ROYAL GOVERNMENT OF CAMBODIA
NATIONAL CLIMATE CHANGE COMMITTEE

THE SECOND NATIONAL FORUM ON CLIMATE CHANGE

PROCEEDINGS

October 03rd-05th, 2011
Phnom Penh, Cambodia

IMPLEMENTED BY:

Ministry of Environment
Cambodia

SUPPORTED BY:

European Union UNDP Cambodia DANIDA Oxfam Sida JCCI

PROCEEDINGS: THE SECOND NATIONAL FORUM ON CLIMATE CHANGE

October 3rd -5th, 2011
Phnom Penh, Cambodia

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FOREWORD

The Second National Forum on Climate Change (SNFCC) was organized from October 3rd-5th, 2011 in Phnom Penh, Cambodia. The National Climate Change Committee (NCCC) organized the forum with support from the Ministry of Environment's Climate Change Department (CCD) and selected development partners including the European Union, the United Nations Development Programme (UNDP), the Danish International Development Assistance (DANIDA), the Swedish International Development Cooperation Agency (SIDA), Oxfam America, and the Joint Climate Change Initiative (JCCI).

The three-day Forum was a knowledge and experience sharing platform with a combination of plenary, parallel working sessions, dialogues, and exhibitions. It brought together key stakeholders related to climate change issues including senior and mid-level national and provincial government staff, development partners, NGOs, civil society, academia, youths, private sectors, and media.

The forum focused on creating a constructive policy dialogue to assist the country in formulating an effective national policy and strategic plan to address climate change. It engaged the NCCC, the Inter-ministerial Climate Change Technical Team, and key stakeholders to build consensus on a process for the development of a national policy and strategic plan for climate change.

The forum also provided an opportunity for the Government to review and layout its negotiating position for the forthcoming 17th Conference of Parties (CoP-17) of the United Nations Framework Convention on Climate Change (UNFCCC) to be held in Durban from November 28th to December 9th, 2011. More than 700 participants attended the forum in the morning session of the first day, and more than 300 participants on each of the following days. The participants were government officials, representatives of diplomatic missions, development partners, NGOs, private sectors, Buddhist monks, indigenous people, and students.

In the inaugural session, the forum was presided over by Deputy Prime Minister H.E **Yim Chhayly**, representative of **Samdech Akka Moha Sena Padei Techo Hun Sen**, Prime Minister of the Kingdom of Cambodia. **H.E. Dr. Mok Mareth,** The Senior Minister and Minister of Environment, **H.E. Suy Sem**, the Minister of the Ministry of Industry, Mines and Energy (MIME) and **H.E. Ros Seilava**, the Deputy Secretary-General, Ministry of Economy and Finance (MEF) gave the opening speeches on the first, second, and third day respectively. Development partner representatives, including the UN Resident Coordinator, the Senior Economist from the Asian Development Bank (ADB), and the European Union Chargé d'Affaires shared welcoming remarks highlighting their support and commitment to assist Cambodia in addressing the risks associated with climate change.

This document provides a summary of the proceedings, main discussions, and key conclusions of the forum. It is hoped that the discussions started during this Second National Forum on Climate Change will continue in order to stimulate policy debate, decision-making, and related actions in the move to a more climate resilient and low carbon economy and to make use of the emerging opportunities for poverty reduction through climate change risk management.

H.E. Dr. Mok Mareth
Senior Minister, Minister of Environment and NCCC Chair

ACKNOWLEDGEMENTS

As the NCCC Chair, I would like to express my deep appreciation to all members of the NCCC for their efforts in organizing the SNFCC.

We would like to express our profound gratitude to H.E **Yim Chhayly**, Deputy Prime Minister, representative of **Samdech Akka Moha Sena Padei Techo Hun Sen**, Prime Minister of the Kingdom of Cambodia, the Honorary Chair of the NCCC for his warmest welcome and guidance provided in the inaugural session.

Our profound gratitude also extend to all speakers and chairs of sessions, who are listed throughout this summary of proceedings, and who have contributed to the richness of the dialogue in the forum through their extensive knowledge and practical experience.

We would also like to thank all participants who have actively participated and shared their perspectives on the various subjects raised during the forum.

We would like to acknowledge our development partners namely European Union, UNDP, DANIDA, SIDA, Oxfam America, and JCCI for their active cooperation and enabling the resources for organizing this forum.

Phnom Penh

H.E. Dr. Mok Mareth
Senior Minister, Minister of Environment, and NCCC Chair

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ABBREVIATIONS

ADB	Asian Development Bank
AFD	Agence France de Development
AFOLU	Agriculture, Forestry and Land Use
ASEAN	Association of Southeast Asian Nations
BAU	Business As Usual
CARD	Council for Agricultural and Rural Development
CARDI	Cambodian Agricultural Research and Development Institute
CBD	Convention on Biological Diversity
CCA	Climate Change Adaptation
CCAI	Climate Change Adaptation Initiative
CCB	Climate, Community and Biodiversity
CCCA	Cambodia Climate Change Alliance
CCCSP	Cambodia Climate Change Strategic Plan
CCD	Climate Change Department
CCSAP	Climate Change Strategies and Action Plans
CCSP	Climate Change Strategic Plan
CDC	Council for the Development of Cambodia
CDCF	Cambodia Development Cooperation Forum
CDM	Clean Development Mechanism
CDRI	Cambodia's Leading Independent Development Policy Research Institute
CERs	Certified Emission Reductions
CH_4	Methane
CHDR	Cambodia Human Development Report
CI	Conservation International
CNMC	Cambodia National Mekong Committee
CO_2	Carbon Dioxide
CO_{2e}	Carbon Dioxide Equivalent
CoP	Conference of Parties
CRDB	Cambodia Rehabilitation and Development Board
CSO	Civil Society Organization
DANIDA	Danish International Development Agency
DCA/CA	Danish Church Aid/Christian Aid
DCs	Developing Countries
DNA	Designated National Authority
DPs	Development Partners
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
DSPFF	Draft Strategic Planning Framework for Fisheries
EE	Energy Efficiency
EEP	Energy and Environment Partnership
ETS	Emission Trading Scheme
EU	European Union
FA	Forest Administration
FCPF	Forest Carbon Partnership Facility
FiA	Fishery Administration
GCF	Global Climate Fund

