allocation fund for the priority projects from STAR, GEF 5 focal area. In this section, mentioned about the background of GEF funding in Cambodia and in globally regarding biodiversity, climate change and land degradation, POPs, international water, and GEF small grants projects.

Section 7 provides three annexes regarding annex 1 decision on the establishment of the TWG including the TWG roles and responsibility and name of the TWG, annex 2 provides the project priority listed inside of the framework of Protected Area and Biodiversity, Climate Change and Land Degradation. In

Annex 2 also be included some projects outside focal area for STAR funding and also provide a list of regional cooperation projects. This is an important part of this document. Annex 3 and 4 showed the list of participant of consultation meeting and workshop on NPFE held in Phnom Penh on August 17 and December 30, 2011. Priority project for GEF-5 STAR funding was identified through a combination of different key sources and different focal persons responsible for biodiversity, climate change and land degradation. Consultation workshop result is also included in the priority projects listed both inside and outside GEF-5 focal area.

SECTION 1: DESCRIPTION OF BACKGROUND AND THE WORKING GROUP

1-1 BACKGROUND SUMMARY

In March 2008, Cambodia hosted its second GEF National Dialogue, a first dialogue having taken place in 2001. The aim of this multi-stakeholder dialogue initiative is to strengthen Cambodia's ownership and involvement in GEF co-financed projects. The initiative also aims to build the capacity of the GEF Operational and Convention Focal Points and to harness lessons learned from other GEF Dialogue Workshops.

The GEF National Dialogue brought together key stakeholders representing a wide range of national and local interests in sustainable development. The initiative will thus provide a medium to facilitate the building of links between people and institutions to address national priorities in line with GEF-funding. The main objectives of the 2008 GEF National Dialogue Initiative are:

- a) Raising awareness on global environmental issues and the GEF
- b) Vetting and agreeing on the national GEF strategy, and
- c) Taking steps toward agreement on projects in support of this strategy

[Note: These objectives to be reviewed and possibly revised]

To meet the objectives of GEF National Dialogue Initiative, MOE has prepared this draft national GEF strategy. The formulation of the strategy has been based on the following processes:

- A review of national policies and strategies, reflected in documents such as the NBSAP, the INC, the NIP, and in speeches by senior government figures.
- An assessment of the processes and arrangements involved in accessing, implementing, and monitoring GEF-funded projects since 1995, and incorporating lessons learned from these past projects
- An analysis of GEF strategic programming priorities as they relate to the current state of the environment and socio-economic development in Cambodia.

1-2 PURPOSE OF ESTABLISHMENT OF THE WORKING GROUP

Purpose in establishment of the working group is providing a main governmental body in management and coordination of Global Environment Fund (GEF5).

1-3 THE NATIONAL WORKING GROUP

Cambodia has not established the National Steering Committee responsible for management and coordination of the GEF5 but we are established the National Working Group to manage and coordinate activities related to the GEF5. This Working Group established on March 11, 2011 by Senior Minister, Minister for Environment. The working group comprised of key resources persons from difference departments, general departments under the Ministry of Environment. Details role and responsibility and the list of Inter-Ministerial working group is in Annex 1 of this document.

SECTION 2 NATIONAL PORTFOLIO FORMULATION EXERCISE (NPFE) CONSULTATIONS PROCESS

2-1 CONSULTATION WITH GEF AGENCIES

The working group as well as the GEF focal person is an arm of the Ministry of Environment cooperated with relevant Ministries that operate in Phnom Penh, Cambodia. The working group has fully in charge of GEF5 project prioritization, report writing, consultation and follow up implementation of projects of GEF5 under STAR funding. During a preparation of NPFE, this working group is discussed the guideline on how to prepare NPFE, submission plan, NPFE consultation plan and financial plan for completion of the NPFE report with officers from relevant ministries, with the GEF secretariat whom is in regular contact with the MOE as GEF focal person.

2-2 PUBLIC CONSULTATIONS PROCESS

The Working Group was constituted comprising all the stakeholders for management and coordination of the GEF5 to execute and to provide advice for proper prioritization of the projects.

In the development of the NPFE report, Cambodia has set up our own process as following:

- 1) Propose a proposal to the GEF for funding in development of the NPFE,
- 2) Set up a coordination unit ,
- 3) Set up the working group for management and coordination of GEF-5,
- 4) Select a National Consultant to prepare the NPFE report,
- 5) Collect data and information from the stakeholders,
- 6) Draft the NPFE report,
- 7) Review and comment by the GEF focal person and GEF agency,
- 8) Organize the NPFE Consultation and Endorsement workshop
- 9) Review, revise and finalize the NPFE report, and
- 10) Approve and publish the NPFE report.

Above process has been working through the public consultation. This document reflected as a participatory approach applied in gathering information, formulation of the draft NPFE, consultation and decision making by the working group. Endorsement result of the NPFE report is a last phase involved in the cooperation and resolution of high commitment made by the stakeholders in both development and adoption of the NPFE through a national consultation workshop.

In preparation process for the NPFE, Cambodia has been through a long way in consultation conducted by MoE with relevant ministries and the stakeholders. After review progress in GEF-4, Cambodia formulated this document for GEF-5 under STAR funding and put in consultation. Consultation process has been conducted as following step:

Step 1: In July 2011, first draft of this document prepared by local consultant was reviewed by GEF focal point and GEF council member.

Step 2: In August 2011, additional document being requested by the NPFE Project Coordination Unit to the stakeholders. These additional documents provided very good input to develop the NPFE made by consultant. This is second draft of the NPFE.

Step 3: In October 2011, GEF focal point and GEF council member call for an internal meeting participated by biodiversity focal point, climate change focal point and land degradation focal point to make a consensus among them all, because some problems regarding the way how to submit their priority project to GEF-5 to get START fund. This is very slow process in consulting to reach agreement.

Step 4: At the end of October 2011, consultation workshop has been post phoned. Second post phone have been happened again in mid November 2011 due to the third drafted of NPFE did not complete to get inputs from those three focal points and clarification letters and correspondents between MoE and GEF secretariat. In early of December 2011, finalization of NPFE document has been made with completed inputs from the stakeholders and Senior Minister; Minister of Environment of Cambodia has provided an official approval in order to put the NPFE document in official consultation and endorsement workshop. This is an experience need to pay more attention regarding very long discussion, consultation, communication and coordination among the stakeholders and senior management level in development of Cambodia's NPFE.

Finally, endorsement of Cambodia's NPFE has been conducted in very good way through an consultation workshop was held in Phnom Penh, in December 30, 2011, and this workshop financed by the GEF and very well organized, coordinated by the Ministry of Environment of Cambodia through led by GEF Focal Point.

The workshop participated by representatives of relevant Ministries of the RGC include the focal areas representative from focal person from the component of the Biodiversity (BD), Climate Change (CC), and Land Degradation (LD). Also be invited of the representatives from the private sector, civil society NGOs, academia, and the GEF implementing agencies (UNEP, UNDP, the World Bank, FAO, and UNIDO) to participate in the workshop. List of participant with phone contact of the consultation meeting and workshop on NPFE is showed in Annex 3 and 4 in this document.

The GEF focal point worked local consultant Mr. Kan Vibol, provided participants with general information about this NPFE and on the GEF and more specifically, the STAR and more consideration of the Cambodia's priorities for GEF projects under the STAR (5th replenishment of resources, GEF-5) for the period July 2010 to June 2014.

Implementing agencies were invited to articulate their comparative advantages, which was followed by a discussion with civil society organizations and the representatives of academia, who presented their ideas and priorities. Group work was organized according to the STAR focal areas to exchange ideas, which were presented in plenary.

The results compiled by the Consultant and the GEF focal points in Cambodia for the STAR focal areas are presented in this document Annex 2. These results is an important guide for the Cambodian environmental institution, relevant governmental Ministries and the stakeholders as not all these ideas will necessarily become GEF projects, and a project proposed for funding (Project Implementation Framework PIF) had not been considered in this document.

SECTION 3: CAMBODIA SECTORAL ENVIRONMENTAL ISSUES

3-1 GENERAL NATIONAL POLICY FORMULATION

Cambodian national policy on environment is not given in any single policy statement, and must be construed from various sources, including especially the second five-year Socio-Economic Development Plan (SEDP) 2001-2005, the Poverty Reduction Strategy Paper, and the Governance Action Plan (GAP). Cambodian environmental policy can be said to have three major themes, under the overarching national objectives of poverty reduction, transparency, and responsiveness of administration, and sustainable economic growth.

The legal framework for environment is at present largely based on laws established in last 15 years. It is now in a period of very rapid change as new laws, which have been under development since the beginning of the fourth mandate of the present government, are coming into force or are in the final stages of development. Laws, Sub-Decrees, and guidelines governing land tenure, decentralized local government, forestry, concession management, community forestry, fisheries management, environmental impact assessment, protected areas management (PAM), and biodiversity conservation, climate change convention, have been enacted in the past three years or are likely to be enacted within the year. The following statement presents some key pieces of legislation and regulation, presented according to responsible of the RGC.

3-1-1 National Strategic Development Plan (NSDP)

Over the last five years, in addition to the Second Socio-Economic Development Plan (SEDP II) 2001-2005, the Royal Government prepared an Interim Poverty Reduction Strategy and a full National Poverty Reduction Strategy (NPRS) 2003-2005 and set the CMDGs in 2003. It has also prepared many sector strategies. As a result, there were concerns regarding multiple strategic development frameworks that made it difficult to align development cooperation programs with national priorities. The Royal Government therefore prepared the NSDP to implement the Rectangular Strategy of the present Royal Government and to achieve the CMDGs.

Through a participatory planning process, a “results matrix” of priority goals and other key features of the NSDP (2009-2013) was formulated that involved the line ministries and agencies, external development partners, and members of civil society. The NSDP is not supposed to and does not contain too much of the information about all activities of the Royal Government. Such details are provided in the programs and plans developed or to be developed by individual ministries and agencies. The NSDP approaches and addresses issues on a sectoral basis, not ministry or agency wise.

The NSDP is a strategic document that amalgamates and synthesizes all development concerns facing Cambodia and expressed in Cambodia Millennium Development Goals (CMDGs) and National Poverty Reduction Strategy (NPRS). It lays- out for the next five years:

- Clear, measurable, and prioritized goals.
- Priority strategies and actions to be followed.
- Cost estimates, resources and programming sequences.
- Procedures and methods for annual monitoring, evaluation and updating.

3-1-2 Cambodian MDGs

Building on medium-term planning exercises in 2002 and 2003 (the SEDP-II and NPRS), in 2003 the MoP took a further step in setting medium-term targets and defining national M&E indicators when it developed its own set of national development goals for 2015. These were based on the Millennium Development goals (MDGs) agreed at the United National Millennium Summit in 2000 (to which Cambodia, along with all other countries, was a signatory); but also incorporated some changes to adapt the global MDGs to the context of Cambodia

In the context of the GEF, the key CMDG is number 7, “Ensure environmental sustainability”. Under this goal there are four overall targets and 14 “targets”, corresponding with indicators:

Overall target 13: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources

- Target 7.1: Maintaining forest coverage at the 2000 level of 60 % of total land area through 2015
- Target 7.2: Maintaining the surface of 23 protected areas at the 1993 level of 3.3 million ha through 2015
- Target 7.3: Maintaining the surface of 6 new forest-protected area at the present level of 1.35 million ha through 2015
- Target 7.4: Increasing the number of rangers in protected areas from 600 in 2001 to 1,200 by 2015
- Target 7.5: Maintaining the number of rangers in forest protected areas at the level of 500 through 2015
- Target 7.6: Increasing the proportion of fishing lots released to local communities from 56% in 1998 to 60% in 2015
- Target 7.7: Increasing the number of community-based fisheries from 264 in 2000 to 589 in 2015
- Target 7.8: Increasing the surface of fish sanctuaries from 264500 ha in 2000 to 580800 ha in 2015
- Target 7.9: Reducing the fuel wood dependency from 92% of households in 1993 to 52% in 2015

Overall target 14: Halve by 2015 the proportion of people without sustainable access to safe drinking water.

- Target 7.10: Increasing the proportion of rural population with access to safe water source from 24% in 1998 to 50% in 2015
- Target 7.11: Increasing the proportion of urban population with access to safe water source from 60% in 1998 to 80% in 2015

Overall target 15: Halve by 2015 the proportion of people without sustainable access to improved sanitation

- Target 7.12: Increasing the proportion of rural population with access to improved sanitation from 8.6% in 1996 to 30% in 2015
- Target 7.13: Increasing the proportion of urban population with access to improved sanitation from 49% in 1998 to 74% in 2015

Overall target 16: Increase the proportion of the population in both urban and rural areas with access to land security by 2015

- Target 7.14: Increase the percentage of land parcels having titles in both urban and rural areas from 15% in 2000 to 65% in 2015

3-1-3 New Approaches to Planning Development Assistance in Cambodia

The Paris Declaration on Aid Effectiveness established the importance of Programme-based approaches (PBAs) and Sector-wide approaches (SWAPs) as new modalities in programming development assistance. SWAPs are also key to fulfilling the objectives of UN Reform (harmonization, coherence). The advantages of such approaches are a reduction in aid fragmentation, promotion of coordination and dialogue; greater assurances of policy coherence reduction in transaction costs and an overall improvement in effectiveness of a programme/sector

These approaches are increasingly used in Cambodia. The RGC has committed to develop sector plans under the NSDP. To date PBAs/SWAPs are being developed or under implementation in sectors such as Health, Education, and Trade, PBAs also used in HIV/AIDs, D&D, Land, Mine Action, Aid Coordination. Development partners have committed to increase funds channelled through PBAs/ SWAPs

3-2 PRIORITY GLOBAL ENVIRONMENTAL ISSUES (CAMBODIAN SECTORAL POLICIES RELATED TO GEF FOCAL AREAS)

3-2-1 Biodiversity Policy

Nature and biodiversity protection in Cambodia has been a constant concern of both the King and Government always realizing the fragile nature of ecosystems owing to the socio-economic pressure, physiogeographic and climatic conditions of the country. Presently, the Kingdom's commitment to environmental protection has been demonstrated by a number of significant legal measures to prevent pollution, habitat damage and to protect wildlife and biodiversity, including the creation of an Environmental Secretariat in 1993, the enactment, in 1996, of the "Law on Environmental Protection and Natural Resource Management" and in 2008, of the "Protected Areas Law", creating a full fledged Ministry of Environment and the adoption of a National Environmental Action Plan in 1998. The National Assembly of the Government of Cambodia has also ratified several international conventions related to the environment including: the Convention on Biological Diversity, the Convention on Climate Change, the Convention on Wetlands of International Importance (RAMSAR Convention), the Convention on International Trade in Endangered Species (CITES), the World Heritage Convention, the United Nations Convention on the Law of the Seas, International Convention for the Prevention of Pollution from Ships (MARPOL), the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, etc.

In view of its commitment to the Convention on Biological Diversity (CBD), the Government of Cambodia is taking serious steps for implementing conservation programs and for applying concepts of awareness raising for the sound use and conservation of biodiversity resources. Soon after the CBD was ratified, the Ministry of Environment was designated as the key agency responsible for the development of a National Biodiversity Strategy and Action Plan to determine the measures required to meet the obligations of the Convention, and to enhance co-ordination of national efforts aimed at the conservation of biodiversity and the sustainable use of biological resources.

Cambodia became a party to the Convention on Biological Diversity (CBD) in 1995 and work required under this agreement is progressing in Cambodia, first Cambodia National Biodiversity Strategic and Action Plan in 2002 was developed and submitted to the CBD Secretariat, with the preparation of the Biodiversity Prospectus in 1997 and the nearly completed efforts to prepare a BSAP (what is this) that are being undertaken for the government of Cambodia with support from the Food and Agriculture Organization (FAO). Although Cambodia has been a party to UN CBD in 1997, RAMSAR Convention, CITES since 1997 and other UN Conventions there is a great need for further capacity building before it can effectively be applied these conventions in this country.

The National Biodiversity Strategy and Action Plan (2002) present a vision for Cambodia of: "Equitable economic prosperity and improved quality of life through sustainable use, protection and management of biological resources". The main strategic goals are:

- Maintaining biological diversity and productivity of ecological systems by protecting the various species of living organisms in their natural and manmade environments, especially forests, aquatic ecosystems, wetlands and agricultural land.
- Managing human activities and utilizing biological resources in a way that preserves for the long term the basic natural resources, which are necessary for human livelihood and development.
- Ensuring that the benefits coming from the sustainable use of biological resources contribute to poverty reduction and improve quality of life for all Cambodians.

Strategic Objectives:

The strategic objectives listed in each section constitute a reflection of the intentions of the government regarding each sector of activity. They are specific and measurable objectives that will guide the relevant ministries during the implementation phase of the strategy and action plan. Ministries will regularly document and report on the identified indicators attached to each objective.