GCMS	General Circulation Models
GDANCP	General Department of Administration for Nature Conservation
GDCC	Government-Donors Coordination Committee
GDP	Gross Domestic Products
GEF	Global Environment Fund
GERES	Groupe Energies Renouvelables, Environnement et Solidarités
GHG	Greenhouse Gas
Gt CO2e	Giga Ton Carbon Dioxide Equivalent
IFC	International Financial Corporation
IGES	The Institute for Global Environmental Strategies
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Conservation of Nature
JCCI	Joint Climate Change Initiative
JI	Joint Implementation
JICA	Japan International Cooperation Agency
KP	Kyoto Protocol
KS	Khmer Solar
LCDF	Least Developed Countries Fund
LDCs	Least Developed Countries
LUCF	Land Use Change and Forestry
M&E	Monitoring and Evaluation
MAFF	Ministry of Agriculture, Forestry and Fisheries
MEF	Ministry of Economy and Finance
MIME	Ministry of Industry, Mines and Energy
MLMUPC	Ministry of Land Management, Urban Planning and Construction
MoE	Ministry of Environment
MoEYS	Ministry of Education, Youth and Sports
MoH	Ministry of Health
MoP	Ministry of Planning
MoWA	Ministry of Women Affair
MoWRAM	Ministry of Water Resources and Meteorology
MRC	Mekong River Commission
MRV	Measure, Reporting and Verification
MW	Megawatt
N_2O	Nitrous Oxide
NAMA	Nationally Appropriate Mitigation Action
NAP	National Action Plan
NAPA	National Adaptation Programme of Action to Climate Change
NCCC	National Climate Change Committee
NCDM	National Committee for Disaster Management
NDF	Nordic Development Fund
NEHAP	National Environmental Health Action Plan
NGO	Non-governmental Organization
NPASP	National Protected Area System Plan
NSDP	National Strategic Development Plan
OA	Oxfam America
ODA	Official Development Assistance
PA	Protected Area
PPCR	Pilot Programme for Climate Change Resilience
RE	Renewable Energy
REDD	Reducing Emissions from Deforestation and Forest Degradation
RGC	Royal Government of Cambodia
SAPs	Strategic Action Plan
SAW	Strategies for Agriculture and Water Resources

SEA	Southeast Asia
SIDA	Swedish International Development Agency
SME	Small and Medium Enterprise
SNA	Sub-National Authority
SNAP-DRR	Strategic National Action Plan for Disaster Risk Reduction
SNC	Second National Communication to UNFCCC
SNFCC	Second National Forum on Climate Change
SPCR	Strategic Programme for Climate Resilience
TF	Trust Fund
TWG	Technical Working Group
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNFCCC	United Nations Framework Convention on Climate Change
USD	United State Dollar
VCM	Voluntary Carbon Market
VCS	Voluntary Carbon Standard
VEPF	Vietnam Environmental Protection Fund
VERs	Verified Emission Reductions
VGS	Voluntary Gold Standard
WB	World Bank
WHO	World Health Organization
WOMEN	Women Organization for Modern Economy and Nursing
WTE	Waste To Energy
WWF	World Wildlife Fund

EXECUTIVE SUMMARY

The Second National Forum on Climate Change Forum took place from October 3rd-5th, 2011 in Phnom Penh, Cambodia. This forum was a knowledge and experience-sharing platform focusing on creating constructive policy dialogue to assist the country in formulating an effective national policy and strategic plan to address climate change. The forum also provided an opportunity for the government to develop further its negotiating position for the forthcoming 17th Conference of Parties (CoP 17) to the United Nations Framework Convention on Climate Change (UNFCCC) to be held in Durban in November 2011.

During the opening ceremony, H.E Dr. Mok Mareth, Senior Minister, Minister of Environment, and NCCC Chair gave the welcoming remarks. H.E Yim Chhayly, Deputy Prime Minister, representative of Samdech Akka Moha Sena Padei Techo Hun Sen, Prime Minister of the Kingdom of Cambodia delivered the official inception remark. The welcoming addresses for the following events were presented by Mr. Douglas Broderick, UN Resident Coordinator; H.E Dr. Mok Mareth, Senior Minister, Minister of Environment, and NCCC Chair; H.E Suy Sem, Minister of MIME; H.E Srun Dara, Under Secretary of State, MEF, NCCC member; H.E Ros Sielava, Deputy Secretary General, MEF; Mr. Peter J. Brimble, Senior Economist, ADB; and Mr. Rafael Dochao Moreno, Charge d'Affaire, a.i. delegation of the EU to Cambodia.

The overall working sessions had organized into different themes in which various national and international experts delivered presentations including:

1. Introductory Session
2. Parallel Working Groups discussions
   - 2.1 Adaptation-successes, challenges, and lessons learnt
   - 2.2 Mitigation-status, progress, lessons learnt, policy gaps, and recommendations
   - 2.3 Climate Change Financing
   - 2.4 Climate Change Cross-Cutting Issues
3. Plenary Sessions
   - 3.1 Climate Change Financing
   - 3.2 Climate Change Policy Framework towards a Cambodia's Climate Change Strategic Plan

INTRODUCTORY SESSION

During the introductory session, the most recent updates on climate change science, impacts, opportunities, recent climate change developments, key climate change initiatives in Cambodia, and the key findings of the Second National Communication had presented. The signs of global warming had highlighted such as changes in the temperature, precipitation, the rise in sea levels, extreme events, and anomalies vary by region and country. It was clearly explained the more the temperature increases, the more the impacts and losses would be. Therefore, it is important to act now, as any delay in cutting emissions will increase the damages. In Cambodia, the emissions of Greenhouse Gases (GHGs) are increasing when compared the base years of 1994 to 2000. Most communes in Cambodia have categorized as vulnerable to extremely vulnerable due to the poor socio-economic and infrastructural conditions. Climate changes will bring negative impacts to many sectors and local adaptation strategies; and pilot projects need to be developed and implemented. In an effort to address climate change in Cambodia, the Cambodia Climate Change Alliance (CCCA) and the Pilot Programme for Climate Change Resilience (PPCR) have been implementing.

ADAPTATION-SUCCESSES, CHALLENGES AND LESSONS LEARNT

Cambodia is extremely vulnerable to the impacts of climate change because of its agriculture-based economy, weak physical infrastructure, weak human resource capacity, limited financial capacity, lack of access to appropriate technologies for addressing climate change, limited adaptive capacity, institutional constraints, weak governance and decision-making. However, the few programms have been initiated and being implemented in the support of the National Adaptation Programme of Action to Climate Change (NAPA), for examplethe CCCA and PPCR, were presented and discussed. Capacity building, climate change, gender mainstreaming on national and sub-national levels, cross-sectorial involvement, and the integration of climate change issues into the NSDP are of considerable importance.

MITIGATION-STATUS, PROGRESS, LESSONS LEARNT, POLICY GAPS, AND RECOMMENDATIONS

In the area of mitigation, several topics had reviewed and discussed representing national and regional perspectives. The Clean Mechanism Development (CDM) and Voluntary Carbon Market (VCM) are the possible mechanisms for supporting mitigation actions in developing countries. However, only the CDM mechanism is best fit for Cambodia and the record showed the number of CDM development is noticeably increasing this year.

Reducing Emissions from Deforestation and Forest Degradation (REDD+) is a programme, which brings additional income from the forestry sector through the prevention of deforestation and forest degradation. REDD+ is a mechanism that is important in Cambodia since it is consistent with national policy and the RGC's goals, especially the commitment to maintain forest cover, and it will provide economic, social, and environmental support, particularly in forest and wildlife conservation.

In addition, Green Growth is another option, which is not a mitigation strategy, but also an adaptation strategy. Implementing Green Growth is not about the money and technology, but about the political commitment, vision, and policy options. However, Cambodia, known as a developing country, should adopt green growth development with precaution.

The solar market (i.e. renewable energy) is one of the mitigation options that are viable for Cambodia, and its growth has been increasing in recent years. However, public awareness, tax, maintenance services, and shortage of information were the main barriers at the initial stages of market development. It is important to have strong support from the government, private sector, and stakeholders to develop the solar energy market.

If looking at the carbon policy, the global economic crisis had server affected on the carbon market and the international negotiations have made little progress toward a successor regime to the Kyoto Protocol (KP). A carbon credit policy is a key to success since market based mechanisms depend on the broader economic and investment context of Cambodia which may provide a participatory basis for future legislation, a complex layer of carbon legislation, clarification of taxation, and ownership rights.

CLIMATE CHANGE FINANCING

Aid has increased noticeably, especially in the social sectors. In the context of aid effectiveness, and coordination, roles and responsibilities of the respective government ministries have been clearly defined to implement the aid. Monitoring mechanism, Cambodia Development Cooperation Forum (CDCF) and Government-Donors Coordination Committee (GDCC) will be organized in which the relevant ministries will present their respective plans and strategies to the DPs to have a better understanding of government priorities and the key priorities of DPs. Cross-cutting issues (gender and climate change) will also be discussed in the forum to ensure that all sectoral issues can be implemented for all relevant sectors. Proposals or suggestions from both

parties (i.e. DPs and government) would be raised in order to find solutions that would implement the aid in an effective manner. Because of this, the aid to Cambodia keeps increasing. Climate change aid is a new source of financial aid for Cambodia, which requires a mechanism to coordinate the aid. The mechanism for climate change finance is available by following the existing national mechanisms of other forms of development aid.

The Least Developed Countries (LDCs) and the Developing Countries (DCs) demand US$ 100 Billion annually to be mobilized from developed countries to assist in the adaptation to climate change. However, of the approximately US$ 32 billion promised, only about US$ 2 Billion have been given so far. Moreover, the distribution of climate change funds is not balanced between adaptation and mitigation, as the major proportion has given to mitigation (79%). Lack of clearly defined leadership or adequate coordination and the lack of participation and accountability of civil societies (CSOs), vulnerable communities, and in particular, women can explain the shortcomings of the existing funds. The Green Climate Fund (GCF) in which accountability, transparency, and country ownership are considerably important provides the potential to build a new approach for managing climate change finance at the global level and institutional capacity building is important for effective adaptation.

CLIMATE CHANGE CROSS-CUTTING ISSUES

Since climate change is as a crosscutting issue, two presentations covered biodiversity and gender. Cambodia is a biodiversity rich country and this biodiversity is regarded as a national treasure and globally important. However, it is under extreme pressure due to the impacts of climate change, hunting and overharvesting. To date, there is a lack of long-term studies, monitoring, and targeted research to identify impacts definitively attributed to climate change. The potential impacts of climate change on biodiversity directly impact species and biodiversity through changing ecosystems and affecting on species living in small ranges and restricted areas, poor dispersers, mountain-top and low-lying island endemic species, extreme niche specialists (i.e. a species that is very specialized depends on a very particular habitat), and species with narrow physiological tolerances. REDD+ can be a key mitigation strategy to maintain the Cambodian and regional forests.

Several studies found that more women died than men did during natural disasters due to the gender inequality between men and women as well as the involvement of women in the family's responsibility. The existing inequality will be exacerbated by the impacts of climate change and limit the effectiveness of mitigation and adaption strategies, if gender relations are not considered. Generally, women play very important roles in the family. However, women have less access and control over resources, services, and decision-making. A gender perspective of gender mainstreaming should be included in addressing climate change especially accessibility to information and participation in dealing with climate change adaptation (CCA).

PLENARY SESSIONS - CLIMATE CHANGE FINANCING

The CCCA is a comprehensive programme launched in February 2010 to address climate change and disaster risks in Cambodia with an overall objective to strengthen the capacity of the National Climate Change Committee (NCCC) to fulfill its mandate to address climate change and to enable line ministries and Civil Society Organizations (CSOs) to implement the priority of climate change actions. The CCCA TF serves as a precursor towards a more permanent funding mechanism for Cambodia – a unified engagement point for development partners (DPs) and a multi-donor financial facility to provide resources for climate change activities in Cambodia. A future Trust Fund (TF) should be built based on key principles such as national ownership, stakeholder representativeness, trust building, transparency, professionalism, accountability, neutrality, competiveness, effectiveness, and efficiency. Under the first call for proposals, eight projects have been approved for grants and the next call will be opened soon.

PLENARY SESSIONS - CLIMATE CHANGE POLICY FRAMEWORK TOWARDS A CAMBODIA CLIMATE CHANGE STRATEGIC PLAN

The presentations and discussions highlighted that a good version of a Cambodian strategic and action plan can be formulated by drawing on lessons learnt and through reviewing the strategies, actions plans, and existing policies in the region. Sectorial policy analysis was reviewed which mainly focused on key sectors including agriculture, water resources, health, disaster risk reduction (DRR), decentralization and de-concentration, forestry, fisheries, land, and energy. There has been impressive progress of policy recognition and interventions in key sectors after the first National Climate Change Forum. Moreover, the existing sectorial policy and recommendations on climate change provide good entry points to develop sectorial roadmaps and have the opportunity to be strategically engaged in the process of developing Cambodia's Climate Change Strategic Plan (CCCSP). While, the sectorial road map will subsequently become programme/project interventions to develop sectorial resilience to climate change impacts.

Cambodia does not have a clear policy for climate change due to a lack of sustainable funding mechanisms (i.e. project based). A challenge for Cambodia is that there is no comprehensive national-level policy or strategic plan to address climate change. Formulation of CCCSP is being considered, and it is one of the prominent accomplishments of the CCCA. CCCSP could play a vital role in climate change, as it will assist Cambodia, particularly the NCCC, not only be well prepared for the future predicted global and regional climate changes, which effect poverty reduction, but also to seize opportunities that take advantage of global funding supports for climate change initiatives under the UNFCC. However, a key of success in creating a sense of national ownership of CCCSP is the participation of related sectors, including inter-ministerial collaboration and the private sector to formulate CCCSP. As the impacts of climate change will change over time, flexibility of policy and strategic planning are important.

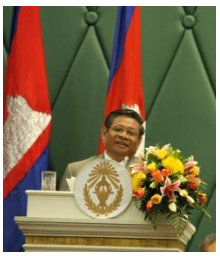
In preparation for Durban, South Africa, Cambodia has drafted five major positions, which particularly focus on adaption and its associated means of implementation, mitigation and its associated means of implementation, financial resources, development and transfer of technology, and capacity building. Cambodia also wants to see the conclusion of discussions and catalyze meaningful REDD+ finance and action. It had estimated that at least 1.5% of the GDP of each developed country should allocate for climate change actions and 70% of the DCs need to organize allocations for adaptation actions. Importantly, co-financing should not be a barrier or condition to accessing funds.

CLOSING CEREMONY

The Senior Minister and the Minister of Environment was impressed and greatly appreciated the contributions of all participants of the forum as well as contributions to support Cambodia in addressing urgent climate change priorities. Priorities such as climate change policy, developing a strategic development plan, technical and institutional strengthening, coordination, actual implementation of climate change response measures, resource mobilization, education, awareness raising, and international climate change negotiations, particularly in preparation of the country's position towards CoP-17 in Durban, South Africa. He reminded everyone that Cambodia is indeed the victim of a problem of which Cambodia is not the cause. However, Cambodia wishes to be a part of the solution of this global problem and can turn the climate change crisis into a new opportunity for a more sustainable development process. Furthermore, he confirmed that the NCCC is ready to fulfill responsibly its mission to enhance cooperation, coordination, and partnership in an equitable, transparent, efficient, and credible manner. Finally, he thanked those who actively participated in the event, with special thanks to the sponsors who made this forum possible.