The National Biodiversity Strategy and Action Plan proposed a series of strategic objectives and priority actions that are presented according to the following themes involving most sectors of society:

- Protection Of Natural Resources (Protected Areas, Endangered Species, Ex Situ Conservation)
- Animal Wildlife Resources
- Freshwater Fisheries And Aquaculture
- Coastal And Marine Resources
- Forest And Wild Plant Resources
- Agriculture And Animal Production
- Energy Resources
- Mineral Resources
- Industry, Technology And Services (Manufacturing, Biotechnology And Biosafety, Tourism)
- Environmental Security
- Land Use Planning
- Water Resources
- Climate Change And Biodiversity
- Community Participation
- Awareness, Education, Research Coordination And Development
- Legislation And Institutional Structure

- Quality Of Life And Poverty Reduction

Key Issues to implement the NBSAP:

- Weak legal, institutional framework and law enforcement
- Lack of close cooperation and coordination with relevant stakeholders and local communities
- Information base to support decision making is limited
- Promoting public awareness is limited and not properly managed
- Social and political constraints
- Field management problems and patrolling
- Lack of financial and human resources
- Lack of technical expertise and human resources
- Boundary demarcation and zoning not clearly defined in the field
- Increasing pressures on nature conservation areas and ecosystems as a result of expansion in forestry, agriculture, fisheries, road building, tourism and urbanization.
- Illegal activities and conflicts with local populations
- Lack of or incomplete implementation of management plans for existing protected areas.
- Incomplete network of protected areas

3-2-2 Biosafety and Modern Biotechnology Policy

It was expected that Cambodia could apply the modern biotechnology in factors of industries, health, and environment to support for national economic development. However, Cambodia would have a numbers of challenges which would be happened concerning modern biotechnology. These challenges are : limited capacity of institution to identify LMOs, lack of guidelines to carry out proper RA, lack of capacity for risk analysis, as well as inefficient infrastructure to seek information from different sources for final decision making process. Beside these, Cambodia has other challenges such as lack of trained or qualified expertise, limitation in facilities to undertake testing, lack of cooperation from other relevant departments within the country, lack of coordination in capacity building programs, lack of legal experts in areas of biosafety, and lack of trained officials for identifying LMOs. Furthermore, lack of capacity in implementing biosafety laws, frameworks and regulations, capacities need to be build to assist countries to undertake research in biosafety, lack of capacity to carry out RA and RM, and lack of training programs needed for policy makers, legislators to help understand the issues on biosafety.

The Royal Government of Cambodia passed the National Action Plan on Biosafety and Modern Biotechnology (NAPBB) in 2010. This policy document is a guidance paper that illustrates the country's preparation for sound environmental management of LMOs/GMOs application in Cambodia with the aim to fulfill the obligation under the Cartagena Protocol on Biosafety. The strategy aims to strengthen institutional capacity for the development, management, and safe use of all modern biotechnology for the benefit of Cambodian people. This installed capacity will enhance a sustainable and competitive agriculture; ensure food safety, food security and the equitable distribution of wealth and health while protecting the environment and endemic biodiversity. This is to be achieved through the integration of efforts by relevant institutions in terms of policies, technical development, and mobilizing key stakeholders of the public and private sectors, toward the enhancement of a better wellbeing of the Cambodian people.

The NAPBB is divided into three main chapters: (i) general information, (ii) overview on LMOs management issues, and (iii) strategic direction and action plan. Chapter 1 has general information

related to international and national framework on biodiversity and biosafety issues and general information on country profile including geography, population, political profile, economic profiles (agricultural and industrial profiles), policy and legal frameworks, role and responsibilities for competent authorities in addressing biosafety management related issues, etc. Chapter 2 provides an overview on LMOs management, which includes: (i) the overview on biotechnologies and its application around the world and in Greater Mekong Sub-regions; (ii) information related to international development in biotechnology and the LMO/GMO controversy (emergence of modern biotechnology, biotechnology and bio-business, GM controversy, and international perspective on biosafety); and (iii) the overview on management context within international framework and national contexts, of which focusing on regulatory framework, international perspectives, institutional arrangement, challenges in LMO management, general principle, and key actors and stakeholders. Chapter 3 consists of four main sections including (a) strategic direction, (b) key components of the action plan, (c) the action plan itself, (d) requirement to achieve goals and objectives of action plan, and (e) monitoring, evaluation and updating NAPBB.

Six main components are under this action plan, which aims to achieve a safe and sound management of biosafety throughout Cambodia including: (i) Policy, regulation and standard norms; (ii) Information and prospective analysis; (iii) Capacity building; (iv) Research and development; (v) Commercialization and trade; and (vi) Education and public perception.

Out of these six components, 13 proposed activities were identified for sound management of LMOs/GMOs with priority actions identified 50. These activities plan to be carried out for 5 years (2010-2014) and they require budget of approximately US\$ 9,730,000. This estimated budget should be allocated as follows: the development of policy, guideline, and standard norm (US\$350,000), information and prospective analysis (US\$460,000), capacity building (US\$4,660,000); research and development (US\$640,000); commercialization and trade (US\$1,050,000); and public awareness, education and participation (US\$2,570,000)

This NAPBB is a direct response to the lack of existing capacity at all levels in both the government and non-government sectors. This plan will assist in building capacity through professional and technical training, assistance with development and creating the appropriate political and legal frameworks and enforcement systems, development in field management capacities and systems especially in institutional development and public participation, building of stakeholders' capacity in terms of human resources development, and systems development through practical studies in term of information development and management.

The implementation of the above components would be carried out by line ministries, particularly the Ministry of Agriculture, Forestry and Fisheries (MAFF), Ministry of Environment (MoE), and Ministry of Industry, Mines and Energy (MIME), Ministry of Health, and Ministry of Commerce under coordination support provided by the National Steering Committee for Biosafety (NSCB). The intended activities will then be to elaborate project proposals for funding, where the support will be from the government as well as from donor agencies.

3-2-3 Cambodia Response to the Climate Change

The Royal Government of Cambodia (RGC) is committed at national and international levels to address the challenges of climate change and, therefore, ratified the United Nations Framework Convention on

Climate Change (UNFCCC) in 1995 and acceded to its Kyoto Protocol in 2002. The Convention entered into force for Cambodia on 17 March 1996. The Ministry of Environment is serving as the UNFCCC and Kyoto Protocol Focal Points.

The Royal Government of Cambodia acts both to support the international effort regarding climate change and to take appropriate action at national level. The action comprises both the adaptation measures and mitigation measure. Cambodia started preparing its Initial and Second National Communications in 1999 and 2008, respectively. In 2002, Cambodia submitted its Initial National Communication (INC) to the Convention in the CoP-8. This was seen as the first step taken by the country in implementing the UNFCCC. The preparation of National Communications assists the country in building its climate change technical and institutional capacity and helps raise climate change awareness among institutions and individuals from the grass-root to the highest political levels. The sectors with the largest GHG reduction potential in Cambodia are renewable energy, energy efficiency, landfill gas capturing and afforestation and reforestation. As of 30th December 2011, eight CDM projects were approved by the Cambodian DNA, five of which have been registered by the UN Executive Board. These eight projects will reduce an estimated 1,276,003 tCO₂ eq. annually.

With support from various donors, Cambodia has implemented a number of projects to address climate hazards: for the period of 1995-2003, Cambodia implemented 98 projects to address institutional strengthening, infrastructure development, and human resource development with a total value of approximately US \$328 million (RGC, 2006).

The responses, combating effects of climate change to environment and social development, were nationally recognized through two universal major measures, adaptation and mitigation:

- Adaptation measures

In 2006, the Royal Government of the Kingdom of Cambodia endorsed its National Adaptation Programme of Action to Climate Change (NAPA), as a process led to the identification of 39 adaptation projects in four key sectors, namely, agriculture, water resources, coastal zone and human health. These are primarily “no-regret” adaptation options focusing on capacity building/training, awareness raising/education and infrastructure development. Of these, 20 are proposed as high priority projects (16 non-health and 4 health), with total estimated budgets of US\$129. The Prime Minister Samdech **Hun Sen** urges “All concerned ministries and agencies shall make their utmost effort to integrate the priority projects identified (in the NAPA) into their respective sectoral plans”. However, Cambodia currently has a limited internal capacity to fund climate adaptation activities. As of to date, two project proposals developed based on NAPA, have received funding from donors: (i) "Building capacities to integrate water resources planning in agricultural development in Cambodia" (UNDP and LDCF), and (ii) "Vulnerability Assessment and Adaptation Measures for CC in the Coastal Zone of Cambodia" (UNEP, LDC Fund and the Cambodia Climate Change Alliance).

In late 2011, the Cambodia Climate Change Alliance granted 8 projects, with a total budget of around USD 2 millions, to selected line Ministries and Universities in partnership with UN agencies and NGOs.

These projects will focus on to implement adaptation projects and enhance climate change institutional capacity building in Cambodia. Beside these initiatives, a number of small-scale projects on water resource management to adapt to climate change have been implemented under the UNDP/GEF Small Grant Programme by selected community-based organizations and local NGOs.

During the period 1999-2003, major activities have been taken for the (i) improvement of irrigation systems, (ii) rehabilitation of pumping stations and water pumps, (iii) water supply and sanitation, and (iv) establishment of Farmer Water User Communities (FWUC). For the period 2001-2005, MOWRAM's objective has been to implement a total of 290 irrigation rehabilitation projects covering 532,673 ha of wet season rice and 154,368 ha of dry season rice, at a total cost of about US \$607 million. Up to 2003, 315 irrigation projects had been implemented, covering 153,149 ha of paddy rice, of which 89,383 ha for wet season and 63,766 ha for dry season (MOWRAM, 2003).

MOE had prepared a National Adaptation Program of Action to Climate Change, and it was approved by the council of minister in 2006. Basing on country background, the key adaptation needs, and priority activities selected, NAPA had identified 39 projects covering several sectors:

Table 1: Projects building adaptation to the climate change

Distribution by sector	Distribution by climate harzard
Coastal Areas: 8 projects	Coastal protection: 3 projects
Malaria: 6 projects	Droughts: 9 projects
Water Resources /Agriculture: 20 projects	Flood: 5 projects
Cross Sectoral: 5 projects	Malaria: 6 projects
	Multiple Climate Hazards: 16 projects
Total cost	US\$130 million
Source: RCG, 2006	

The proposed projects in Annex 2 (GEF-5 under START Funding on Climate Change) included relevant actions as:

1. The construction of community water reservoirs as a mean to keep water for community uses during the dry season.
2. The development and improvement of community irrigation systems, whereby community could enhance their farming during the time of long droughts.
3. The rehabilitation of coastal protection infrastructures, this is response to the increase of strong waves and surges.
4. Reforestation activities are to make forest resilience to climate change and this will see less impact on climate change.
5. The local production of bio-pesticides for mosquito control, the wider distribution of mosquito nets, and other much needed initiatives that will allow Cambodia to both adapt to climate change and achieve its national sustainable development objectives. We do this we prevent the spread out disease resulted from mosquito.

The NAPA project implementation requires not only the involvement and close cooperation from relevant inline governmental ministries/ agencies, local authorities, communities and civil societies, but also the financial support, which is approximately US\$ 130 million, from internal and external sources. NAPA is considerably being an immediate strategy response to the expected negative impacts of

climate change on national scale, especially on livelihood of poor communities in remote areas, through three main strategies, capacity building/training, awareness raising/education, and infrastructure development. It is noted that these 39 proposed projects had been urged by RGC to integrate into national sustainable development plan 2006-2010 and institutional strategic plans of relevant governmental ministries for implementation.

- Mitigation Measures

The sectors with the largest GHG emission reduction potential in Cambodia are renewable energy, energy efficiency, landfill gas capturing and afforestation and reforestation. All proposed CDM projects must comply with the Law on Investment in the Kingdom of Cambodia, promulgated in 1994, and amended in 2003 which provides the institutional and legal basis for foreign investments in Cambodia. CDM afforestation and reforestation projects must comply with the Forestry Law, 2002, while CDM energy projects producing electricity must comply with the Electricity Law, which governs the operations of the power industry.

As of 30th December 2011, eight CDM projects were approved by the Cambodian DNA, five of which have been registered by the UN Executive Board. These eight projects will reduce an estimated 1,276,003 tCO₂ eq. annually. These CDM projects are associated with the use of renewable energy, industrial waste heat, agricultural, livestock wastes to generate electricity and heat, and hydropower. Cambodia forest definitions were submitted to the UNFCCC on 26 September 2008. However, despite the dominance of land use change and forest sector as a source/sink of CO₂, no CDM afforestation or reforestation projects have been developed to date in Cambodia.

Cambodia has one of the highest levels of forest cover in Southeast Asia, with approximately 10.7 million hectares of forest in 2006 or 59% of Cambodia's land area. Based on the FAO 2005 Forest Resources Assessment, Cambodia has the 30th largest area of tropical forest in the world, and is the 13th most forested country by percentage of land area. Cambodia also has a relatively high rate of land-use change with Forestry Administration statistics showing that 379,485 hectares of forest were lost between 2002 and 2005/621, a deforestation rate of 0.8% per year (Cambodia R-PP Country Revision, March 4, 2011).

Cambodian has made great efforts to preserve the country's forests, which currently cover approximately 59% of the total country land area, slightly less than the 60% target set by our Millennium Development Goals. Approximately 26% of the country's total land area is within protected areas and protected forests, some of which are endowed with habitats for biodiversity of global significance. The Royal Government has banned large scale unsustainable forest exploitation through annulling many forest concessions since 1995. The total forest area excluded from concession management is estimated at around 4 million hectare. Reforestation and afforestation activities on barren and degraded forest land have been actively implemented since 1985: more than 49,000 hectares of trees have been planted all over the country.

Cambodia contributes to mitigation actions in the forest sector by rapidly starting the implementation of a number of pilot REDD-plus projects, following the Bali Roadmap of the CoP-13 in 2007 and the Cancun Agreement of the COP-16 in 2010, with the approval of a first REDD-plus pilot in the Oddar Meanchey community forests in May 2008, and the Seima Protected Forest REDD-plus pilot in 2009. These pilot projects are amongst the most advanced in the Greater Mekong region. In developing these pilots the RGC has made maximum efforts to ensure transparent and equitable local benefit-sharing to communities- an explicit policy priority under Council of Ministers Decision #699 that approved the first pilot.

Cambodia has developed its REDD-plus Roadmap in cooperation with UNDP and FAO. It was developed by the interim REDD-plus Taskforce and stakeholder groups during the period January-September 2010. In late 2011, Cambodia officially launched the UN REDD Programme, which is jointly implemented by Forestry Administration of the Ministry of Agriculture, Forestry and Fisheries and the General Department of Administration for Nature Conservation and Protection of the Ministry of Environment.

Issues and Challenges:

- Limited financial resources or funding for climate change related activities, especially in the health sector,
- Little climate change studies and experiences within the country;
- Lack of climate change research/training institutions in the country;
- Lack of data availability and reliability in particular absence of a formal mechanism for information sharing,
- Limited cooperation and coordination among institutional agencies related to research or studies on climate change and climate variability,
- Relatively low technical capacity of local staff,
- Government salary is relatively low and limited incentives from the climate change project,
- Non-comprehensive national climate change policies/strategy;
- Lack of qualified national experts in the country;
- Limited public awareness/education on climate change; and
- Limited technical, financial and institutional resources for adaptation.

3-2-4 Land Degradation Policy

Cambodian soils tend to be of low fertility and the agricultural productivity is largely dependent on deposition of silt from annual floods, the use of animal manures, and by rotational systems in the uplands. Soil infertility has been recognized as one of the most serious constraints to crop yield improvement in Cambodia. Land degradation is a growing concern and soil erosion is a major problem. The main causes of erosion are deforestation and unsustainable agricultural practices, which pose a risk to food security. Furthermore, overuse of pesticides is a growing and serious threat to food security, human health and pollution to land and water. Agricultural expansion is limited by the presence of landmines.

Policies related to land degradation are entrenched within the Rectangular Strategy which envisages employment creation, efficiency and the core objective of good governance. The Rectangular Strategy consists of four main areas:

- (i) Enhancement of Agriculture Sector;
- (ii) Rehabilitation and reconstruction of physical infrastructure;
- (iii) Employment and private sector development; and
- (iv) Capacity building and human resource development.

The Royal Government of Cambodia's policy goal is to encourage the country's economic growth and development with sustainability.

The National Forest Sector Policy embraces the conservation and the sustainable management of the country's forest resources to ensure provision of a maximum contribution to the sustainable socio-economic development of the Kingdom of Cambodia. The Objective of Forestry sector reform as stated in the Forest Policy Reform is, among others, to ensure sustainable management of forest resources by maintaining the remaining national forest resources as permanent forest asset through conservation and sustainable management in order to maximize the forest covers and resources; and conservation and sustainable management of forest resources to maximize contribution to sustainable socio-economic development in the Kingdom of Cambodia.

The goal of the forest sector strategy of the Royal Government will ensure sustainable forestry management based on the three pillars as follows:

1. Sustainable forest management policy, to ensure the rational and strict monitoring of forest exploitation according to the international best practices in forest management that require adequate forest reserves for domestic consumption, protection against drought and floods as well as wetlands that serve as fish sanctuary;
2. Protected Area System to protect biodiversity and endangered species; and
3. Community Forestry as a sound, transparent and locally managed program.

The Royal Government's energy policy aims to provide an adequate supply of energy and electricity, encourage the exploration of environmentally and socially sound energy sources, while promoting the efficient use of energy; such as bio-gas, fire wood...etc. The Royal Government has reviewed the remaining forest concessions, cancelled many concessions found violating the agreement, and evaluated the concession system to ensure efficient management. The Royal Government will also continue to promote reforestation.

3-3 PRIORITY ENVIRONMENTAL ISSUES OUTSIDE FOCAL AREAS

3-3-1 Persistent Organic Pollutants

The Royal Government of Cambodia has established a general partnership for mobilizing funding and action to manage the Cambodian environment. Cambodia's primary formal POPs management policy is to address general environmental problems in combination with national efforts to achieve sustainable development and a safe public health including the reduction and elimination of POPs and for the special exemption of POPs use will be implemented by the determination of the Stockholm Convention. At the mean time, the Royal Government of Cambodia has developed supporting policy as a convincer facilitator for all donor agencies, non-governmental organizations and stakeholders through their network of Cambodia country offices.

Based on the national policy related to POPs and from the time of the signature of the Stockholm Convention in May 23, 2001, the Royal Government of Cambodia delegated the ministry of environment to play a role as a national focal point for the Stockholm Convention. At the same time, in order to facilitate the implementation of the Stockholm Convention among relevant institutions and also for improving effective management of chemicals as well as POPs management, the Inter-Ministerial Coordination Sub-Committees (known as National Coordinating Committee – NCC) have been established with membership of governmental institutions, NGOs, and national institutes. The Ministry of Environment, in association with other governmental institutions and stakeholders, deals with human health protection, environmental protection, human capacity building, and information dissemination and public awareness raising in Cambodia, a country where both human and natural resources have been devastated by years of civil war.

The NIP supports the governmental policy framework and Cambodia's millennium development goals in the following areas:

- 1) Improvement of public health,
- 2) Prevention of toxic chemicals releases into the environment, and
- 3) Reduction of poverty through reducing cost of health services.

The NIP establishes four action plans, namely:

- Action Plan on POPs pesticides,
- Action Plan on PCBs,
- Action Plan on unintentionally produced POPs, and
- Action Plan on the management of the NIP implementation.

The Goals and Objectives for the first three of these are listed below:

Action Plan on POPs pesticides

Goals: Eliminate the import and use of POPs pesticides. Overall Objectives: Effectively implement law enforcement related to POPs pesticides

- Objective 1: Amendment of existing legal instruments and strengthening effective pesticides (including POPs) law enforcement.
- Objective 2: Strengthen institutional capacity and raise public awareness on obsolete pesticides including POPs pesticides.
- Objective 3: Undertake ecologically sound management measures related to obsolete pesticides including POPs pesticides.
- Objective 4: Eliminate stockpile of obsolete pesticides, including POPs pesticides.

Priority Issues of POPs Pesticides and DDT

- Lack of regulations and the existing one has limited provision for full management of pesticides using in agriculture and household condition;
- Lack of pesticides evaluation capacity and facilities for legislative enforcement;

- Lack of awareness and knowledge on safe and responsible use of POPs pesticides among users as well as retailers and formulating shop workers; and hazard of POPs pesticides;
- Limited/insufficient monitoring of POPs pesticides residues in environment and agricultural products, and human health;
- Lack of data records and national database management system for management of pesticides especially on POPs;
- Lack of information exchange mechanism and technology transfer; and
- Lack of pesticides disposal policy and disposal facilities.

Action Plan on PCBs

Goals: Reduce risks and minimize impacts caused by PCBs with sound economical and ecological management. Overall Objectives: Proper economical and ecological management of PCBs and its contaminated articles.

- Objective 1: Develop legal instruments and technical standards for managing equipment and articles contained and contaminated with PCBs.
- Objective 2: Develop ESM of in-use electrical equipment and accessories/articles containing and/or contaminated with PCBs.
- Objective 3: Set up a management tool for transformers in use until the end of life considering the socio economic aspects
- Objective 4: ESM of out-of-use of equipment, articles and wastes containing and/or contaminated with PCBs
- Objective 5: Strengthen capacity and enhance public awareness on PCBs issue

Priority Issues of PCBs:

- Lack of both human resources and technical facilities to implement the international conventions Cambodia have signed; ratified, and acceded;
- Lack of specific law and legislation on PCBs management; and specifically lack of regulatory framework for PCBs use and disposal;
- Lack of appropriate laboratory capacity;
- Improper management of used and obsolete transformers and dielectric fluid;
- No safety precaution and protection measure for handling with PCBs equipment and contaminated sites (workshop, warehouse...);
- Lack of awareness on PCBs perception of hazard at all levels;
- All employees and workers have no awareness on the technical safeguard and hazard of PCBs;
- Lack of data records and database management system on PCBs; and
- Lack of national as well as international mechanism for information exchange and technological transfer.

Action Plan on Unintentionally Produced POPs

Goals: Reduce and eliminate the release of unintentionally produced POPs. Overall Objectives: Proper management of the release of unintentionally produced POPs.

- Objective 1: Revise or develop the legislations related to the sound management of unintentionally produced POPs.
- Objective 2: Strengthen capacity and raise public awareness on unintentionally produced POPs issues and hazard.
- Objective 3: Improve waste management practices and prevent uncontrolled burning of wastes
- Objective 4: Maintaining of comprehensive inventories of unintentionally produced POPs.
- Objective 5: Implementation of guidelines on best available techniques (BAT) and best environmental practice (BEP) to prioritized sources of unintentionally produced POPs

Priority Issues of Unintentional POPs By-Products

- Lack of technical experts and technical guidelines for unintentional POPs by-products management;
- Uncontrolled burning (waste at municipality and rural landfills...etc);
- Insufficient regulation related to unintentional POPs by-products management and enforcement;
- No Public awareness on unintentional POPs by-product's generation and hazard;
- No control measures for reducing the release of unintentional POPs by-products from all sources;
- No waste separation policy but limited in practice (by interest groups like scavengers);
- No data records regarding the incident from unintentional POPs by-products and poorest database management system and information exchange mechanism among the governmental agencies and stakeholders; and
- Lack of laboratory capacity and equipment for monitoring and analyzing.

3-3-2 National Capacity Self Assessment

The project developed and implemented to strengthen capacity for sustainable management and use of natural resources and environment. The primary objective of the NCSA process is to identify priorities and needs for capacity development to address global environmental management requirements in a country-driven manner by focusing on three thematic areas: biodiversity, climate change, and desertification/land degradation.

It took Cambodia 20 months to develop National Capacity Self-Assessment aiming at developing capacities for Cambodia to meet obligations under the three Conventions and its own need to protect environment and natural resources.

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 buildup 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.

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.

3-3-3 International Waters

There are two significant international water bodies affecting Cambodia. One is the Mekong River, and the other is the Gulf of Thailand.

Cambodia is an integral member of the Mekong River Commission (MRC). As such it is committed to regional coordination on issues affecting the Mekong. Cambodia's National Mekong Committee ensures that regional policies and actions adopted by the MRC are consistent with Cambodia's national policies related to natural resource management and socio-economic development.

Cambodia being a state entitled to become a party to the International Maritime Convention on 25 November 2004. This accession, mean Cambodia policy must having duly considered on other relevant conventions including the International Convention on Load Lines 1966, International Convention for the Safety of Life at Sea 1974 as amended, Protocol of 1978 relating to the International Convention for the Safety of Life at Sea 1974 as amended, International Convention on Tonnage Measurement of Ships 1969, International Convention for the Prevention of Pollution from Ships 1973, as modified by the Protocol 1978 relating thereto, and International Convention Civil Liability for Oil Pollution Damage 1969. In 2007 the RGC adopted a Coastal Environmental Management Action Plan covering the period 2007-2011. This document includes Action Plans for four themes:

- Forest Management
- Marine Fisheries
- Waste Management
- Land Use Management

A total of 20 projects are proposed within these four Action Plans.

Very critical issues have been identified for international water including:

- Development of policies and plans to control marine pollution for land and sea- based sources and inland water,
- Upgrading of national and regional infrastructures and technical skills,
- Establishment of financing instruments for project sustainability, and
- Establishment of regional monitoring and information network, and involvement of regional association of marine legal experts to improve capacity to implement relevant conventions.

3-3-4 Ozone Depleting Substances

The RGC formulated a sub-decree on Ozone Depleting Substances dated March 17, 2005; the objective of this Sub-decree is rule for stop using Ozone Depleting Substances and manages all business activities and consumptions under the Vienna Convention and Montreal Protocol.

This Sub-decree applies to all import, export, transit, handling, produce, and use of Ozone Depleting Substances whether they exist alone or as part of a mixture and to virgins, used, recovered, recycled and reclaimed ODS in Cambodia.

Cambodia as a Party to the Montreal Protocol is having acceded to the Vienna Convention and the Montreal Protocol in June 2001. Cambodia is a developing country and has been classified as an Article 5(1) country. This ODS Phase-out Management Plan including Country Program, Terminal Phase out Management Plan and HCFC Management Plan have been prepared and implemented by Cambodia National Ozone Unit of the Ministry of Environment on behalf of the Royal Government of Cambodia. It is a consensus approved by the National Steering Committee and by the Senior Minister, Minister of Environment on behalf of the Royal Government of Cambodia. The plans; especially, HCFC Phase-out Management Plan explains the policies and programs that the Royal Government of Cambodia has both adopted and intends to adopt to ensure Cambodia's compliance with the Montreal Protocol on ODS phase-out schedule. Many of these activities presume that financial and technical assistance for Cambodia's efforts will be provided from the Multilateral Fund.

Recently Cambodia's Hydro-Chlorofluorocarbon Phase-out Management Plan (HPMP) of Ozone Depleting Substances was prepared and submitted for consideration at the 61st Meeting of the Executive Committee of the Multilateral Fund and was approved at the same meeting in November 2010. Cambodia's consumption of HCFCs in 2008 was 165 metric tonnes. Thus, Cambodia was faced with a challenge to freeze this consumption by 2013 and phase-down this consumption by new control schedule of Montreal Protocol 10% by 2015 and 35% by 2020 and 67.5% by 2025, and finally the 100% reduction from the base line by 2030 for Annex-C Group-I substances (HCFCs). Priority environmental issues regarding the Ozone Depleting Substances is:

❖ **Not enough Information on Ozone issues being provided to the public**

The National Ozone Unit under the Institutional Strengthening Program being assisted by UNEP. The NOU has raised awareness on ozone related issues, published awareness materials for distributing to the public, relevant institutions and stakeholders. In addition, the National Ozone Unit conducted the Inter-ministerial Meeting, awareness workshops for the participants from relevant institutions and stakeholders attended these workshops. However, in general public still receive very limited or never get information about negative impact of the Ozone Depleting Substances, market cost problem when alternative use is forced by the government and also the use of these substances is not properly way.

❖ **Market cost of Refrigerants**

There is some study and survey on the cost of the refrigerants in the market in Cambodia that study are focusing on ODS and alternative refrigerant (non-ODS) and looking ahead for the implementation of the HPMP in Cambodia.

❖ **Use of CFC and HCFC in sectors**

Cambodia uses CFC and HCFCs only in the installation and servicing of refrigeration and air conditioning equipment. Based on data survey for end-users in 2008, Cambodia used about 164 MT of HCFC-22 and 1.2 MT of HCFC-123. The HCFCs were used in sub-sectors such as air conditioning, chiller, commercial

refrigeration and transportation refrigeration. There are also HFC-blended refrigerants (R-404A, R-407C, and R410A) being used. The survey in 2009 did not find any use of HCFC in foam-blowing, fire-fighting, or solvent applications. Based on data of importation in 2009; there are about 10 companies were registered (included old and new companies) and applied for imported permission from NOU/MOE; and there also the importation of HFCs refrigerant, Air Conditioning equipment contained HCFC-22 Air Conditioning equipment contained HFC-410a as blend refrigerant and others RAC equipment were imported by those companies into Cambodia by the year of 2009.

3-3-5 Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Purpose of GHS is to provide a basis to implement the GHS of classification and labeling of chemicals in Cambodia. The National Implementation Strategy (NIS) serves as a policy and technical framework within which all stakeholders can play their appropriate roles in the implementation of the GHS of classification and labeling of chemicals.

The goals of the National Implementation Strategy are to enhance the protection of human health and the environment; reduce the need for testing and evaluation of chemicals; and facilitate international trade in chemicals whose hazards have been properly assessed and identified on an international basis.

The National Implementation Strategy is based on the following key principles:

- Use an integrated life-cycle management approach approved by international institutions appropriated with Cambodia situation and resource and inter sectional characteristic.
- Promote harmonization of chemical management across the chemicals classification and labelling;
- Use existing chemicals management legislation and regulations as the overarching instrument for GHS implementation, in Cambodia.
- Enhance the protection of human health and the environment;
- Reduce the need for the use of chemicals;
- Facilitate international or/and regional trade in chemicals with consideration on people health and environmental protection appropriated with technical regulation and procedure with properly assessed and identified an international or/and regional basis.
- Devise an approach to provide for the full implementation of the GHS in Cambodia by 2011;
- Ensure continued alignment with international trends in the further development of the GHS; and
- Ensure that national law and regulations prescribes compliance with the GHS requirements.

The National Implementation Strategy for Globally Harmonized System of Classification and Labeling of Chemicals is a policy in Cambodia to response the concerns and it is an obligation of Cambodia for implementation of the GHS. National Implementation Strategy is not intended as a document for teaching to students or the public, but is a document to establish national framework for four sectors including Industrial Workplace, Agriculture, Transport and Consumer properly to conduct the classification and labeling of chemicals in Cambodia.

Cambodia has set up very clear priorities strategy to implementation of the NIS on the GHS as following:

Table 2: Priorities of NIS on the GHS

Implementation Strategy	What needs to be done?
1. Develop new sub-decree, procedure and other regulations for implementing GHS.	<ul style="list-style-type: none"> • <i>Review and assess existing legal instruments related to the GHS;</i> • <i>Develop first draft of sub-decree on the GHS; and</i> • <i>Develop ministerial regulations and procedures for implementation of the sub-decree on the GHS in each sector.</i>
2. Improve the existing institutional and administrative structural mechanisms.	<ul style="list-style-type: none"> • <i>Opening up access to meet policies, legal framework, activities and plans for implementation of the GHS;</i> • <i>Establish mechanisms and procedures for communicating with organizations, the government and the donors;</i> • <i>Keep MoE as a competent institution to be the focal point on the GHS for all donors related matters; and</i> • <i>Participate in the development of all new or revised guidelines and materials pertaining to the involvement of trade business, community groups, NGOs and other stakeholders in implementing GHS.</i>
3. Promote capacity development; education and awareness raising on the GHS.	<ul style="list-style-type: none"> • <i>Review and assess existing education and training material;</i> • <i>Develop chemical safety and the GHS training and education materials;</i> • <i>Provide training to the stakeholder;</i> • <i>Promote participation of civil society in implementation of education programs;</i> • <i>Promote formal and non-formal and unofficial educational activities; and</i> • <i>Provide awareness to the public through mass media.</i>
4. Improve the participatory mechanisms of the stakeholders to implement the GHS.	<ul style="list-style-type: none"> • <i>Communicate and build on good examples of NGOs, private sector, public interest groups, and stakeholders' involvement in the GHS implementation;</i> • <i>Create an effective mechanism to support the use of NGOs private sector, public interest groups, and stakeholders as executing agencies on the GHS; and</i> • <i>Initiate discussions with the government and concerned donor agencies of refined or new modalities and approaches for facilitating NGO and stakeholders' participation in future GHS implementation.</i>
5. Improve the GHS information sharing and management.	<ul style="list-style-type: none"> • <i>Collect and combine the GHS provision and technical material;</i> • <i>Create national network on the GHS information sharing;</i> • <i>Establish the National GHS Information and Database; and</i> • <i>Establish a process for information storage and access of data on the GHS related issues in Cambodia.</i>
6. Develop and implement communication strategy on GHS.	<ul style="list-style-type: none"> • <i>Identify national and local "target audiences" for the GHS information, including the local media; consult with representatives from the different target groups to determine the kinds of information they need locally to publicize, support or carry out the GHS of classification and labelling activities;</i> • <i>Communicate findings and recommendations to the relevant governmental institutions involve in the GHS communication strategy;</i> • <i>Establish documentation and materials centres related to the GHS;</i>
7. Promote effective law and regulation enforcement on the GHS.	<ul style="list-style-type: none"> • <i>Promote implementation of the GHS sub-decree on classification and labelling of chemicals;</i> • <i>Conduct monitoring and inspection on implementation of sub-decree on the GHS of classification and labelling of chemicals,</i> • <i>Train private sector on GHS and promote self inspection and monitoring collection of chemicals and chemical products in case of its inappropriate with the legal requirement, and</i> • <i>Promote technical development through provide proper training on GHS, inspection and monitoring to relevant official institutions.</i>