PRESS CONFERENCE

A press conference organized to share the key results of the Second National Forum on Climate Change with national and international media. The speakers were representatives of the RGC, Ministry of Environment (MoE)/NCCC, the EU, Oxfam America, SIDA, and the UNDP. The Senior Minster summarized the achievements of the 3 days of the Second Forum on Climate Change and he hoped that the press conference would add and provide answers to questions related to climate change. The questions from the floor were mainly about issues to be discussed in the upcoming CoP 17, mainstreaming climate change awareness to local people, benefits from mitigation actions for Cambodia, the carbon credit system, reforestation toward carbon credits to support economic development, and the CCCA TF.



PROCEEDINGS

DAY 1- OCTOBER 3RD, 2011

OPENING CEREMONY

OPENING REMARKS

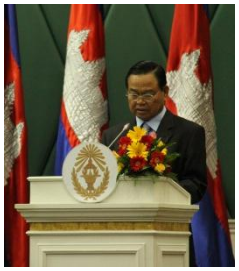
***H.E. Yim Chhayly**, Deputy Prime Minister*

Beginning with new scientific evidence and the results of recent studies, H.E. Yim Chhayly, representative of Samdech Akka Moha Sena Padei Techo Hun Sen, Prime Minister of the Kingdom of Cambodia, described that climate change is real and has affected society, the economy, and the environment, threatening the foundations of our existence, and the progress and sustainability of society. He acknowledged that emissions of huge amounts of greenhouse gases, in particular carbon dioxide from human activities such as energy generation, transportation, agriculture, deforestation, and waste disposal, particularly in major industrialized countries, have caused increasing concerns about climate change and its severe effects on humanity. Global warming, changes in precipitation, the rising sea levels, and extreme climate events have caused an increasing loss of human life, and damage to economies and the environment in countries all over the world. He stressed that the poor, least developed countries such as Cambodia are the most vulnerable to the impacts of climate change because of their agriculture-based economies, weak physical infrastructure and human resources, limited financial capacity, and lack of access to appropriate technologies for addressing climate change.

H.E. Yim Chhayly confirmed that the RGC clearly recognizes climate change in the country's development process, as well as its moral commitment, as a victim of this problem, to work with the international community to address this critical problem for humanity. Cambodia ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1995, agreed to the Kyoto Protocol in 2002, and started to integrate climate change into the Rectangular Strategy Phase 2 with a particular focus on promoting the implementation of the National Adaptation Programme of Action (NAPA) to climate change. Furthermore, climate change has become a priority in the National Strategic Development Plan Update 2009-2013 'being extensively integrated into all relevant sectors'.

He said that despite the impressive successes in approaching climate change, there is a long

way to go to achieve a greener and more climate resilient society and to ensure equitable and sustainable development under the conditions of climate change. In this respect, he outlined six recommendations which can be considered for making decisions in response to climate change at both the national and international levels. These are [1] development of policies and strategic plans on climate change, [2] institutional and technical strengthening, and coordination, [3] implementation of climate change response projects, [4] financial mobilization, [5] education and awareness raising, and [6] international negotiations to address climate change. These principles provide an important basis for the RGC to use its national position in the international negotiation process in addressing the global challenge of adaptation to climate change, mitigation of GHGs, technology transfer, and financing.



He also mentioned that Cambodia had many immediate priorities. These are the development of strategic policies and plans, mainstreaming climate change into relevant sectorial plans, strengthening and building technical capacity, and the establishment of a climate change fund. In addition, there need be the mobilization of resources for implementation of adaptation and mitigation projects, cooperation and coordination for actions, education and awareness raising, research, strengthening the role of the private sectors, preparations to participate in international negotiations, and more.

In conclusion, H.E. Yim Chhayly emphasized that the RGC is strongly committed at the highest levels of the government to join on all levels with the efforts of other stakeholders to respond to climate change. The effects of which undermine the progress toward meeting the national millennium development goals, which require actions now to ensure a future that is resilient to climate change.

WELCOME REMARKS

***H.E. Dr. Mok Mareth**, Senior Minister, Minister of MoE and NCCC Chair*

H.E. Dr. Mok Mareth warmly welcomed H.E. Yim Chhayly, representative of Samdech Akka Moha Sena Padei Techo Hun Sen, Prime Minister of the Kingdom of Cambodia, and all participants. H.E. Dr. Mok Mareth stated that climate change is now universally recognized as a global threat as well as a challenge that may lead to severe negative impacts on the progress made so far in the socio-economic development of Cambodia as well as in other countries in the world. In recent years, countries of the world, including Cambodia have experienced abnormal natural phenomena more frequently and severely such as floods, droughts, and typhoons having destructive impacts on water supply, agriculture, infrastructure, food security, health, loss of life, and people's livelihoods, particularly in the rural areas.

He said that the RGC under the wise leadership of *Samdech* Prime Minister through the NCCC and the MoE clearly understands these threatening crosscutting issues. To prove the strong commitment of the government the RGC ratified the UNFCCC in 1995 and agreed to the Kyoto Protocol in 2002. The RGC developed the first national communication for the UNFCCC and submitted it to the Conference of Parties in 2002, endorsed the National Adaptation Programme of Action to Climate Change (NAPA) in 2006, and mainstreamed broad response measures in the Rectangular Strategy and National Strategic Development Plan Update (NSDP 2009-2013).

To respond to climate change, the MoE as the chair of the NCCC in close coordination with line ministries, agencies, development partners (DPs), private sector, and selected NGOs received recommendations from Samdech Techo in the First National Forum on climate change in October 2009 and has achieved 15 objectives by jointly implemented activities.

He also confirmed that climate change continues to be the most threatening challenge to socioeconomic development. The threats that may result in adverse effects on national efforts for development if the appropriate responses are not instituted in a timely manner.

H.E. Dr. Mok Mareth invited Excellency Deputy Prime Minister, H.E. Yim Chhayly, to share his perceptions, thoughts, and recommendations

with the forum. That he might provide perspective and a basis for the development of a strategic policy and plan to respond to climate change, as well as for the development of the national position for negotiations on climate change and discussions for a more prosperous, peaceful, greener, and more resilient Cambodia.

Group Photo taken during the opening ceremony at Peace Palace (CCCA, 2011)

WORKING SESSIONS

WELCOME REMARKS

***Mr. Douglas Broderick**, UN Resident Coordinator*

Mr. Broderick welcomed participants and noted that there are climate change impacts in every sector of society. It is a global phenomenon and its impacts are obvious and may be seen in heavier rainfall that causes flooding in many regions, extreme drought is increasing, crops are withering, ecosystems are changing, sea levels are rising, the temperatures of large lakes are warming, and warmer temperatures are affecting human health.

In Cambodia, he noted that the impacts of climate change put vulnerable groups, particularly women-headed households, children, and indigenous people at risk. Extreme climatic events such as floods and droughts already recognized as main contributors to poverty. Therefore, understanding the impacts of climate change is essential in successfully fighting climate change while promoting economic growth and reducing poverty. Climate change is fundamentally a development challenge, and Cambodia is highly vulnerable to climate change impacts, not because of high exposure, but rather from low adaptation and coping capacities.