<p>8. Improve existing financial mechanism.</p>	<ul style="list-style-type: none"> • <i>Involve representatives of the bilateral in national briefings and round tables on technical and financial assistance in Cambodia.</i> • <i>Organize initiative meeting involving donor agencies, private sector to consider strategies for developing private sector partnerships in the GHS;</i> • <i>Organize meetings with relevant industry groups, e.g., the Industrial Association, local private companies for chemicals import, on how to develop private sector partnerships in the GHS;</i> • <i>Develop relationships, and exchange information, with NGOs and other groups engaged in monitoring corporate environmental practices; seek their help in identifying potential corporate partners;</i> • <i>Promote the allocation of the government funds for NIS;</i> • <i>Promote join implementation of the plan with NGOs or/and private sectors;</i> • <i>Develop new relationships with donors governments and bilateral aid agencies; and</i> • <i>Strengthen relationships with private sector companies and association to raising funds.</i>
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In the implementation process on GHS, Cambodia faced some priority issues as following

A- Technical Issues

There are technical issues could be happened in the implementation process of the NIS on GHS as following:

- The hazard classes and associated criteria for classifying chemicals;
- Any words and phrases that are translated from a foreign language to English, or any other Cambodian official language for use on labels, must retain their comprehensibility while conveying the same meaning. The standardized phrases and words that are used in the GHS would have to be correctly translated into other languages should a decision be made to include labels in different languages that are indigenous to Cambodia.
- Periodic review and updating of label information on receipt of new information are mandatory.
- New and significant information is any information that changes the GHS classification and leads to a change in the information conveyed on the label or MSDS and the appropriate control measures.
- Suppliers must also periodically review the information on which the label and MSDS for a chemical is based, even if no new and significant information has been provided. This applies to labels and MSDS that are not subject to any approval mechanisms.
- For labels, the hazard symbols, signal words and hazard statements have all been standardized and assigned to each hazard category. These standardized elements should not be subject to variation. However, as the transport sector relies on information primarily in a graphic form that is displayed on the vehicle placards, the UN Sub-Committee of Experts on the Transport of Dangerous Goods is still considering whether or not to include signal words and hazard statements as part of the information provided on the placard.
- A product identifier should be used on a GHS label, which should match the product identifier used on the MSDS.

- The name, address and telephone number of the manufacturer or supplier of the substance or mixture should be provided on the label.
- The label for a substance should include the chemical identity of the substance. For mixtures, the label should include the chemical identities of all the ingredients that contribute to acute toxicity, skin corrosion or serious eye damage, germ cell mutagenicity, carcinogenicity, reproductive toxicity, skin or respiratory sensitization or target organ systemic toxicity.
- Appropriate mechanisms must be established for the protection of confidential business information (CBI) in accordance with the principles of GHS and national law and legislations in order to ensure that health and safety is not compromised.
- The general principles of GHS include: CBI claims are to be limited to the names of chemicals and their concentrations regarding information disclosed on the label and safety data only, i.e. the name and amount of (or concentration range of) chemical ingredients, other than the 'active ingredients', if not hazardous, need not be provided.

B- Legislative Issues

The GHS does not require the whole system to be implemented at once, but rather that where an element is implemented, it must be done in its entirety. In order to enforce the implementation of the system, it will be necessary to ensure that legislative obligations and compliance and enforcement provisions underpin the requirements. This Strategy is based on the implementation of the whole system, although different tasks to achieve this may be rolled out sequentially.

B-1 Classification and criteria:

Currently, Cambodia does not have in place a system for hazard classification and will therefore apply the GHS hazard system pending the establishment of appropriate infrastructure.

The terminology differences between the various legislations of regulatory bodies should be streamlined by means of consistent definitions to ensure that there is a sectoral understanding to the approach taken to classification

These issues will need to be informed by a decision maker regarding the approach to be taken to the discretion afforded by the GHS as to which of the components to apply in the different parts of the classification system in Cambodia.

B-2 Safety data sheets:

The draft Sub-Decree on the GHS has made provision for issuance of regulation on SDS in accordance with the GHS requirements.

B-3 Labelling

Current legislative gaps in labelling in respect of agricultural sector, industrial workplace, consumers product and in transportation sector seem to be not well done yet with initiative for labelling system and legislative labelling gap will be addressed in the prescribed regulation in the proposed sub-decree on GHS and future development of chemicals management law. Legislative provisions for the review, periodic updating label is considered in the draft sub-decree on GHS.

B-4 Other issues

Other issues should be considered by the Cambodian Government including:

- Overlap of jurisdiction;
- Regulation throughout the life-cycle;
- Incorporation of a rights-based approach into the chemicals management law and the sub-decree on GHS;
- Institutional co-ordination;
- Compliance and enforcement. Deficiencies in the implementation of the current compliance and enforcement system due to limited information regarding compliance and enforcement activities by government and capacity constraints in implementing adequate enforcement activities.

C- Institutional Issues

It is recognized that there is no clearly assigned duties for one ministry/institution to responsible for GHS of classification and labelling of chemicals. However, Ministry of Environment seems to be a coordination agency for GHS of classification and labelling of chemicals while other relevant ministries is responsible for the use without harmonizing of chemicals in all for main sectors yet.

In the implementation process of this NIS on the GHS, the relevant ministries in purpose of yearly result based GHS implementation have proposed next steps and follow-up the activities by focusing on the main points as following:

- Revising existing objectives set out in the NIS related to the GHS.
- Reassessment of the situation and gap and the sectoral plan for the implementation of the GHS.
- Reviewing and conducting participatory priorities setting of the action plan to implement GHS. The prioritization of the action plan will speed up and improving the future action as well as the implementation of the GHS
- Updating the NIS. When Cambodia have more expereices in the implementation of the NIS on GHS and after well analysis of the situation and gap and have prioritised the activities in each sector, Cambodia will update the NIS through additional activity in order to promote effective implementation of the GHS. The updating the this NIS including updating the progress report and annual GHS implementation report, updating the activities by component and study the possibility to redevelopment of sectoral plan collaborate to the NIS.

SECTION 4: PRIORITY PROJECTS IN FOCAL AREAS/THEMES OUTSIDE THE STAR

4-1 HISTORY OF CAMBODIA AND GEF-4

With the introduction of the RAF for the two Focal Areas of Biodiversity and Climate Change, GEF funding opportunities in these areas are clearly defined.

For Climate Change Cambodia has an RAF allocation of \$3.3 million for GEF-4. Under the “50% rule”, only \$1.65M can be approved for specific activities in the period July 2006-June 2008. As of January 2008, \$0.3M had been approved for the SGP and \$1.0 M committed to a UNDP SFM project. Assuming the PIF for the latter project is approved in the GEF Council’s next Work Programme, this will mean that Cambodia has committed \$1.3M, or 40% of the total.

The CC RAF only applies to mitigation projects. CC adaptation projects are funded from two separate funds, the Special Climate Change Fund and the Least Developed Countries Fund, neither of which is subject to RAF allocations. Cambodia is eligible for both of these funds. Since mid 2007, the SCCF has had no funding, so effectively the only source of CC adaptation funds currently is the LDCF.

For Biodiversity, Cambodia is part of the “group” of countries whose BD RAF scores were insufficient to justify a country-specific allocation. There are 95 countries in the group, and a total of \$146 million has been allocated to the group. No country is allowed to access more than \$3.5 million. However, up to November 2007 only \$18 million of the total had been approved or pipelined (12%). Thus, it appears that there is good potential for group countries which have clear and vigorous strategies to access amounts close to the permitted maximum.

The RAF does not apply to the other Focal Areas for which Cambodia is eligible.

4-2 ALIGNMENT OF GEF-4 STRATEGIC PROGRAMMES WITH CAMBODIA’S POLICY, ENVIRONMENTAL AND SOCIO-ECONOMIC SITUATION

In the Biodiversity Focal Area there are eight Strategic Programmes (see Table 1). For some of these programmes, the current situation in Cambodia is not conducive to the development of GEF-funded projects. For examples, SP-5, which deals with markets for BD-friendly products, requires a level of awareness and spending power among consumers in order for such market-based initiatives to succeed. Such conditions do not yet exist in Cambodia.

SP-2, which covers the establishment and development of a system of marine PAs is an important issue for Cambodia. However, with only the first marine NP having recently been established, and with numerous institutional issues, including duplicate and unclear mandates of different agencies to be resolved, it is probably too early to contemplate such a project. Perhaps late in GEF-4, or more realistically during GEF-5, such a project could be developed.

The UNDP SFM proposal, which covers several Focal Areas, proposes to allocate BD funding under, SP-4, which deals with regulatory changes to mainstream biodiversity conservation into productive sectors and productive landscapes. Therefore the potential for an additional project under this Strategic Programme is limited.

SP-1, sustainable financing for PA systems, is an important issue, but given the large funding gaps currently experienced within the Cambodian PA system, it will require substantially higher levels of funding than are available in GEF-4 to effect the changes required to secure sustainable financing.

Of the remaining four Strategic Programmes, SP-8 is currently receiving relatively little attention from the GEF. This leaves the potential to develop further GEF-4 projects in three Strategic Programmes:

SP-3: Strengthening systems of terrestrial PAS

SP-6: Building capacity to implement the Cartagena Protocol

SP-7: Invasive alien species

In the Climate Change Focal Area, considering opportunities for projects on CC mitigation, the two Strategic Programmes most relevant to Cambodia's policies and current situation are:

SP2: Energy Efficiency in Industry; and

SP-4: Energy from Biomass

In addition, SP-1 (Energy Efficiency in Residential and Commercial Buildings, is of secondary importance, while the remaining two SPs are of low importance to Cambodia at the current time. SP-4 is already covered by the UNDP SFM proposal, meaning that the remaining \$2 million in Cambodia's RAF allocation for GEF-4 should be used for a SP2 project. Alternatively, the current allocation of \$1.0 million to the SFM project could be increased because energy from biomass is the most significant CC issue for Cambodia, with a smaller SP2 project also being developed.

Concerning CC adaptation, \$1.8 million has already been request from the LDCF for a NAPA follow-up project dealing with water resources use in the agricultural sector. Cambodia is eligible for an additional \$1.6 million from the LDCF, with adaptation in the coastal zone receiving a high priority. This would also be a strategic use of LDCF funding, give the possibility of future BD and IW projects dealing with Cambodia's coastal resources.

In the Land Degradation Focal Area, the majority of GEF-4 funding has already been committed to a major programme in Africa, meaning that the UNDP SFM project probably represents the only realistic opportunity for LD funding in Cambodia during GEF-4.

Similarly, in the International Waters Focal Area, almost all GEF-4 funding has already been committed or pipelined. Therefore, Cambodia will continue to participate in regional East Asia Seas and South China Seas projects, but the opportunity for additional funding during GEF-4 is unlikely.

On the other hand, in the POPs Focal Area, where there is no RAF allocation, GEF-4 funds are still available. Cambodia's NIP identifies action programmes in three areas: POPs pesticides, PCBs, and unintentionally-produced POPs (uPOPs). Although the quantities of stockpiled POPs pesticides are not as large as in some other countries in the regional consideration should be given to a modest-sized project to eliminate stockpiles (around \$1.5 million of GEF funding). On the other hand, the numbers of PCB containing transformers and other electrical transmission equipment are high in Cambodia, so a larger project dealing with PCBs in the electricity transmission sector seems justified (around \$2 million).

4-3 PROPOSED POSSIBLE PROJECTS FROM GEF-4 TO IMPLEMENT IN GEF-5

As we know that, the GEF established in 1991, then

- United Nations Conference on Environment and Development-Earth Summit, 1992
- Instrument for the Establishment of the Restructured GEF-March 1994
- Replenishment of the GEF Trust Fund:
 - GEF-1 (1994) \$2 billion
 - GEF-2 (1998) \$2.75 billion
 - GEF-3 (2002) \$3 billion
 - GEF-4 (2006) \$3.13 billion
 - GEF-5 (2010) \$4.34 billion
- World Bank is the Trustee of the GEF Trust Fund.

Taking account of the previous discussion, the following project proposals would seem to be feasible for GEF-4 but possible and still appropriate to implement in GEF-5 period of time: Those projects are proposed to get funding as following:

- 1- Strengthening sustainable forest management and the development of bio-energy markets to promote environmental sustainability and reduce rural poverty and CO2 emissions in Cambodia. This is a UNDP proposal, for total GEF funding of \$5 million (including Agency fees). Of this, \$2 million is requested from the BD Focal Area (SP-4), \$2 million from the CC RAF allocation, under SP-4, and \$1 million from the LD Focal Area (SP-2). The PIF is being submitted in January 2008, with Work Programme entry sought for April 2008.
- 2- A capacity building for the Cartagena Protocol proposal. This is being prepared by UNDP, with a budget of \$xx million, including agency fees. The PIF is expected to be submitted in...
- 3- Although Cambodia is limited to a maximum of \$3.5 million in the BD Focal Area, as it is a member of the group, the slow rate of commitment of BD group funds during GEF-4 to date means that it might be possible to consider another small BD project, perhaps under the SP-3 (Strengthening terrestrial PA systems) during 2009, when the overall funding picture becomes clearer. A PIF could possibly be submitted in June 2009, with Work Programme entry sought for December 2009.
- 4- A CC SP-4 project, possibly dealing with Energy Efficiency in the brick industry, GEF agency to be decided. This project could be for up to \$2 million, including agency fees. However, since SP-4 is of greater relevance to Cambodia, a small project of \$1.2-1.5 million could be considered, with additional funds being allocated to the CC SP-4 component of UNDP's SFM project (see # 1, above). The PIF could be submitted in July 2008, with Work Programme entry sought for December 2008.
- 5- A commitment of \$0.3 million from the CC RAF to the GEF Small Grants Programme, to complement core funding of the SGP.
- 6- Adapting to the impacts of climate change on water resources utilization in the agricultural sector in Cambodia. This is a LDFC proposal, prepared by UNDP. The PIF was submitted

- 7- Adapting to climate change in coastal zone management in Cambodia, GEF agency to be decided. This is another LDCF project. A PIF could be submitted in April 2008, with Work Programme entry sought for June 2008.
- 8- A POPs SP1 project on elimination of POPs pesticides, GEF agency to be decided, for about \$1.5 million.
- 9- A POPs SP-1 project on elimination of PCB-containing oils in electricity transmission equipment, GEF agency to be decided, for about \$2 million.

Even discounting number 3, above, the total amount of funding for national projects in Cambodia during GEF4 if each of these opportunities were to be pursued, would amount to \$13.9 million, which represent 76% of all GEF funding Cambodia has received for national projects during the first 3 cycles of the GEF.

4-4 PERSISTENT ORGANIC POLLUTANTS

Cambodia is an agricultural based country and for industrial sector is mainly depend on garment and food processing. That is why no local production and formulation of pesticides, including POPs, in Cambodia have been registered up to now. Exporting of POPs pesticides is also unavailable. All pesticides, including POPs, which have been used in Cambodia, are imported from abroad.

It is known that the use of POPs-pesticides in Cambodia began a long time ago (perhaps since the 1960s) and still continues today. However, there are no records with regards to when POPs-pesticides were initially applied in Cambodia until the beginning of the 1980s, but we do know that POPs-pesticides, such as DDT and Endrin, are the most common ones known by Cambodia's older generations. From 1985 to 1992 approximately 121.91 tons of powder pesticides and 264,640 litres of liquid pesticides were imported to be used for pest control over cultivation areas of about 1,700,000 ha throughout the country, of which there were about 1.22 tons of DDT and 1922 litres of Endrin. The findings of the recent POPs-pesticides inventory (2004) have shown that there are about 450 kg of powder called DDT and 53.7 kg of chlordane available on Cambodian markets. Such POPs chemicals are generally used for pest control in the field as well as for termite control to protect buildings. In addition, the Dieldrin was tracked to consumer products, i.e. mosquito coils.

All electrical equipment including lamps, cable, and transformers are not produced in Cambodia. Since the demand of electricity has become wider, the electrical network has also been expanded and along with this process, many transformers have been imported to secure supply. Before 1975, electrical equipment was imported from Japan, and Yugoslavia; between 1975-1979 from China; and between 1979 to 1992 from former Soviet Unions and East European countries, and after 1992 until now from Thailand, South Korea, Germany, ...etc.

Transformers produced in the 1950s and 1960s are still in operation. In addition, there are about 1600 transformers available in Cambodia, of which 1343 units were inspected and recorded during a preliminary inventory during the preparation of the NIP. It was found that there are about 465 transformers that are PCBs-free, while about 762 units were regarded as PCBs assumed, and the remaining 116 units fall into the PCBs-contaminated category.

Among the 1343 transformers recorded, about 498 units are being used within provinces and municipalities (excluding Phnom Penh, the capital city) which represents 37% of total distribution throughout the country. However, about 50% of transformers with missing nameplates are also being used within the provinces and municipalities (excluding Phnom Penh, the capital city). Regarding stockpiles, about 358 transformers require close attention. Among these, 274 units are waiting for disposal and 84 units are standing-by for repair. Among those waiting for disposal, about 83% of transformers are stocked in Phnom Penh while the remaining 17% are located in other provinces and municipalities.

An initial inventory of unintentionally produced POPs estimated a total annual emission of 606.664 g TEQ. However, it can be assumed that more dioxins/furans will be released in the near future due to the growth of small and medium industries, agricultural activities, transportation, tourist and other infrastructure.

Progress in Cambodia on POPs

There are currently no scientifically based programs monitoring the use of POPs-pesticides in Cambodia. The Department of Agronomy and Agricultural Land Improvement of the Ministry of Agriculture, Forestry and Fisheries established a pesticide analysis laboratory in 2001 to serve as a pesticides evaluation tool for implementing its duty on pesticides management in the country. Unfortunately, this laboratory is unable to analyze POPs-pesticides due to lack of equipment, facilities and capacity.

The government regulation related to the management of pesticides (Sub-Decree 69 on Standards and Management of Agricultural Materials) has been enacted since October 1998. A set of detailed guidelines to implement this basic regulation was prepared and the POPs-pesticides were banned from use in December 2003 by MAFF Ministerial Prakas No. 598 on the three pesticides lists for the Kingdom of Cambodia. In this regard,

Cambodia has no intention to use POPs-pesticides for agricultural purposes. However, due to the weakness of law enforcement and other constraints, practical application of these legislative instruments has not really happened up to date.

Illegal import, distribution and use of POPs-pesticides is still happening in Cambodia. The reason are legislations recently enacted and inadequate monitoring and law enforcement mechanisms including capacity, experience, techniques, facilities...etc.

There are no legal instruments and technical guidelines in place yet related to the requirement for installing air control system (air cleaning equipment/devices) at potential release sources of unintentionally produced POPs. Nevertheless, few legal instruments have addressed limits on the release of small particles into the environment.

POPs are a relatively new subject for Cambodia so that no information about this issue has been disseminated so far. Furthermore, neither an educational program nor public awareness campaigns have been introduced this issue yet. In addition, there is no existing educational curriculum related to

pesticides including POPs yet in Cambodia, but some extension programs such as IPM and SARUP have set up their own approach to minimize the use of pesticides in crops production.

It is understood that neither general education nor the professional education system in Cambodia integrates subjects related to health issues affected by PCBs into the educational curriculum, neither do the mass media for the general public. This result is no one understanding the risks of PCBs substance that affect human health and the environment. Furthermore, there is also a lack of understanding by decision makers, government officers, and electrical utility workers about PCBs and the way it can impact human health and the environment. That is why there has been incorrect use of dielectric fluid such as secondary fuel, for wood treatment, lubricant for sewing machines, cooking oil and other purposes.

GEF's contribution to progress on POPs

Cambodia has implemented a single Enabling Activity project in the POPs Focal area (Table x, below).

Table 10: GEF-funded POPs projects in Cambodia

GEF ID	Project Name	Agency	Project Type	GEF Grant (US\$M)	Project Stage
1783	Enabling activities for the Stockholm Convention on Persistent Organic Pollutants (POPs): National Implementation Plan for Cambodia	UNEP	Enabling Activity	0.49	CEO Approved

4-5 INTERNATIONAL WATERS

GEF's contribution to progress on International Waters

Cambodia has participated in 7 regional projects in the International Waters Focal Area. One of these dealt with water utilization in the Mekong River Basin, while the other six all dealt with aspects of management of the East Asia Seas, including the Gulf of Thailand.

Table 11: GEF-funded IW projects in Cambodia

GEF ID	Project Name	Agency	Project Type	GEF Grant (US\$M)	Project Stage
2188	East Asian Seas Region: Development and Implementation of Public Private Partnerships in Environmental Investments	UNDP	Medium Size Project	1	CEO Approved
615	Mekong River Basin Water Utilization Project	WB	Full Size Project	11.1	CEO Endorsed
597	Building Partnerships for the Environmental Protection and Management of the East Asian Seas	UNDP	Full Size Project	16.224	CEO Endorsed
2700	Implementation of Sustainable Development Strategy for the Seas of	UNDP	Full Size Project	11.576	CEO Endorsed

	East Asia (SDS-SEA)				
885	Reversing Environmental Degradation Trends in the South China Sea and Gulf of Thailand	UNEP	Full Size Project	16.749	CEO Endorsed
3025	World Bank/GEF Partnership Investment Fund for Pollution Reduction in the Large Marine Ecosystems of East Asia (Trenches 1, 2nd Installment)	WB	Full Size Project	10	Council Approved
396	Prevention and Management of Marine Pollution in the East Asian Seas	UNDP	Full Size Project	8.025	Project Completion

4-6 GEF SMALL GRANTS PROGRAM (GEF/SGP)

The GEF Small Grants Program (GEF/SGP) is part of the Global Environmental Facility's efforts to improve the global environment through localized and focalized priority funding. The GEF/SGP aims to protect the global environment by funding community conservation and sustainable natural resource use projects.

Although being an integral part of the GEF Corporate Business Plan and the UNDP GEF unit, the GEF/SMP is administered by UNDP, and its implementation decentralized and country driven. The GEF/SGP complements the regular and medium and full-sized GEF project funding, by providing an opportunity for the direct participation of local non-governmental, community-based, and grassroots organizations in project development and implementation. The GEF/SGP is founded in the belief that global environmental problems can only be addressed adequately if local people are involved, and that with small amounts of funding--maximum USD 50,000 per project--local communities and organizations can undertake activities which will make a significant difference in their livelihoods and their sustaining environment.

GEF/SGP principal objectives are to: (a) Demonstrate strategies that are community-based and which could help reduce threats to the global environment; (b) Draw lessons from community-based experiences to support dissemination of successful strategies to stakeholders working on a larger scale; and (c) Build partnerships and networks of local stakeholders to support and strengthen stakeholder capacities to address environmental problems and to promote sustainable development measures. Project eligibility includes five main points: Proposed projects must (a) comply with GEF focal areas and national priorities, (b) contribute in the human welfare and sustainable development; (c) foresee elements of capacity building and rising environmental awareness; (d) promote human capacity development; and, (e) include close cooperation with local communities. GEF/SGP funding resources are available for projects that address GEF Focal Areas, thus addressing environmental concerns in (a) climate change, (b) loss of biological diversity, (c) pollution of international waters, and (d) depletion of the ozone layer. Projects addressing degradation through desertification and deforestation, are also considered for funding as they relate to the focal areas.

Institutional Arrangements

The GEF/SGP operates in a decentralized and country-driven manner, through a National Coordinator (NC) and National Steering Committee (NSC), with support from the UNDP Country Office. In some countries, this support is provided by a non-governmental organization, and the GEF/SMG is held within the offices of that organization. The UNDP/GEF Unit and UN Office of Project Services (UNOPS) provide global coordination and support. Additional details on the tasks of each of the above institutions are provided below.

Table 12: Institutional tasks within the GEF/SGP

GEF/SGP National Coordinator	The <i>National Coordinator</i> takes the lead in managing implementation of the country program, with tasks including (a) awareness raising of GEF/SGP objectives and procedures, (b) assisting NGOs and CBOs in the formulation of proposals, (c) pre-screening project proposals, (d) facilitating the work of the National Selection Committee, (e) assisting NGOs and CBOs with access to technical support services, (f) ensuring sound program monitoring and evaluation, and (g) laying the foundation for program sustainability.
GEF/UNDP National Steering Committee	The <i>National Steering Committee</i> consists of voluntary members from the NGO sector, government, academic, scientific and technical institutions, and UNDP. The Steering Committee (a) provides overall guidance to the country program and is responsible for selecting projects. Members are also involved in (b) pre-selection, and (c) project monitoring and evaluation. While the core activity of the Steering Committee is allocation of grant funds, emphasis is placed on overall policy guidance and outreach, including developing and implementing strategies to ensure sustainability of the country program.
UNDP Cambodia Office	The UNDP Country Office provides overall programmatic and management support to operations in each of the GEF/SGP country program. The UNDP Resident Representative and the country office environment focal point are both members of the National Steering Committee. The Country Office helps to (a) monitor program activities; (b) facilitate interaction with the host government; and (c) develop links with other in-country financial and administrative arrangements for the GEF/SGP. The Resident Representative also (d) signs the Memoranda of Agreement, on behalf of UNOPS, with NGO/CBO grantees. The Country Office (e) facilitates the disbursement of grant payments.
GEF/SGP Coordination Unit	The GEF/SGP Coordination Unit is responsible for overall program management and support of country programs. The Coordination Unit focuses more intensively on providing strategic and operational guidance, on coordinating and supporting the ongoing country programs, and on documenting and disseminating lessons from the community-based experiences of the program.
UNOPS	The <i>UN Office of Project Services (UNOPS)</i> provides program execution support services in the following areas: (1) personnel recruitment and contract administration for national project staff and consultants; (2) subcontracts for host NGOs and country program grant allocations; (3) budget administration, including monitoring of expenditures; and, (4) guidance on the above to country-level staff.

Implementation of GEF/SGP in Cambodia

One of the key strategic aspects of the GEF/SGP is for it to focus on the funding of small-scale initiatives by local non-government and community-based organizations, with a view of some of these activities scaling up to larger projects or programs funded by GEF or other alternative sources. The value of this approach is that local environmental issues are generally linked or prone to impact the livelihood of local communities, and that if successful, they have great potential for replication and expansion given the vested interest of the direct stakeholders.

With small projects averaging about USD 20,000, the program is able to promote grassroots initiatives. However, if these initiatives are not linked to an overall strategic plan that sets to address national development policies linked to environmental priorities, and these grassroots initiatives are not viewed as pilot scale-up activities to address larger national, regional, and global environmental concerns, the program is unlikely to address other than local environmental concerns.

SECTION 5: PRIORITY AREAS FOR REGIONAL COLLABORATION

5-1 MEKONG RIVER BASIN WETLAND BIODIVERSITY CONSERVATION AND SUSTAINABLE USE PROGRAMME

The project involves Lao PDR, Cambodia, Thailand (funded through non-GEF sources) and Vietnam, assisting them to conserve and sustainably use biological diversity in the Lower Mekong Wetlands. The project will establish a multi-sectoral planning process at national and regional levels, strengthen macroeconomic and policy frameworks for wetland biodiversity conservation and sustainable use, provide adequate information to support sound policy, planning and management, improve human and technical capacity to better conserve and sustainably manage wetlands, and improve community-based natural resources management of wetlands.

5-2 MEKONG RIVER BASIN WATER UTILIZATION

The project would help the member states of the Mekong River Commission (MRC): Cambodia, Lao PDR, Thailand, and Vietnam, implement key elements of the 1995 Agreement on Cooperation for Sustainable Development of Mekong Basin (Agreement). The project's board development objectives would be to assist the MRC to establish mechanism to promote and improve coordinated and sustainable water management by the countries of the Basin and protection of sensitive ecological systems including wetlands, flooded forests and the estuary system that support globally significant biodiversity. This would be achieved through preparation of "Rules" for water utilization (in particular, minimum in-stream flows on the Mekong River) and protocols for information exchange, notification/consultation in accordance with the Mekong Agreement. The project would assist in the formulation and implementation of the Rules by facilitating consultations among the MRC-member states and helping the MRC develop a Basin Simulation Model Package and Knowledge Base.

5-3 REVERSING DEGRADATION TRENDS IN THE SOUTH CHINA SEA AND GULF OF THAILAND

The overall goal of the Project is to foster and encourage, at a regional level, collaboration and partnership in addressing transboundary environmental problems of the South China Sea between all stakeholders and at all levels. The Project also seeks to enhance the capacity of the participating governments to integrate environmental considerations into national development planning. In the medium term, the objective of the project is to facilitate an agreement on specific targeted and costed actions for the longer term to address the priority transboundary issues and meet the targets which emerged from the diagnostic study, and the framework program of actions completed during the PDF-B phase. The priorities that will be addressed are wide ranging in both context and proposed areas of action: (i) habitat conversion and loss; (ii) over-exploitation of fisheries; (iii) land based pollution; and (iv) regional co-operation. Stress is placed on co-ordination of actions by diverse organizations, agencies, NGOs, private sector, government entities both at the national and regional levels.

5-4 PREVENTION AND MANAGEMENT OF MARINE POLLUTION IN THE EAST ASIAN SEAS

Development of policies and plans to control marine pollution for land and sea- based sources, upgrading of national and regional infrastructures and technical skills, and establishment of financing instruments for project sustainability. Project will include selection of demonstration sites,

establishment of regional monitoring and information network, and involvement of regional association of marine legal experts to improve capacity to implement relevant conventions.

5-5 EAST ASIAN SEAS REGION: DEVELOPMENT AND IMPLEMENTATION OF PUBLIC PRIVATE PARTNERSHIP IN ENVIRONMENTAL INVESTMENTS

The objectives of the project are: To build confidence and capabilities in public-private sector partnerships (PPP) as a viable means of financing and sustaining environmental facilities and services for the protection and sustainable use of the marine and coastal resources of the East Asian Seas region. To verify a PPP working model and related guidelines, resulting in the formation of public-private partnerships at the local government level To build capacity within and among the public and private sectors to effectively develop, finance, implement and sustain new investments in environmental facilities and services utilizing the PPP approach, within the East Asian Seas region and elsewhere.

5-6 BUILDING PARTNERSHIP FOR THE ENVIRONMENTAL PROTECTION AND MANAGEMENT OF THE EAST ASIAN SEAS

The objective of the project is to assist the riparian countries of the East Asian Seas to collectively protect and manage their heavily stressed coastal and marine environments through intergovernmental and intersectoral partnerships. These countries include the Republic of Korea which for the first time is a GEF recipient. Building upon the methodologies, approaches, typologies, networks and lessons learned from the pilot phase, the project would enhance and complement national and international efforts by removing or lowering critical barriers regarding policy, investment, capacity, which are having negative effects on the management of the coastal/marine environment in the region. Together with several waterbody-based projects in the area, these projects constitute GEF's programmatic approach to these coastal and marine waters with globally significant ecosystems that are experiencing severe degradation.

SECTION 6: STAR - ALLOCATION AND PRIORITIES PROJECTS

Cambodia's contribution to the global environmental wealth, as defined by the GEF's Focal Areas, is described in the various national plans and strategies, such as the BSAP, INC, NAP, and NIP. The GEF, through the RAF, has initiated a process to define the comparative contribution of each country to global environment wealth. Therefore, the status and global contribution of Cambodia to each Focal Area is described for each. The GEF project for Cambodia up to the present show in table below:

Table 3: GEF Project for Cambodia

ID #	GEF Agency	Project Title	Focal Area	Details
272	UNDP	Enabling Cambodia to Prepare its First National Communication in Response to its Commitments to UNFCCC	Climate Change	View Details
467	UNDP	Biodiversity Enabling Activity	Biodiversity	View Details
946	IBRD	Rural Electrification and Transmission	Climate Change	View Details
621	IBRD	Biodiversity and Protected Area Management Pilot Project for the Virachey National Park	Biodiversity	View Details
1043	UNDP	Establishing Conservation Areas Landscape Management (CALM) in the Northern Plains	Biodiversity	View Details
1086	UNDP	Developing an Integrated Protected Area System for the Cardamom Mountains	Biodiversity	View Details
1183	UNDP	Tonle Sap Conservation Project	Biodiversity	View Details
1783	UNEP	Enabling activities for the Stockholm Convention on Persistent Organic Pollutants (POPs): National Implementation Plan for Cambodia	POPs	View Details
1435	UNDP	Assessment of Capacity Building Needs for Implementation of Priorities from the NBSAP (additional financing)	Biodiversity	View Details
1493	UNDP	National Capacity Self-Assessment (NCSA) for Global Environment Management	Multi Focal Area	View Details
3404	UNDP	Promoting Climate-Resilient Water Management and Agricultural Practices	Climate Change	View Details
3636	UNEP	BS Building Capacity for the Detection and Monitoring of LMOs in Cambodia Biosafety Program	Biodiversity	View Details
3976	UNIDO	Reducing Greenhouse Gas Emissions through Improved Energy Efficiency in the Industrial Sector	Climate Change	View Details
3890	UNEP	Vulnerability Assessment and Adaptation	Climate	View

ID #	GEF Agency	Project Title	Focal Area	Details
		Programme for Climate Change in the Coastal Zone of Cambodia Considering Livelihood Improvement and Ecosystems	Change	Details
4042	UNIDO	TT-Pilot (GEF-4): Climate Change Related Technology Transfer for Cambodia: Using Agricultural Residue Biomass for Sustainable Energy Solutions	Climate Change	View Details
2819	UNEP	Implementation of the National Biosafety Framework of Cambodia	Biodiversity	View Details
3635	UNDP	SFM Strengthening Sustainable Forest Management and the Development of Bio-energy Markets to Promote Environmental Sustainability and to Reduce Green House Gas Emissions in Cambodia	Multi Focal Area	View Details
1602	UNDP	Climate Change Enabling Activity (Additional Financing for Capacity Building in Priority Areas)	Climate Change	View Details
1869	UNDP	Programme of Action for Adaptation to Climate Change	Climate Change	View Details

Regarding to the GEF funding by component will be described as following:

6-1 BIODIVERSITY

Cambodia, a tropical country found on the peninsula of mainland Southeast Asia adjacent to the gulf of Thailand with a land area of 181,035 km². Cambodia has a coastline of 435 km, and its land border of 2,438 km runs along Thailand to the west, Vietnam to the east and Laos PDR to the north. Biogeographically, Cambodia is dominated by the lowlands along the Mekong River and Tonle Sap (Great Lake), which are the sites of most of the population and agriculture and three mountainous regions in the Southwest, North and Northeast, which are less populated and rich in forest resources.