He said that the best approach to building resilient rural livelihoods in the context of climate change is to adopt approaches that provide benefits by addressing current development priorities. This will strengthen the resilience of vulnerable populations and improve their ability to respond to the potential impacts of climate change. However, this requires looking at long-term development objectives through a new lens and supporting the kind of informed, deliberative public debate and decision-making that can address the uncertainties and risks that climate change will bring.

Mr. Broderick mentioned that climate change is a source of vulnerability and a threat to Cambodia's development gains. It is important to pay special attention to rural poverty and vulnerability. With the vast majority of Cambodia's poor living in rural areas and depending on agriculture, understanding and responding to the root causes of rural poverty and vulnerability are essential to understanding the human development implications of climate change and to develop the options to mitigate these impacts.

Additionally, it is important to address the structural dimensions of poverty and vulnerability rather than solely focusing on climate change adaptation. He recommended three strategies to empower the life of the poor and near poor to cope with the impacts of climate change by building awareness, knowledge and information, and capacity for planning and decision-making. This needs to be complimented by ensuring better access to financial and technical supports, strengthening access rights to reliable information, the right to control and make sustainable use of natural resources, and the right to meaningful participation in planning and decision-making.

Mr. Broderick noted that The United Nations (UN) has placed climate change high on its development agenda and has promised to continue to provide support to the Government, to improve coordination, enhance awareness and understanding about climate change, and mobilize technical and financial supports to address any gaps. The UN will also continue to coordinate with key development partners and government institutions to facilitate policy dialogue on

climate change in different sectors and thematic areas.

He reminded us that Cambodia must prepare itself now through the development of climate change policies, institutional capacity, knowledge and information, and must set up strong and effective financing mechanisms to absorb and manage the costs of climate change. It is critically important to empower vulnerable people especially the poor and near poor, children and youths, indigenous people, and women to have better knowledge and capacity to plan and make decisions concerning their livelihoods in the face of climate change.

WELCOME REMARKS

***H.E. Dr. Mok Mareth**, Senior Minister, Minster of Environment, NCCC Chair*

H.E. Dr. Mareth began his remarks with the general recognition that climate change is a striking challenge facing the world. The fourth report of the Inter-governmental Panel on Climate Change (IPCC) of the United Nations and findings from recent scientific research reaffirm with high confidence that anthropogenic activities are the major cause of climate change. Countries in the Mekong are vulnerable to climate change due to changes in the Mekong hydrology, decline in agricultural and fisheries production, seawater intrusion, an increasing population, lack of financial and technical resources, and lack of appropriate physical infrastructure. He noted that Cambodia has in the last several years, experienced more frequent floods, droughts, and storms. This has severe implications on food security, peoples' livelihoods, and national socio-economic development.

The Senior Minister mentioned the recent scientific findings presented in the Second National Communication to the United Nations Convention on Climate Change (UNFCCC) that in the last half-decade changes in temperature and rainfall in Cambodia have already started. The projection for the next eighty years, however, concludes that in the future the temperature in Cambodia will continue to rise with the potential of a decline in dry season rainfall and the delayed arrival of the wet season regardless of the potential of increased wet season rainfall. He also stated that the changes might vary based on GHGs emission scenarios. Many socio-economic sectors would be affected and mitigation efforts by the international community to reduce emissions would have direct consequences on Cambodia. Cambodia needs to prepare to cope with these climate change scenarios, which require new policies, changes in work methodologies and practices in all socio-economic aspects to ensure sustainable development in the face of climate change.

H.E. Dr. Mok Mareth delivered his Welcome Remarks at Intercontinental Hotel (CCCA, 2011)

He emphasized that climate change has seen as an important priority in the government agenda to be gradually mainstreamed in the national policy and socio-economic development planning and integrated into the National Strategic Development Plan Update (NSDP Update 2009-2013). The aim is to promote participation by line agencies to meeting the Millennium Development Goals within the framework of the Rectangular Strategy Phase 2. He also said that much effort has been expended to develop institutional and technical capacity, research capacity, policy development, a climate change strategic plan, awareness raising, education, and implementation of the UNFCCC. In addition, this includes the implementation of the provisions of the Kyoto Protocol (KP) through the Clean Development Mechanism (CDM), implementation of the National Green Growth Programme, strengthening cooperation and coordination across government line-ministries, agencies, and with donors.

H.E. Dr. Mareth reminded us that gaps remain in public awareness and understanding of the impacts as well as the opportunities of climate change and the need for coordinated response measures. This forum and similar future forums are of utmost importance to review achievements, share information, lessons

learned, create constructive dialogue on policy development and strategic planning, promote climate change mainstreaming, and strengthen cooperation and coordination among government agencies, development partners, non-governmental organizations, and civil society.

He proudly noted the presence of national and international experts who will make presentations and participate in the discussions of broad themes, and the active participation of private firms and NGOs in displaying environmentally friendly products. He also hoped that the participation of the broad range of agencies present would provide an encouraging positive move towards a shared focus and concern on climate change issues and contribute to addressing the challenge to develop a greener, more resilient, more inclusive, equitable, and sustainable Cambodia. Finally, he wished all participants the gems of Buddha's blessing and a fruitful forum.

INTRODUCTORY SESSION

Co-Chairs:

1. **H.E. Chay Samith**, Delegate of the RGC, Director-General, GDANCP, MoE
2. **H.E. Pon Narith**, Secretary-General, NCDM, NCCC Member

H.E. Chay Samith kicked off the session by indicating that climate change has been recognizing as a severe and threatening challenge to socio-economic development in Cambodia as well as for the whole world. Cambodia is one of the most vulnerable countries due to its limited adaptation capacity. Understanding the causes, impacts, and opportunities of climate change are important to plan effective adaptation measures. Addressing climate change has become a priority for the RGC and several achievements have accomplished over the past decade. NCCC has been established under Samdech Techo the honorary chair and the MoE's CCD to play a role as the secretariat. He confirmed that Cambodia is the first country to have completed the NAPA and SNC is being finalized under the UNFCCC.

Co-chairs and Speakers during the introductory session (CCCA, 2011)

LATEST UPDATES ON CLIMATE CHANGE SCIENCE, IMPACTS, AND OPPORTUNITIES

***Mr. Mozaharul Alam**, Regional Climate Change Coordinator, Regional Office for Asia and the Pacific, UNEP*

This presentation aimed at providing the most recent updates on climate change science, impacts, and opportunities based on the IPCC 4th Assessment Report and other credible research results.

Mr. Alam summarized the signs of global warming such as changes in temperature, precipitation, and sea level rise together with other extreme environmental events occurring on regional and global scales. The global mean temperature has increased 0.76° C during 1906-2005 while the average temperature in Southeast Asia (SEA) has increased 0.1-0.3° C per decade over the last 50 years. The increase in temperature varies by country, and the highest change has been in Singapore due to the urbanization of the country.

Referring to historical data from 1960 to 2000, it shows that precipitation in SEA is on a downward trend. However, a decrease in annual precipitation is not true for all countries in the region since some countries are showing a decreasing trend while others an increasing trend. From a seasonal perspective, there has been an increase of monsoon rains, as well as a decrease of rain in the winter. A key finding shows that annual rainfall has not changed much in terms of volume, but in terms of duration, in that more rain is falling in a shorter period. As a result, there are intense rains that current systems cannot handle resulting in flooding.