This geography helps to form an unusual phenomenon whereby in the Rainy season the Mekong River backs up and actually flows into the Tonle Sap causing the lake to swell up to 4 times its size. The Tonle Sap Lake provided a wealth of biological resources. Specifically the seasonal flooding of the Tonle Sap, supplies suitable conditions for rice and fish, which were and still are the staples of diet in Cambodia. This is probably why the ancient Khmer empire of Angkor was located near its shores. Depictions of plants and animals, throughout Angkor Wat, give an indication of the biodiversity of the area and its cultural importance through utilization. The Tonle Sap ecosystem was, and is still considered by many to be the heart of the country.

The full extent of Cambodia's biodiversity is not yet known; however Cambodia is thought to have a rich diversity of species and is considered a biodiversity 'hot spot' (an area very rich in biodiversity) given its tropical location. Compared with neighbouring countries, Cambodia has a low population density and relatively large intact natural areas that are still intact.

Despite Cambodia's abundance of natural resources and their significance for biodiversity conservation and dependent local communities, these are being significantly and rapidly eroded by a variety of, often very strong, drivers. Cambodia's forests have decreased significantly in terms of both area and quality over the last few decades. A recent forest resource assessment by FAO (2005) indicates that Cambodia has lost more than a quarter of its remaining primary forest since 2000, ranking the country third in the world for primary forest loss. The rate of deforestation accelerated during the period between 1997 and 2002 by approximately 5%, or 1% per year and still increased further between 2002 and 2005 at a rate of 2% annually, and afterwards.

Biodiversity supports human societies ecologically, economically, culturally and spiritually. Cambodia is host to a great diversity of life, which can be seen most directly in the use of biological resources such as agriculture, forestry and fisheries.

In agriculture the importance of ecosystems is combined with the species preferred for food and the genetic diversity of these species allows for increased capacity to deal with diseases or pests. Others are of considerable importance for the control of natural predators of agriculture productions (e.g. carnivores control rodent populations, insect eating birds protect crops), the control of pest animals (e.g. bats prey on biting insects, fish prey on mosquito larvae) or pollination (e.g. bees). Wildfowl are currently being domesticated for egg and meat production, cormorants are used as fishing aides. Some species are notable tourist attractions (e.g. elephant, birds) or constitute on the other hand important parasites and vectors of disease affecting domestic animals and people (e.g. mosquito). In Cambodia biodiversity

Definitions for biodiversity often include three components; genetic diversity, species diversity and ecosystem diversity. In Cambodia and indeed around the world and there tends to be varying levels of information on these components. Species diversity is commonly the best-known and most thoroughly investigated component, while genetic diversity has been focused on a few species that are of commercial interest, and the true ecological functions of ecosystems are only slowly coming to light. The following seeks to summarize current knowledge on the status of these three components of biodiversity in Cambodia.

The causes of forest degradation include commercial logging (a ban on logging is currently in force, but illegal logging remains a problem), slash and burn cultivation, cutting wood for fuel, land encroachment, and conversion for agriculture and infrastructure development. Until recently, the degradation of forest quality has been significantly higher than the loss in forest area as logging has concentrated on commercially valuable species and larger-sized trees. These activities have been a major threat for large mammals, particularly those whose populations are already dwindling. Recently, deforestation and habitat fragmentation associated with Economic Land Concessions (for mining and plantations of rubber, cassava, sugar cane, and other uses) has become of significant concern to maintaining the national PAS, especially in view of the apparent lack of consideration of conservation values, and sustainable development principles. This has to be considered as potentially the most important driver of loss of biodiversity in Cambodia due to its threat to the PAS. Inundation of major areas of forest will occur as a result of proposed hydro-electric power (HEP) programmes including 22 HEP stations in the Cardamom Mountains and 18 in Monduliri province. Planned mainstream dams will impact the hydrological regime, aquatic and floodplain habitats and fish populations on the Mekong River.

Aquatic habitats are increasingly being converted for agricultural and other types of land use, and fish migration patterns are interrupted by hydrological infrastructure development as well as local irrigation schemes in the flood plain. The seasonally flooded forests around Tonle Sap originally extended over 1 million hectares, but only 362,000 hectares remained by 1991 and they remain under pressure. Overexploitation of fishery resources is a major concern.

Coastal and marine development is emerging, with almost all coastal islands being offered on concession. A few urban and tourism developments have changed coastal habitats, particularly mangroves and potentially coral reefs fringing islands. In 2010 only 56,000 hectares of mangrove forest remained in Cambodia. Annual rates of mangrove loss exceed that of forest loss in general at 1.9% from 2000 - 2010. Against this, community fishery, forestry and tourism initiatives as well as replanting of mangroves have started to encourage more sustainable use of mangrove resources. Key coastal and marine issues include destructive fishing practices, loss of seagrass beds and degradation of coastal water quality as a consequence of upstream logging, hydropower development, mining, use of agrochemicals and urban pollution.

Represented Species

The World Resources Institute's 'Earthtrends' web-site (<http://earthtrends.wri.org>) provides data on number of species by country. For Cambodia, the figures are shown in Table 3, with figures for the other three countries of the Lower Mekong Basin shown for comparison:

Table 4: Number of Species in Cambodia and the other three countries of the Lower Mekong Basin

	Plants	Mammals	Birds	Reptiles	Amphibians	Fish
Cambodia	x	127	521	116	11	128
Laos PDR	8,286	215	704	147	59	49
Thailand	11,625	300	971	341	103	308
Vietnam	10,500	279	837	286	132	257

Threatened species

The IUCN web-site (<http://www.iucnredlist.org>) provides data on the number of species in each category of threat. For the four countries of the lower Mekong basin, the figures are:

Table 5: Threatened Species in Cambodia and the other three countries of the Lower Mekong Basin

	Extinct in the Wild	Critically Endangered	Endangered	Vulnerable	Near Threatened	Least Concern	Total
Cambodia	0	16	25	49	62	601	772
Lao PDR	0	13	21	52	64	829	1,015
Thailand	1	24	38	100	182	1,089	1,499
Vietnam	0	27	47	88	113	995	1,363

Represented Ecoregions

The WWF web-site (<http://www.worldwildlife.org/science/ecoregions/biomes.cfm>) lists all of the 800 + ecoregions, complete with a description that includes location. In the Indo-Malayan biome there are 107 ecoregions. Those represented in Cambodia are shown in Table 5, below.

Table 6: Indo-Malayan biomes in Cambodia

	Status
Cardamom Mountains moist forests	S
Central Indochina dry forests	V
Indochina mangroves	C
Southeastern Indochina dry evergreen forests	C
Southern Annamites montane rain forests	V
Tonle Sap freshwater swamp forests	V
Tonle Sap-Mekong peat swamp forests	C

Threatened Ecoregions

In the table above, the "Status" column indicates the threat category assigned by WWF (C = critical/endangered; V = vulnerable; S = relatively stable). Three of the seven biomes found in Cambodia are considered critical/endangered, and another three are vulnerable.

Progress by Cambodia on Conserving Biodiversity

The Kingdom's commitment to environmental protection has been demonstrated by a number of significant legal measures to prevent pollution, habitat damage and to protect wildlife, including the creation of an Environmental Secretariat in 1993, the enactment, in 1996, of the "Law on Environmental Protection and Natural Resource Management" creating a full fledged Ministry of Environment and the adoption of a National Environmental Action Plan in 1998. The National Assembly has also ratified several international conventions related to the environment including: the Convention on Biological Diversity, the Climate Change Convention, the RAMSAR Convention, CITES, the World Heritage Convention and the Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin.

This National Biodiversity Strategy and Action Plan reflect the national goals of poverty reduction through accelerated economic growth, environmental sustainability and social equity. It constitutes as such a major contribution to the country's development plan. Land, water, pasture, terrestrial and marine ecosystems as well as wildlife and aquatic resources in particular are central to agriculture, fisheries and tourism development. Habitat protection, natural resource conservation and sustainable use options offer significant opportunities for demonstrating that conservation of biodiversity represents a vital investment in future sustainability of Cambodia's economic and social development.

GEF's contribution to progress on Biodiversity

Cambodia has had seven GEF-funded projects implemented, approved or CEO endorsed, for a total GEF contribution of \$10.94 million. Of these three are Enabling Activity projects (though one was approved as an MSP), one is an MSP and three are FSPs. In addition, Cambodia has participated in one regional project, UNDP's Mekong Wetlands project (see Table x). The four national MSP and FSPs have supported biodiversity conservation in the following areas:

- Tonle Sap
- Cardamom Mountains
- Northern Plains
- Virachey National Park

Table 7: GEF-funded BD projects in Cambodia

GEF ID	Project Name	Agency	Project Type	GEF Grant (US\$M)	Project Stage
467	Biodiversity Enabling Activity	UNDP	Enabling Activity	0.35	CEO Approved
1086	Developing an Integrated Protected Area System for the Cardamom Mountains	UNDP	Medium Size Project	0.998	CEO Approved
2819	Implementation of the National Biosafety Framework of Cambodia	UNEP	Medium Size Project	0.641	CEO Approved
621	Biodiversity and Protected Area Management Pilot Project for the Virachey National Park	WB	Full Size Project	2.75	CEO Endorsed
1183	Tonle Sap Conservation Project	UNDP	Full Size Project	3.596	CEO Endorsed
1043	Establishing Conservation Areas Landscape Management (CALM) in the Northern Plains	UNDP	Full Size Project	2.51	CEO Endorsed
1435	Assessment of Capacity Building Needs for Implementation of Priorities from the NBSAP (additional financing)	UNDP	Enabling Activity	0.097	Project Completion
1490	Mekong River Basin Wetland Biodiversity Conservation and Sustainable Use Program (Regional)	UNDP	Full Size Project	4.535	CEO Endorsed

6-2 CLIMATE CHANGE

Cambodia contributes little to climate change but will be affected by its impacts. Although Cambodia is not highly exposed to climate hazards (except the Mekong Delta on the border to Vietnam) almost all the provinces in Cambodia are vulnerable to climate change due to their low adaptive capacity and dependence on climate-sensitive livelihoods.¹⁸ As much as climate change mitigation is about energy, climate change adaptation in Cambodia is largely about water and health concerns and the strengthening of institutional capacity. The climate change impacts in Cambodia will largely be felt in

Tonle Sap through changed water flows in the Mekong, altering the unique flood pulse system, and in coastal zones through sea-level rise, increased erosion and salinisation. It is likely to be wetter, with higher water levels and more extensive flooded area as well as longer flood duration, however the effects of climate change on the monsoon system are not yet fully understood. Responding to climate change should start by linking efforts to reduce vulnerability to present climate-related disasters with those aimed at building longer-term resilience to climate change. It is important to note that climate change is not the only factor affecting the Mekong flows; planned large-scale hydropower dams is estimated to have a remarkable impact on the quantity and quality of the flow. The combined impact is a serious concern for the Tonle Sap.

National inventories of greenhouse gases have been conducted for year 1994 (Initial National Communication) and year 2000 (Second National Communication), following the IPCC 1996 Revised Guidelines and IPCC Good Practice Guidance. Cambodia provides estimates of anthropogenic emissions for three gases by sources and removals by sinks: carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). The inventories cover energy, agriculture, land use change and forestry, and waste. The 1994 GHG inventory includes emissions from a cement factory as part of industrial processes, but the 2000 inventory reports that the factory has ceased operations. Cambodia's industrial emissions are considered insignificant.

Agriculture was the largest contributor to national emissions both in 1994 and 2000. Livestock populations have been constant over the period but rice cultivation has increased with area harvested. Between 1994 to 2000, emissions from energy increased by 48% . At the same time, removals from land use change and forestry (LUCF) only increased by 7%. While Cambodia was a net sink in 1994, it had become a net source by 2000. Paragraph 7 of the the Decision 17/CP.8 of the UNFCCC states that for the Second National Communication, non-Annex I Parties shall estimate GHG inventories for the year 2000. However, Least Developed Countries (LDC) can choose any year at their discretion. According to Paragraph 8, Non-Annex I Parties should use the Revised 1996 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories. Following these COP agreed decisions, Cambodia followed the Revised 1996 IPCC Guidelines to conduct its national GHG inventory for the year 2000.

Most models indicate that by 2100 rainfall in Cambodia would increase by 3% to 35% from the current condition, while temperature increase would be in the range of 1.3⁰C-2.5⁰C. The occurrence of climate extremes may also increase. As a result of these changes, impacts would be felt in the following sectors:

Agriculture:

In the agriculture sector, only the rice production system was assessed in four major rice producing provinces. Based on data from the past five years, rice production loss in Cambodia was mainly due to the occurrence of flooding (more than 70% loss) and followed by drought (about 20% loss) and others such as pest and diseases (10% loss). Under elevated CO₂, yields of wet season rice might increase above that of dry season rice. However, there is a chance that under changing climate, rice yield in some provinces would be more variable than under current conditions due to the increase in flood frequency and intensity, in particular in rice growing areas surrounding the Tonle Sap Lake and the Mekong River.

Forestry:

According to the Holdridge Classification System, under the current climate conditions, Cambodia's forests are dominated by dry forest (60%), followed by wet forest (20%) and moist forest (20%). Under changing climate, the area of wet forest would decrease while moist forest would increase and dry forest would remain the same. This change indicated that forest productivity and biodiversity might also change. High rate of deforestation may accelerate the loss of forest biodiversity and reduce forest productivity.

Health:

In the V&A study, only the impact of climate change on malaria has been assessed as this is the most serious vector-borne disease in Cambodia. The study showed that in the last four years the number of malaria cases is negatively correlated with dry season rainfall (6%), mean annual temperature (19%) and percent literate (46%), and positively correlated with wet season rainfall (29%).

Coastal Zone:

Cambodia's coastal zone consists of two provinces (Kampot, and Koh Kong) and two municipalities (Sihanoukville and Kep). The total area covered by these provinces and the autonomous city is about 17,237 km². In this study, only Koh Kong province has been assessed since this province covers most of the coastal zone (11,160 km²) and is the most vulnerable to the impact of sea level rise according to a preliminary analysis of the impacts of a 1 m sea level rise on Cambodia's coastal zone. This is due to the fact that most areas along the Koh Kong coastline are low-lying. The study indicated that if sea level rises by 1 m, about 0.4% of the total area of Koh Kong province would be permanently under water.

Progress in Cambodia on Climate Change

The Royal Government of Cambodia has taken a firm stance to support the promulgation of the Kyoto Protocol to achieve the ultimate goal of the UNFCCC. In this context, the Royal Government of Cambodia signed Instrument of Accession to the Kyoto Protocol on 04 July 2002, indicating its commitments to the global efforts in addressing climate change issues. In addition, many government activities and measures also contribute to the global efforts to achieve the objectives of the UNFCCC such as creation and management of 23 protected areas, the current forest protection efforts, air pollution control measures, promotion of renewable energy development and cleaner technology, etc.

Education and training specifically relating to climate change is limited to the work of the GEF-supported Climate Change Enabling Activity Project. However, there have been a number of environmental education, training and awareness projects and activities, which have included climate change in their curricula.

Since 1993, environmental education and awareness programmes have been introduced and integrated into formal education curricula at all levels. A number of international organizations, local and international NGOs have implemented non-formal environment education activities with monks and local communities as part of sustainable agriculture and community/rural development programs. In recent years, environmental and sustainable development issues have become popular and frequent topics for mass media in Cambodia. The Ministry of Environment, a number of NGOs and local media

have been organizing various programmes to promote better understanding among the general public and policy makers about these issues, which also include climate change.

Cambodia preparing its Second National and is participating in a UNITAR-executed project entitled "Building Human and Institutional Capacities to Address Climate Change Issues in Least-Developed Countries". The ADB's Promotion of Renewable Energy, Energy Efficiency and GHG Abatement (PREGA) project is still on the initial stage. There are other projects, which although not classified as climate change projects, can actually reduce GHG emissions, once implemented. Some of these projects are the WB/MIME "Cambodia Renewable Energy Promotion Project", JICA's "Transport Master Plan of Phnom Penh" and DANIDA's "Natural Resource and Environment Programme", among others. Several project proposals are underway, to be submitted for funding to some potential donors. NEDO of Japan and WWF have also expressed interest in climate change projects in Cambodia.

In the SEDP-II, 2001-2005, Cambodia has emphasized technology transfer. Although the initiative is not specific to climate change, most of the technology transfer can reduce GHG emissions.

GEF's contribution to progress on Climate Change

Table 8: GEF-funded CC projects in Cambodia

GEF ID	Project Name	Agency	Project Type	GEF Grant (US\$M)	Project Stage
272	Enabling Cambodia to Prepare its First National Communication in Response to its Commitments to UNFCCC	UNDP	Enabling Activity	0.325	CEO Approved
1602	Climate Change Enabling Activity (Additional Financing for Capacity Building in Priority Areas)	UNDP	Enabling Activity	0.1	CEO Approved
1869	National Adaptation Programme of Action to Climate Change	UNDP	Enabling Activity	0.2	CEO Approved
946	Rural Electrification and Transmission	WB	Full Size Project	6.08	CEO Endorsed
1609	Renewable Energy Enterprise Development - Seed Capital Access Facility (Regional)	UNEP	Full Size Project	8.7	CEO Endorsed
????	Enabling Cambodia to Prepare its Second National Communication in Response to its Commitments to UNFCCC	UNDP	???	???	????

6-3 LAND DEGRADATION

The third national report of Cambodia to the UNCCD reports that In Cambodia, the major root causes of land degradation are come from soil erosion, deforestation, seasonal drought caused by inappropriate land use, poor agricultural activities and gemstone mining activity in the area of border between Cambodia and Thailand. The high erosion has taken place at the North-East mountain ranges and high plateau along main tributaries of the Mekong River, and at the North-West high plateau, where

sediment is flows into the Tonle Sap Lake. The recent changes in climate events, particularly the increasing frequency of dry events notably by El Nino, have increased new emerging climate pattern called seasonally aridity. The dry can spell long times as usual in some areas in Cambodia.

The GEF defines land degradation to be: *“the reduction of land resource potential through desertification and deforestation.”* Contributing factors include:

- Soil erosion, denudation, pollution, loss of organic matter, and loss of fertility
- Loss of vegetation cover, and alien invasive species that result in loss of cover.
- Habitat conversion (urban or agricultural)
- Aquifer degradation, leading to loss of soil cover

This definition, while being comprehensive, differs from definitions of land degradation used in some other fora, so titles used in data sources can be confusing. In particular, the terms “land degradation” and “desertification” are sometimes used inter-changeably.

In the following table, data for deforestation are from FAO’s Forest Resources Review for 2003. Data for “land degradation” are from FAO’s Terrastat database. FAO acknowledges that “national statistics are estimates based on various small scale maps and inventories that were not always up to date, reliable or both. Results therefore, in particular for small countries, are to be interpreted with care”.

Table 9: Deforestation and Land Degradation in Cambodia. Figures for the other three countries of the Lower Mekong Basin are provided for `comparison.

	Deforestation		Land Degradation		
	Forest change 1990-2000 (000 ha)	Deforestation rate /year	Severe (000km ²)	Very severe (000km ²)	% degraded
Cambodia	-56	-0.6	48	40	49
Laos	-53	-0.4	0	3	1
Thailand	-112	-0.7	144	258	78
Vietnam	52	0.5	97	162	79

Progress on Land Degradation in Cambodia

The Government’s environmental protection and natural resources management efforts are guided by four principles. The first principle is the recognition of the link between poverty alleviation and the environment. To safeguard the environment, the Government will increase the economic opportunities to the rural poor. Natural resource degradation is in part due to exploitation by the rural poor, who are seeking to satisfy their basic needs. Reducing rural poverty is therefore essential for achieving sustainable management of the environment.

The Royal Government's Rectangle Strategy launched in July 16, 2004 recognized that the Government would enhance agriculture sector in Rectangle I such as Improve agricultural productivity and diversification, Land reform and de-mining, Fisheries reform, and Forestry reform which focusing on sustainable forest management policy, protected area system, and community forestry (Rectangle Strategy for Growth, Employment, Equity and Efficiency).

Based on the national goals of environmental protection, bio-diversity conservation, poverty reduction, socio-economic development, and good governance, the Statement of the Royal Government on

National Forest Sector Policy has been developed and adopted in 2002. The main concept of the National Forest Sector Policy (NFSP) shows that Cambodia has been seriously concerned about the conservation and sustainable management of the country's forest resources. The NFSP was developed consistent to the Rectangular Strategy of the RGC, Forestry Law, relevant regulations, and the existing National Forestry Program (NFP).

To ensure sustainable forest management, it is important that the forest resources, especially the permanent forest estate, are secured and protected from encroachment and that they are managed in accordance with best management practices involving the participation of local communities, who are dependent on the forest for their daily subsistence. Reforestations have been developed under categories of (1) Economy Land Concession (2) Forest land granted for tree planting (3) Community forestry plantation (4) Government own plantations including military activities (5) Individual or private land plantations, and (6) National Labour-Day celebrations with people participation.

Environment and conservation are accorded high priority in Royal Government of Cambodia's efforts for sustainable development to benefit social and economic development of concerned communities. A draft law on Protection Areas is before the National Assembly. This law provides for procedures, guidelines, and regulatory tools for the administration and management of protected area, protection of rights and traditions of ethnic minorities and creation of protected area communities to seek their participation in the sustainable management and use of natural resources, and use National Biodiversity Steering Committee has been set up.

To adequately respond to the urgent needs of climate change, in particular droughts and floods, a draft National Adaptation Program of Action to Climate Change has been prepared containing priority actions needed to adapt to climate change in regard to agriculture, water resource management, coastal zone management and human health.

The National Poverty Reduction Strategy (2003-2005) recognizes the three aspects of land management vision including (1) land will be administered in a way which makes property rights legally clear and secure, (2) concessions for social purposes will be made to distribute vacant State's land to socially needy households, and (3) land will be managed in an environmentally sustainable way, which provides the poor with the opportunities for secure access to natural resources (especially land), to secure housing, to credit, and to employment, and for investment.

The developments in decentralization and de-concentration are an opportunity to re-define the roles of the national, provincial, district and commune level authorities that devolves power to decide on land use planning and NREM issues at the commune level with support from the higher levels to implement the community development plans. The Government has also stressed the adoption of a consultative process to determine the land distribution for the poor and prevent illegal land acquisition and land concentration.

The relative of human technical competence by sectors working under CCD are still very limited. According to the result from conducted surveys for human technical competence working under UNCCD in order to fulfill the obligation of the convention, the severely lacking of human technical competence working on CCD obligations within the governmental agencies, international organizations, local organizations, but within the academic research and development there were the percentage of responses of human competence under CCD are most the same percentage between severely lacking, lacking, sufficiency and more than sufficiency.

With its goal, activities has mentioned above, activities have focused on (1) research and development, (2) capacity building and (3) networking and information activities, capacity-building and human resources development components achieved the effectiveness of the professionally trained staff able to undertake and implement the activities of Sustainable Forest Management Conservation and Sustainable Land Management effectively in respond to the implementation the obligations of the Convention to Combat Desertification.

GEF's contribution to progress on Land Degradation

There have, as yet, been no GEF-funded projects on Land Degradation in Cambodia. In January 2008, UNDP submitted a PIF under the Sustainable Forest Management Cross-cutting Programme which includes a component on Land Degradation.

6-4 PROPOSED PRIORITY PROJECTS TO GEF-5 UNDER STAR FUNDING

Based on GEF Council Meeting Results in June 29 – July 2, 2010 at Washington, D.C. GEF-5 INITIAL STAR ALLOCATIONS including:

1. The GEF Council at its November 2009 Meeting adopted all main elements of a new System for Transparent Allocation of Resources (STAR), which was designed to replace the Resource Allocation Framework that was used during the fourth replenishment of the GEF.
2. This note has been prepared to disclose the initial STAR envelopes for the GEF-5 period, in light of the conclusion of the replenishment negotiations, and their endorsement by the GEF Council in May 2010. A further document, “GEF-5 Operational Procedures for the System for a Transparent Allocation of Resources (STAR)” (GEF/C.38/9) clarifies the operational rules and procedures related to the practical application of the STAR.
3. To determine the initial STAR allocations for GEF-5, the STAR model has been run for a total replenishment level of \$4.25 billion. Based on the GEF-4 experience, this is likely to reduce the need for upward or downward adjustments to the national allocations during the replenishment period. Re-allocation is allowed only under the conditions detailed in document “GEF-5 Operational Procedures for the System for a Transparent Allocation of Resources (STAR).”
4. As per the replenishment agreement, the overall focal area envelopes for GEF-5 are set at \$1,210 million for biodiversity, \$1,360 million for climate change, and \$405 million for land degradation. The focal area set asides, which include contributions to enabling activities, global and regional activities, and sustainable forest management (SFM), amount to 20 percent of these allocations. The resultant amounts after these set asides are taken out and therefore the amounts available for national STAR allocations are \$968 million for biodiversity, \$1,088 million for climate change, and \$324 million for land degradation.
5. As detailed in “GEF-5 Operational Procedures for the System for a Transparent Allocation of Resources (STAR)”, a number of countries have been granted flexibility in the use of their STAR allocations. At a \$4.25 billion replenishment level, 63 countries with a sum total of under \$7 million for the total of the three STAR allocations will benefit from the “flexibility” rule introduced for the STAR. The threshold of \$7 million is set such that at least 90 percent of the resources intended for biodiversity

and climate change are guaranteed to be programmed under these focal areas, as intended. The base against which the 90 percent is calculated is the total amount of focal area resources including the 20 percent set-aside, since enabling activities, SFM, and global and regional projects all support the mandate of the GEF under the conventions.

6. Table below provides the initial nominal STAR envelopes for Cambodia that receive an individual allocation for GEF-5.

Country	GEF4-RAF (M\$)		GEF5				Flexible
			STAR Envelopes (M\$)				
	CC	BD	CC	BD	LD	Total	
Cambodia	3.30	Group	2.21	3.85	1.22	7.28	No

Cambodia has proposed priority project to GEF-5 under STAR funding through participatory approach. The projects proposed is under three Cambodia programmes framework including PA& Biodiversity, Climate Change, and Land Degradation. **Annex 2** demonstrated about those priority projects.

6-5 LESSON LEARNED FROM THE NPFE DEVELOPMENT PROCESS

In development of the national portfolio exercise of Cambodia, we have learned with both positive and negative lessons. The lesson learned will make more improvement of the process in the future.

6-5-1 Positive Lesson Learned

- GEF provides a good and simple guideline in order to develop NPFE,
- Project proposed based on priority of Cambodia. It is respected to the ownership of implementing country,
- NPFE development process is applied participatory, systematically and transparency approaches,
- After approval of the NPFE, all GEF's agencies cooperated with Cambodia Ministries need to prepare the best concept papers and PIF to compete with others, and
- Well support and closer interaction between the GEF and Cambodia Ministry.

6-5-2 Negative Lesson Learned

- Ability and capacity of consultant and TWG or National Steering Committee in preparation of NPFE is very critical. Cambodia difficult to find competent person who can produce this NPFE with advice provided by the TWG,
- Internal coordination in Cambodia faced some unwanted problems during NPFE development process and document integration,
- Information exchange between GEF and GEF's Agency and MoE not fully flow and caused some problem in development process of NPFE and delayed the deadline,
- Lack of information from relevant Ministries and interested parties for integration of NPFE, and
- Most of the interested parties don't understand clearly about the useful of the NPFE. So, they hesitate to provide inputs and afraid to lost their benefit and opportunity to submit the PIF to GEF.

6-6 NPFE NEXT STEP

After endorsement of this document, the relevant GEF Agency and relevant ministries in purpose of submission of their proposal to the GEF Secretariat for funding process and then they will provide yearly result based prioritized project implementation have proposed next steps and follow-up the activities by focusing on the main points as following:

- Submit detail proposal to GEF by GEF's Agencies and Relevant Government's Ministries
- Implement proposed priority project,
- Reassessment of the situation and gap during the implementation of those priority projects.
- Reviewing and conducting participatory priorities setting of the new priority project in next GEF-5 START funding,
- Updating the NPFE. When Cambodia have more expereices in the implementation of the NPFE, the updating NPFE being made through all implement agencies by updating for prograss in implementation of proposed priority projects annually, updating the activities by component and study the possibility to further redevelopment of NPFE.

SECTION 7: ANNEXES

7.1 ANNEX 1: LIST OF INTER MINISTERIAL TECHNICAL WORKING GROUP

**Nation Religion King
Kingdom of Cambodia**

Ministry of Environment

No. 068

Phnom Penh, 11 March 2011

Decision

**Establishment of the Working Group
For Management and Coordination of Global Environment Fund (GEF5)**

Minister of Environment

- Having seen Preah Reach Kram No. 0196/21 dated 24 January 1996, promulgating the Law on Establishment of the Ministry of Environment
- Having seen Sub-decree No. 57 dated 25 September 1997 on the Organization and Procedure of the Ministry of Environment
- Referring to the result of the meeting on 22 December 2010, Ministry of Environment
- According to the necessity of the Ministry of Environment.

Decides

Article 1: To establish the Working Group for Management and Coordination of Global Environment Fund (GEF5), this is composed of the following:

1. H.E Lonh Heal, General Director of Technical General Directorate, Chairman
2. Mr. Long Rithireak, Deputy General Director of Technique, Vice-Chairman
3. Dr. Tin Ponlok, Deputy General Director of Administration for the Nature Conservation and Protection, Vice-chair
4. H.E. Heng Nareth, MOE Advisor and Director of Department of Environmental Pollution Control, Member
5. Mrs. Chan Somaly, Director of Department of International Convention and Biodiversity, Secretary
6. Mr. Chea Sina, Deputy Director of Department of Environmental Pollution Control and Representative of Stockholm Convention Focal Point, Member
7. Mr. Pak Sokharavuth, Deputy Director of Department of Environmental Pollution Control, Member
8. Mr. Ken Chorivan, Deputy Director of Department of Environmental Pollution Control and Representative of Basel Convention Focal Point, Member
9. Mr. Ken Chorivan, Deputy Director of Department of Environmental Pollution Control and Representative of Stockholm Focal Person, Member
10. Mr. Oum Pisey, Deputy Director of Department of Planning and Legal Affairs, and Biosafety Coordinator, Member
11. Mr. Sum Thy, Director of Department of Climate Change, and Representative of UNFCC Focal Person, Member
12. Meng Monyreak, Deputy Director of Department of International Convention and Biodiversity, and Representative of UNCBD Focal Person, Member

Article 2: The Working Group for Management and Coordination of Global Environment Fund (GEF5) has the following duties:

- Study and propose for approval from the ministry management regarding the global environment fund (GEF5) by considering the national priority and priority activities of the MOE, relevant institutions and program activities of the partner organizations by avoiding overlapping tasks and shortcomings.
- Control, monitor, evaluate and advise the ministry management on the implementation of various GEF5 projects that are operating.
- Organize meetings, workshops, conferences to widely disseminate information about GEF5 principles and budget packages for Cambodia and other related information.
- Propose budget according to the priorities set and coordinate with national and international partners in order to seek contribution fund and partnership in project implementation with effectiveness and sustainability.
- Examine the possibility for allocation of existing GEF5 budget to relevant institutions in order to implement the project in accordance with the activities and responsibilities of those institutions.
- Coordinate participation of staff of the ministry, other related institutions and NGOs/IOs counterparts in project activities, aiming to ensure effectiveness, ownership and sustainability.
- Determine the standing of and provide advice for the Cambodian delegation who will participate in the GEF5 meeting/conference.

Article 3: The Chairman of the working group has the overall responsibility to lead the working group and lead the meeting/discussion in order to decide on the proposed GEF5 budget.

Article 4: Endorsement letter for the proposed budget from GEF5 must be checked and have the initials of the both vice-chairs and submit to the chairman for his signature.

Article 5: The Secretary has a duty as an assistant to the chairman and vice-chairs organizing and managing all administrative tasks to undertake their duties as mentioned in Article 2 with success and effectiveness.

Article 6: Each member of the working group has a duty to collect information, organize and attend meetings/discussions, give comments and cooperate with governmental ministries/institutions, development partners and NGO counterparts in order to implement the tasks as indicated in Article 2 successfully and effectively.