Looking at the rise in sea levels, which has been taking place over the last 100 years, changes in the range of 1.8 mm to 3.1mm per year have been seen. The IPCC projected that sea levels may rise from 18 cm to 59 cm in the coming century. However, based on recent scientific literature, at the end of century sea levels are going to rise more than 1 m and the primary reason behind these new findings is that more glaciers are melting as well as changes in the reflective power of the earth's surface. In the case of Southeast Asia, an increase of 70 cm will be by 2100. The rise in sea level projected for Cambodia by 2090 is between 0.18 and 0.56 m. The latest findings on the rise of the sea level on a global scale are that there was a drop of 6 mm in 2010 due to the La Niña effect. The main contributors to the rise in sea level come from two main sources: thermal expansion of water and the glaciers and ice caps melting.

The third element is the occurrence of extreme weather events in the form of heat waves, intense rains and floods, droughts, and typhoons. What has been observed globally and regionally is the increase in hot days and warm nights, the intensity of the rain and floods, and droughts. It varies depending on the weather in El Niño years and non-El Niño years. If we look at the overall occurrence of extreme weather events in every decade, the number of extreme events has doubled. This trend is taking place on a global scale.

Scientists have projected the future under different storylines. A key message in the storyline is that future concentrations of GHGs in the atmosphere are going to increase. CO_2 concentrations are not showing any decreasing trend, and globally CO_2 emissions are expected to increase over time. So, the key message of the future storyline relates to changes in temperature, the variation in rainfall, and the rise in sea levels and how these relate to the occurrence of extreme weather events. The future global temperature is going to increase by 1.8° C to 5.4° C while in SEA the increase will be in the range of 1° C in the next 30 years and 2° C to 4° C by the end of century. The temperature changes in Cambodia by end of century are expected to be 1.4° C to 4.3° C, as compared to the global predictions of 1.8° C to 5.4° C. One of the key findings in countries of the Asia-Pacific is that it looks similar for all countries; but not the same for all countries. However, similar changes and impacts are foreseen throughout the region in the future.

One of the major signs of the anomalies in the weather is the number of hottest days. The number of hottest days higher than 30° C is going to more than double by the end of the century when compared to present weather patterns. In addition, it is predicted that there will be an increase in the number of rainy days and number of heavy rains in the future. These changes will impose severe consequences on production systems such as in the agricultural sector.

In the higher latitudes, studies show that water is going to be more available; however, it is going to be less available in dry regions. In the desert region, the uncertainty of water supply is going to be very high. One of the difficulties facing scientists is ascertaining the variation of rainfall, particularly in the monsoon season due to a high degree of uncertainty.

Mr. Alam explained that the more the temperature increases, the more impacts will be experienced. In the case of water, a one-degree change in temperature will cause more than 1 billion people globally to face extreme water stress. In the case of ecosystems, a three-degree change in temperature will see a major change in ecosystems in terms of their functionality, a critical issue in their sustainability. However, the same climate changes are not going to place the same stresses on different sectors. When looking at a 3-degree change in temperature, more impacts will be on the environment than the availability and quality of food and water. The scientific community presents climate change in a way that is somewhat complex, and so it is important for policy makers to make the case properly why climate change is so important. He also observed that with increasing temperatures there would be evaporation changes that will result in a variation of precipitation and a decrease of water flow. The decrease of water flow has implications not only for agriculture, but also for hydropower. The rise in sea levels has major implications for coastal agricultural supply for domestic users. In this way, it is similar to changes in water resources. It decreases the crop yield, there is an increase of floods, and droughts, which also decrease crop yield. The rise in sea

levels brings about a loss of arable land, having two main implications on croplands: [1] inundation and [2] increasing salinity in both soil and water. In the health sector, significant increases in dengue and the spread of water borne infectious diseases have been observed in the region. A study done by ADB found that costs resulting from climate change are increasing over time with the projection of an increased death rate in the future.

Adaptation options for the specific sectors have been suggested to address climate change. For instance, possible options for water resources is to scale up water conservation, integrated water management, flood early warning systems, and irrigation improvement. In the agricultural sector, there is the need for better climate information, research, and development. In the forestry and health sectors enhancing early warning systems and introducing climate proofing in the infrastructure sector. One of the greatest challenges of adaptation is the costs and the benefits associated with the options that policy makers need to understand - that if we do not act what the implications of impacts will be in the future? What costs will be incurred, through what actions? In addition, there are the challenges of insufficient information and knowledge on the impacts of climate change and responses of natural systems to climate change, limited studies on interconnections between adaptation and mitigation options, and a lack of systems for research and monitoring climate and responses.

Mr. Alam outlined the impacts of emission reductions under different scenarios. The effect of a 50% GHGs emissions cut by 2050 (i.e. 3% reduction per year) will see a temperature rise of 2.4° C. If there is an 80% GHGs emissions cut, there will be a temperature rise of less than 2° C, and 50% and 80% emissions cuts will show different peak periods. If the peak period is delayed, more climate change is expected in the future. How and when the peak period will take place is a key issue in climate change discussions that the global community is addressing. The mitigation of which depends on the type of climate changes and the implications of the different impacts.

In term of opportunities, Mr. Alam highlighted that first the recognition of the implications on development must be high on the agenda of government and take place through the engagement of policy and decision makers. The second to set up a new institution to coordinate the climate change activities. Next is to organize provisions for financing, technology, and capacity building. Last, development proceeds towards the integration of a variety of sectors on multiple issues for effective planning and handling of climate change problems.

Environmental sustainability, disaster risk reduction, and climate change are the interrelationships that need to be considered in the multiple sector approach.

In the last part of his presentation, he presented three key messages.

- That a certain degree of adverse impacts cannot be avoided even with stringent mitigation measures;
- That many beneficial measures to enhance resilience to cope with climate variability and weather extremes already exist and much can be learnt from experiences, knowledge, and
- integration of adaption measures that will help both to address climate change and development

UPDATE ON RECENT CLIMATE CHANGE DEVELOPMENTS AND KEY CLIMATE CHANGE INITIATIVES IN CAMBODIA

***Mr. Uy Kamal**, Head of GHGs Inventory & Mitigation Office, CCD, MoE*

Mr. Kamal's presentation reported on the progress Cambodia has made in building its institutional capacity, mainstreaming climate change into national and sectorial plans, and implementation of key climate change initiatives. He briefly described the two programmes called the Cambodia Climate Change Alliance (CCCA) and the Pilot Programme for Climate Resilience (PPCR).

Mr. Kamal began his presentation by explaining that the CCCA is a multi-donor initiative programme funded by the EU, the UNDP, DANIDA, and the SIDA with a total grant of US$ 8.9 million over the period of 2010-2012. The main objectives of the CCCA are: [1] to ensure that climate change activities are nationally owned, led, and aligned with

Cambodia's development priorities and [2] are effectively coordinated and implemented.

He also highlighted the three key results from the CCCA including:

- coordination of climate change policy formulation and mainstreaming,
- the platform for climate change knowledge management, outreach, climate change awareness, education, and information, and
- Trust fund management, including project grants

Another initiative, the PCCR funded by the WB, ADB, NDF, and the RGC has as its objectives:

Phase 1: The assessment and strengthening of institutional readiness for the project focusing on three priority areas - water resources development, agriculture and natural resources, and rural infrastructure.