Article 7: Delegate of the Royal Government of Cambodia in charge as General Director of Administration for Nature Conservation and Protection, General Director of Technique, General Director of Administration and Finance, General Secretary, Chief of Minister's Cabinet, and all the people as indicated in Article 1 above must be responsible for applying this decision with high effectiveness from this signed date onwards.

Senior Minister, Minister of Environment
(signature and seal)

CC:

- Council of Ministers
- Relevant institutions
- General Departments under MOE as stated in Article 9
- National and international organizations "for their information"
- Individuals as stated in Article 1 "for implementation"
- Documentation

Mok Mareth
PhD in Biology

7.2 ANNEX 2: PRIORITY PROJECT TO GEF-5 UNDER STAR FUNDING

A. PROPOSED HIGH PRIORITY PROJECT UNDER STAR ALLOCATION

Table 13: PROPOSED PRIORITY PROJECT ON BIODIVERSITY

No	Project Title	Priority	GEF Agency	Implement Agency	Allocation (US\$)	
					Indicative GEF Financing	Indicative Co-financing
1	STRENGTHENING CAMBODIA'S PROTECTED AREA SYSTEM AND DEMONSTRATING INTEGRATING LANDSCAPE MANAGEMENT FOR THE EASTERN PLAINS DRY FORESTS (CAMPAS)	H	UNEP	MoE	5,221,101	9,725,000
	COMPONENT					
1.1	Strengthen National Vision, Support and Management Effectiveness of Cambodia's PAS				1,000,000	2,500,000
1.1.1	<i>Strengthened coherent and informed inter-sectoral governance, resource allocation, and management of the national Protected Area System (PAS) focusing on delivering strategic planning goals</i>					
1.1.2	<i>Improved national compliance with PAS management goals particularly wildlife conservation & transboundary cooperation</i>					
1.2	Integrated Landscape Management Safeguarding PA Network, Biodiversity Conservation and Sustainable Livelihoods in the Eastern Plains, Mondulhiri Province				2,710,046	5,680,000
1.2.1	<i>National and sub-national governments have improved capability and motivation to secure protected areas and biodiversity in the Mondulhiri landscape including forest resources through harmonization of economic development with biodiversity and forest conservation.</i>					
1.2.2	<i>Increased benefit to local communities through prioritized investment in sustainable livelihoods, enterprise development and community-based natural resource management including forest protection and rehabilitation</i>					

1.3	Communications, Education and Information Management to support Biodiversity Conservation				1,250,000	1,044,500
1.3.1	<i>Greatly improved national recognition and support for the protected areas system's role in biodiversity conservation and achievement of national sustainable development goals</i>					
1.3.2	<i>National decision-making for biodiversity conservation and PA management improved through collaborative information management aligned with MEA requirements.</i>					
1.4	Project Management Cost				261,055	500,500

Table 14: PROPOSED PRIORITY PROJECT ON CLIMATE CHANGE

No	Project Title	Priority	GEF Agency	Implement Agency	Allocation (US\$)	
					Indicative GEF Financing	Indicative Co-financing
1	REDUCTION OF GHG EMISSION THROUGH PROMOTION OF INVESTMENTS IN BIOGAS PLANTS	H	UNIDO	MoE and MAFF	1,540,000	7,050,000
	<i>COMPONENT</i>					
1.1	<i>Demonstrating commercial biogas plants</i>				500,000	5,000,000
1.2	<i>Capacity building and institutional strengthening in commercial biogas technology and mini-grids</i>				400,000	800,000
1.3	<i>Creating conducive environment for investments to support commercial biogas technology</i>				400,000	800,000
1.4	<i>Climate change awareness and GHG mitigation</i>				50,000	50,000
1.5	<i>Project Management</i>				190,000	400,000

2	GHG EMISSION REDUCTION THROUGH GOOD MANAGEMENT PRACTICE IN LULUCF WITHIN THE FOREST LAND AND IN THE WIDER LANDSCAPE	H	UNEP	MoE	500,000	500,000
3	A LOW-CARBON SUSTAINABLE TRANSPORTATION PLAN FOR CAMBODIA	H	U.N. Agency	MoE and MPWT	700,000	500,000

Table 15: PROPOSED PRIORITY PROJECT ON LAND DEGRADATION

No	Project Title	Priority	GEF Agency	Implement Agency	Allocation (US\$)	
					Indicative GEF/ADB Financing	Indicative Co-financing
1	THE WATERSHED MANAGEMENT AND ECOSYSTEM SERVICES IN THE CARDAMON MOUNTAINS UPLAND OF PREK THNOT RIVER	H	GEF/ADB	MAFF	1,200,000	4,800,000
	<i>COMPONENT</i>					
1.1	<i>Soil and water conservation</i>				400,000	550,000
1.2	<i>Afforestation, agroforestry, integrated farming and soil management</i>				400,000	1,050,000
1.3	<i>Habitat conservation and rehabilitation</i>				180,000	1,850,000
1.4	<i>Watershed management institutional development</i>				100,000	1,050,000
1.5	<i>Project management</i>				120,000	300,000

B. PROPOSED PRIORITY PROJECT UNDER OUTSIDE STAR ALLOCATION

Table 16: PROPOSED PRIORITY PROJECT UNDER OUTSIDE STAR ALLOCATION

No	Project Title	Priority	GEF Agency	Implement Agency	Allocation (US\$)	
					Indicative GEF Financing	Indicative Co-financing
I	<u>BIODIVERSITY</u>					
1	SUB-REGIONAL PROJECT FOR STRENGTHENING CAPACITY FOR RISK ASSESSMENT AND MANAGEMENT¹	H	UNEP	MoE	3,000,000	3,000,000
	<i>COMPONENT</i>					
1.1	Governance systems for effective risk assessment and management of LMOs				540,000	1,200,000
1.2	National institutions for effective risk assessment and management				1,200,000	600,000
1.3	Sub-regional cooperation on risk assessment and management.				900,000	810,000
1.4	Project monitoring, evaluation and learning				90,000	90,000
1.5	Project management				270,000	300,000
II	<u>CLIMATE CHANGE</u>					
1	STRENGTHENING THE ADAPTIVE CAPACITY AND RESILIENCE OF RURAL COMMUNITIES USING MICRO WATERSHED APPROACHES TO CLIMATE CHANGE AND VARIABILITY TO ATTAIN SUSTAINABLE FOOD SECURITY IN CAMBODIA	H	FAO	MAFF , MoE and MoWRAM	5,098,000	18,805,395
	<i>Components</i>					

¹ This fund to be requested from GEF-5 STAR under BD is \$1.1 million only.

1.1	Integrating climate change adaptation into agricultural and food security policies and planning				1,010,000	3,858,520
1.2	Participatory integrated micro watershed management to reduce climate impacts on natural resources and agriculture				1,740,000	3,357,870
1.3	Demonstrating and promoting climate resilient agricultural practices through farmers field schools (FFS)				1,000,000	5,580,515
1.4	Piloting climate resilient alternative livelihood options targeted at women				1,093,100	4,175,120
2	REDUCING GHGS THROUGH INTEGRATING CLIMATE CHANGE INTO URBAN PLANNING (UNHABITAT)	H	U.N. Agency TBC	MLMUPC	NA	NA
3	ACCELERATED PHASE OUT OF ODS CHEMICALS IN AIR CONDITIONING AND REFRIGERATION SECTOR THROUGH AN INTEGRATED STANDARDS AND LABELING PROGRAMME IN CAMBODIA	H	UNEP	MoE	875,000	5,000,000
	COMPONENT					
3.1	National regulation, policies and measures (NRPM)				100,000	400,000
3.2	Institutional framework for development of links between ODS refrigerants phase out and energy efficiency (IFEE)				150,000	600,000
3.3	Integrated standards and labeling programme (ISLP)				150,000	600,000
3.4	Testing protocols and promoting infrastructure (TPPTI)				150,000	600,000
3.5	Framework for energy efficient low HCFC economic development (FELHED)				100,000	400,000
3.6	Information communication and education strategy (ICES)				225,000	2,400,000

4	PROMOTING CLIMATE RESILIENT WATER MANAGEMENT AND AGRICULTURE PRACTICE IN RURAL CAMBODIA (NAPA FOLLOW-UP)²	Implementing	UNDP	MAFF	1,850,000	1,429,350
5	ENVIRONMENTALLY SOUND MANAGEMENT OF PCBs	H	UNIDO	MIME and MoE	950,000	1,999,000
	Components					
5.1	PCB inventory and safe storage of PCB containing transformers				132,240	874,000
5.2	Capacity building and strengthening of legislative framework on PCBs.				32,820	80,000
5.3	Demonstration of safe disposal of 300 tons of PCB contaminated transformers.				697,480	765,000
5.4	Project management, monitoring and evaluation				87,460	280,000
6	BAMBOO COMMUNITY DEVELOPMENT FOR POVERTY REDUCTION AND CLIMATE CHANGE MITIGATION	M	UNIDO	MoE and MAFF	2,748,460	NA
	Components:					
6.1	Improve legal framework and create enabling country environment for growth of bamboo based enterprises and sustainable management of bamboo.				1,239,300	NA
6.2	Enhancement of production processes and green energy made from bamboo residues introducing bamboo pellet small factories.				1,239,300	NA
6.3	Project management and monitoring and evaluation				269,860	NA
7	GREEN INDUSTRY PROGRAMME FRAMEWORK	M	NA	MIME	1 200 000	NA

² Indicative Co-financing is US\$ 1,429,350 (US\$1,240,350 from UNDP and US\$189,000 from RGC)

8	TRANSFER OF ENVIRONMENTALLY SOUND TECHNOLOGY (TEST)	M	NA	MIME	1 200 000	NA
9	IMPLEMENTATION CLEANER TECHNOLOGY IN RICE MILLING SECTOR	M	NA	MIME	1 200 000	NA
III	<u>SOUND CHEMICAL MANAGEMENT</u>					
1	DEMONSTRATION OF PRE-AND POST-TREATMENT BAT AND BEP OPTIONS TO REDUCE UP-POPS RELEASES FROM INCINERATION PROCESSES IN RESPONSE TO THE STOCKHOLM CONVENTION ON POPS	H	UNIDO	MoE	5,400,000	21,900,000
	Components:					
1.1	Update of the regional UP- POPS releases baseline information on waste incineration processes				500,000	2,000,000
1.2	Legislation development				250,000	1,500,000
1.3	Institutional strengthening, education and awareness raising				1,500,000	1,500,000
1.4	Demonstration of best environmental practices (BAT/BEP) in waste incineration sector				2,500,000	15,000,000
1.5	Monitoring and evaluation				400,000	900,000
2	DEMONSTRATION OF BAT AND BEP IN OPEN BURNING SECTOR IN RESPONSE TO THE STOCKHOLM CONVENTION ON POPS	H	UNIDO	MoE	7,560,000	28,700,000
	Components:					
2.1	Legislation improvement: Strengthened capacity in introducing BAT/BEP in waste open burning sector				700 000	4,200,000
2.1	Institutional strengthening: Human resources capacity available to carry out BAT/BEP implementation				1,400,000	7,000,000

2.2	Demonstration activities: BAT/BEP gradually implemented in open burning sector				3,500,000	10,500,000
2.3	Education and awareness: Improved knowledge and understanding on BAT/BEP and UP-POPs related risks concerning open burning activities				1,400,000	4,300,000
2.4	Monitoring and evaluation: Established project management and M&E				200,000	600,000
IV	<u>SMALL PROJECT TO ABATE LAND DEGRADATION</u>	H	NA	MAFF	1,128,000	NA
1.	Orientation on agroforestry and development of agroforestry subject matter specialists				100,000	NA
2.	Identification and assessment of local agricultural farmers (AF) practices				50,000	NA
3.	Adaptation trials and dissemination of potentially applicable (AF) practices in priority zones				200,000	NA
4.	Development of effective agroforestry curriculum for tertiary education				50,000	NA
5.	On site planning using the watershed approach				50,000	NA
6.	Watershed level information campaign				50,000	NA
7.	Microgrants facility for stakeholder investment in forest regeneration				150,000	NA
8.	Plant materials production technical support				150,000	NA
9.	Orientation and training on principles, strategies for land degradation and SLM monitoring				NA	NA
10.	Updating of land degradation and SLM information				NA	NA
11.	Development of land degradation and SLM monitoring and				NA	NA

	utilization system					
12.	Awareness building on global and national soil management strategies and practices				50,000	NA
13.	Participatory development testing and dissemination of suitable strategies and practices				150,000	NA
14.	Development of subject matter specialists and field extension facilitators on soil management				100,000	NA
15.	Development of SLM communication strategy				10,000	NA
16.	Development of communication products				80,000	NA
17.	Training for MAFF based NAP communication unit				10,000	NA

C. PROPOSED PRIORITY PROJECT UNDER REGIONAL COOPERATION

Table 17: PROPOSED PRIORITY PROJECT UNDER REGIONAL COOPERATION (Regional projects outside-STAR allocation)

No	Project Title	Priority	GEF Agency	Implement Agency	Allocation (US\$)	
					Indicative GEF Financing	Indicative Co-financing
1	INDUSTRIAL WASTEWATER MANAGEMENT IN THE MEKONG RIVER BASIN	H	UNIDO	UNIDO	1,000,000	2,000,000
	Components:					-
1.1	Identification, assessment and prioritization of pollution hot spots (UNIDO's Hot-Spot methodology)				200,000	400,000
1.2	Capacity building, including the preparation of presentations and written				383,334	766,667

	course material and initial training on the TEST integrated approach					
1.3	Introduction of the TEST integrated approach at the level of demonstration enterprises				250,000	500,000
1.4	Dissemination of the results of the project				166,666	333,333
2	REGIONAL PROGRAMME ON THE IMPLEMENTATION OF THE DEVELOPMENT STRATEGY FOR THE SEAS OF EAST ASIA (SDS-SEA), THE SCALING UP INTEGRATED COASTAL MANAGEMENT IMPLEMENTATION IN PREAH SIHANOUK PROVINCE, CAMBODIA	H	UNOPS/ UNEP	PEMSEA and Provincial Government of Preah Sihanouk	112,700	73,150
	Components:					
2.1	Project Management and Capacity Development				25,900	11,700
2.2	Refinement and implementation of the Environmental Plan/Coastal Strategy				65,300	57,850
2.2.1	<i>Refinement of the Environmental Plan/Coastal Strategy</i>					
2.2.2	<i>Habitat protection restoration and management</i>					
2.2.3	<i>Pollution reduction and waste management</i>					
2.3	Review and implementation of the Coastal Use Zoning Scheme				21,500	3,600
3	EASTERN PLAINS LANDSCAPE CONSERVATION (Funding Sources: WWF-US, WWF-Germany, WWF-Switzerland, WWF-Sweden, USFWS, October Hill Foundation, Habitat Group, Darwin)	H	WWF and others	MoE	NA	NA

4	FRESHWATER AND AQUATIC RESOURCE CONSERVATION (Funding Sources: WWF-Germany, WWF Switzerland, WWF Denmark, SIDA, CEPF)	H	WWF and Other	MoE	NA	NA
5	SUSTAINABLE RATTAN HARVEST AND PRODUCTION (Funding Sources: EC, IKEA, WWF International, WWF Australia)	H	WWF and Other	MoE	NA	NA
5	POLLUTION PREVENTION AND REDUCTION OF POLLUTION FROM LAND-BASED ACTIVITIES IN TO THE GULF OF THAILAND AND SOUTH CHINA SEA FROM HOT SPOT AREAS IN CAMBODIA	H	UNEP	UNEP, MoE	400,000	NA

7.3 ANNEX 3: LIST OF PARTICIPANT OF CONSULTATION MEETING ON NPFE

**List Participants of Consultation Meeting on Second Draft of
National Portfolio Formula Exercises GEF 5"NPFE"
17 August 2011, NAGA World Hotel**

No	Name	Sex	Ministry Institution Organizatio	Title	Telephone
1	H.E Lonh Heal	M	Ministry of Environment	General Director	012 92 35 26
2	Long Rithirak	M	Ministry of Environment	Deputy General Director	012 927 001
3	Tan Setha	M	Forest Administration	Deputy General Director	012 95 42 80
4	Meas Sophal	M	Ministry of Environment	Deputy General Director	012 92 69 37
5	Ke Vongwathana	M	Ministry of Environment	Deputy General Director	017 44 83 66
6	Heng Chanthoeun	M	Ministry of Environment	Deputy Director of CCD	016 72 66 68
7	Ken Chorviran	M	Ministry of Environment	Deputy Director/Project Manager	012 856 818
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25	Mok Ry	M	Kampot Provincial Dep't of Environment	Officer	012 86 86 46
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7.4 ANNEX 4: LIST OF PARTICIPANT OF CONSULTATION WORKSHOP ON NPFE

**List Participants of Consultation Workshop on Final Draft
National Portfolio Formula Exercises GEF 5"NPFE"
30 December 2011, Sofitel Hotel**

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