Phase 2: Implementation of a 'strategic programme' through investment projects with seven components that include policy reform, institutional capacity building, and investments on the grassroots level in the three priority areas.

The budget for the Phase 1 is US$ 1.5 million and a grant of US$ 50 million grant plus a loan of US$ 36 million for its implementation in Phase 2. However, the length of the funding period is still unclear.

Finally, he listed some of the existing climate change related projects that have been carrying out on national and sub-national levels by various agencies, for instance, Oxfam America, and the JCCI. The existing projects had categorized, into three types namely adaptation, mitigation, and research and development. He noted that the projects presented do not reflect the last updated database. Therefore, the actual number of projects related to climate change might be higher.

PRESENTATION OF THE KEY FINDINGS OF THE SECOND NATIONAL COMMUNICATION

***Dr. Tin Ponlok**, Deputy Director General, Administration for Nature Conservation and Protection, Head of the CCCA TF Secretariat, MoE*

This presentation provided a summary of the GHGs inventory for 2000, results of GHGs mitigation analysis, vulnerability, and adaptation assessment, as well as other information included in Cambodia's Second National Communication to the UNFCCC.

Dr. Ponlok explained that Cambodia is party to the UNFCCC, and that it has a commitment to report to the Conference of the Parties on (Article 12 of the UNFCCC) [1] emissions by source and removal by sinks of all GHGs and [2] national measures to mitigate and adapt to climate change. This report is officially called the "National Communication" and the costs of preparation are entitled to full financing whereas it is compulsory for the developed countries to prepare the report by using their own budgets.

Dr. Ponlok explained that the GHGs inventory aimed to estimate the emission sources and sinks from concerned sectors including energy, agriculture, land use change, forestry, and waste covering the main pollutants CO_2, CH_4 and N_2O. The results of the GHGs inventory for the base year 2000 show that Land Use Change and Forest Change (LUCF) was the highest emitter of CO_2. However, the forestry sector can also remove CO_2 through photosynthesis. This sector can absorb CO_2 emissions totaling 24,565.67 Gg CO_2e, while the agricultural sector contributed about 21,110.82.67 Gg CO_2e, and the energy sector emitted 3,443.14 Gg CO_2e, with the waste sector having the lowest amount of 229.24 Gg CO_2e. He also made a comparison between the annual emissions per capita in the energy sector in Cambodia and in other countries. Even though, total emissions is increasing, the annual emissions per capita in Cambodia is comparatively low at 0.3 t CO_2e, whereas 3.5 t CO_2e, 1 t CO_2e, 10 t CO_2e, and 19 t CO_2e for Thailand, Viet Nam, Germany and USA respectively.

Cambodia is a developing country dependent on agriculture and highly vulnerable to the impacts of climate change. The SNC covers an assessment of historical and future climate changes in Cambodia, climate change vulnerability mapping, and climate change impacts on key sectors (i.e. agriculture, water

resources, forestry, the coastal zone, and health) using a regional climate model (PRECIS) in combination with a number of GCM models. Based on the SNC findings, he claimed that most communes in Cambodia have categorized as vulnerable to extremely vulnerable due to poor socio-economic conditions and infrastructural conditions together with high population density. A vulnerability assessment at the commune level revealed that the vulnerability of communes surrounding the Mekong River and Tonle Sap is increasing mainly due to the rapid increase in population. Furthermore, without socio-economic improvements and infrastructure development this vulnerability is likely to increase due to population pressures. Temperature has been increasing gradually from 1960 to 2000 and the prediction of the average temperature in 2099 will be an increase of 0.013° C to 0.036° C. Given this situation, the North East of Cambodia will experience drought while areas around the Tonle Sap will have more rainfall which might cause flash floods. He also concluded that the future rainfall patterns would continue to change depending on emission scenarios. The emissions under the Business as Usual (BAU) high emission scenario - SRESA2 will affect Cambodia on a larger scale while the low emissions scenario - SRESB1 will likely have its effects, but presents a better scenario when compared to SRESA2. The global community's ability in reducing GHGs emissions will have different implications for Cambodia. He added that to cope with these changes, adaptation studies, and pilot projects at the local level must be developed and implemented.

In addition, Dr. Ponlok presented GHGs mitigation in some sectors such as energy & transport; and agriculture, forestry, and land use (AFOLU). In the energy & transport sectors, the mitigation options can be energy efficiency, hydroelectric power, solar power, gasification and cogeneration, electric vehicles, efficient cook stoves, and biogas digesters. It was predicted that in the last sector listed above that by 2050 the emissions reduction will be about 17% compared to the baseline of a 3,877 Gg CO_2e In AFOLU, mitigation options can be achieved through manure management, biogas, switching fertilizer to sulphate fertilizer, improved drainage in the rainy season, compost/bio-slurry, organic inputs, crop management, agro-forestry, reforestation, and REDD+. If all technically feasible mitigation options are implemented, emissions can be reduced by 32,521 Gg CO_2e in the agricultural sector and net sinks increased by 20,545 Gg CO_2e in the LUCF sector.

Finally, he highlighted the constraints and gaps RGC faces in addressing climate change due to limited human resources, limited awareness, and lack of data, research, analysis, technology, financial resources, policy, and strategic planning. However, the opportunities for implementing adaptation and mitigation measures are considered to be excellent through increasing climate change financing (e.g. fast track, GCF, GEF, Adaptation Fund, LDCF, bilateral, private sectors, etc.) and the RGC's commitment to green growth that is in alignment with mitigation, CDM, and REDD+.

QUESTIONS AND ANSWERS

Questions from the floor (CCCA, 2011)

Mr. Luos Seiha, SAK Company, was extremely impressed with the presentations; however, he needed clarification on the following issues: What are GHGs? Regarding land management for rice production, how can we possibly discover ways to keep the water to stay in the rice field long enough during the dry season until the rice can be harvested? Due to recent abnormal weather events and flooding, all of his paddy fields in Kampong Thom were damaged and they were almost ready for harvesting. So, what are the indicators to look for as early warning signs of flooding events? Which institutions could provide such assistance?

Mr. Uy Kamal clarified that the terminology of GHGs is still confusing to the public. GHGs consist mainly of CH_4, CO_2, N_2O, SF_6, which are emitted primarily from human activities in

transportation, industry, and agriculture. In the past, GHGs were called "Green Gases", but the MoE renamed it "Green House Gases" and it has now become common to refer to GHGs in this way. The atmosphere surrounds the planet, GHGs are emitted into the atmosphere and heat (i.e. infrared radiation) is absorbed by those GHGs. He added that published documents are available at the display areas for further reading.

Dr. Tin Ponlok responded to the second question of ways to keep the water to stay in the rice field long enough during the dry season by saying that, the MoE probably does not have the ability to do so. This depends on different types of soil or the "geo-physical-chemistry" of soil, so he strongly suggested discussing these matters with experts in that specific field. To know when serious events such as floods or droughts will occur depends much on information gathering, specifically reliable and accessible meteorological data, or information. In this regard, the MAFF and the MoWRAM are the right agencies to contact. They have the direct roles and responsibilities to work in these areas.

Mr. Khter Uzaman Sano, Save the Earth Cambodia, based on his experience projects need to build resilience in terms of disasters and climate change. In addition, there are no indicators in the post-project period to justify whether the project is resilient or not?

Dr. Tin Ponlok mentioned that to identify whether a project is resilient or not, will depend largely on how reliable and accessible meteorological data is. Meaning that, first, a reliable baseline of existing weather data needs to be collected together with future predictions, for instance, on precipitation.

Mr. Khter Uzaman Sano, Save the Earth Cambodia, said that gender mainstreaming is one of the most important issues. He provided an example based on his experience of putting 50% of women in decision-making positions in a micro institution. The results clearly illustrate that it can work as a community revolving fund to build disaster and climate change resilience. He was surprised why women speakers had not found in this presentation session. Does this mean that we do not have any capable women?

Dr. Tin Ponlok confirmed that of course, the gender issue is one amongst other matters that being taken very seriously. So far, one member of the NCCC is a woman who is a representative from the Ministry of Women Affairs. This shows the RGC pays serious attention to gender mainstreaming, especially with regard to projects of building climate change resilience.

Mr. Khter Uzaman Sano, Save the Earth Cambodia, referring to Dr. Ponlok's comment on climate insurance he needs more clarification on this terminology. He gave an example related to insurance by saying that when we buy insurance, we need to pay for that, as in car or health insurance. However, what about communities that do not have enough money for food, how can they pay for insurance? Who is going to pay this money?

Dr. Tin Ponlok believed that climate change insurance is just the starting point, so that there is not much to say for a poor country like Cambodia. It will take years or even decades to see progress because this issue needs further deep and critical study. Normally, the process of climate change insurance requires "cost-benefit sharing" among citizens and insurance companies. Cambodian farmers, for example, can pay a given amount of money to insurance companies in order to derive benefits from compensation in cases of natural disasters that destroy their crops. However, this will be quite a challenge considering that companies would not dare to take such a risk and possibly lose money by making such an insurance contract.

PARALELL WORKING SESSION 1

CLIMATE CHANGE ADAPTATION – SUCCESSES, CHALLENGES, AND LESSONS LEARNT

Co-Chairs:

1. **Mr. Ken Serey Ratha**, Deputy General Director of GDANCP, MOE
2. **Mr. Koen Everaert**, Attaché, Cooperation, Delegation of the European Commission to Cambodia

Mr. Ratha stated that we are aware of the fact that adaptation to climate change is important in contributing to reducing the impacts of climate change and enhance the capacity for resilience in facing future impacts. Today's discussion will look at opportunities to build human capacity and a framework to address the impacts of climate change.

STATUS OF NAPA IMPLEMENTATION IN CAMBODIA

***Dr. Heng Chanthoeun**, Deputy Director, CCD, MoE*

Dr. Chanthoeun mentioned that the preparation of the Cambodian NAPA was funded by the GEF through the UNDP by following the CoP-7 Decision. The first NAPA report was completed in March 2005 and endorsed by the RGC the following year (October 20006). The NAPA is a country driven programme of actions and priority activities addressing the urgent and immediate needs and concerns of the country for adaptation to climate change in key sectors (i.e. agriculture, water resources, coastal zone, and human health).

The proper identification and prioritization of the NAPA projects had accomplished by consulting with stakeholders (i.e. national and provincial levels) and by matching Cambodia's sustainable development goals with the RGC's development priorities and other associated factors. The NAPA project activities have broadly divided into three categories namely, capacity building/training, awareness raising and education, and infrastructure development. Among the 39 proposed projects, 20 are ranked as high priority projects amounting to US$ 128,850,000.

To date, there are a number of projects and programmes have been implementing and partly contributing to NAPA. For instance, the call for proposals from the CCCA TF from which eight projects out of 60 submitted concept notes were approved for funding. These included coastal adaptation and resilience planning, promoting climate change resilient water management and agricultural practices in rural Cambodia, the PPCR, and the climate change adaptation initiative funded by the World Bank. In addition, there is a demonstration project in Prey Veng, which is a regional Mekong project.

PROMOTING CLIMATE CHANGE RESILIENT WATER MANAGEMENT AND AGRICULTURAL PRACTICES IN RURAL CAMBODIA (NAPA FOLLOW-UP)

***Mr. Hok Kimthoun**, National Project Manager, Project Support Unit, MAFF*

Mr. Hok Kimthoun provided an overview on the status of the approved NAPA project on "Promoting Climate Change Resilient Water Management and Agricultural Practices in Rural Cambodia. It is a 4-year project in operation since 2010. The target areas are Preah Vihear and Kratie and made possible through a grant of US$ 3,090,350 funded by the LDCF, the UNDP, and the RGC.

The primary objective of this project is to reduce the vulnerability of Cambodia's agricultural sector to climate-induced changes in water resources availability. The key expected outcomes of the project are:

- capacity building within local institutions to manage the impacts on agricultural water resources,
- reduce exposure to climate change through locally appropriate adaptation options, and
- replication in other areas of vulnerability by using existing lessons learnt and experiences

According to Mr. Kimthoun, the nature of project is a bit different because it has been following the decentralized and de-concentration of the government, so the national level just prepares the guidelines related to reporting while the sub-national levels are given the responsibility to carry out the budget and project management. At the national level, it is administered by the MAFF with support from the UNDP and at the provincial level is under the control of the provincial administration, and all contracts to will be done with the provincial administration. This project will provide support from the community level (i.e. farmer) to the district level with the cooperation of the Cambodian Agricultural Research and Development Institute (CARDI) and Save Wildlife Cambodia.

Mr. Kimthoun highlighted some achievements, for example, commune councils and farmers are aware of the impacts of climate change on

agricultural livelihoods, and they will mainstream climate change issues into Commune Investment Programmes. Along with the success stories, a number of lessons had discussed. Climate change is a crosscutting issue that requires and implies coordination between sectors, disciplines, and areas of expertise. The identified solutions in agriculture, irrigation, and gender are more coping mechanisms rather than adaptation strategies. In addition, there is the need to improve the knowledge of the government, project staff, and the farmers on climate change, as well as mainstreaming climate change in decentralized and de-concentrated working procedures.

THE CAMBODIA CLIMATE CHANGE ALLIANCE

***Mr. Sum Thy**, Director of CCD, National Project Coordinator of CCCA -Climate Change Policy Development and Knowledge Management Project, MoE*

The key objective of the presentation was to provide an overview of the CCCA.

As stated by Mr. Sum Thy, the CCCA is a multi-donor initiative with a comprehensive and innovative trust fund approach to address climate change adaptation and mitigation. It began in 2007 through the EU initiative of the Global Climate Change Alliance supporting Least Developed Countries (LDCs) and the SISs in climate change adaptation and mitigation.

Currently, the CCCA TF (Cambodia Climate Change Alliance Trust Fund) has been under the UNDP administration and management. Later, it will be transferred and be fully managed by the government. Under the budget from the EU, SIDA, DANIDA, and the UNDP, this project is US$ 8.9 million, lasts for three years, and has been implementing by the MoE's CCD on behalf of the NCCC.

He later pointed out that the CCCA's overall objective is to formulate effective coordination and implementation strategies for climate change activities in Cambodia so as to be nationally owned, led, and aligned with Cambodia's development.

So far, many positive results had achieved by complying with the objective set above. First is building the NCCC's capacity to coordinate national policy-making, capacity development, information dissemination, advocacy efforts, and monitoring the implementation of the national climate change strategy. A technical climate change team has formed following the agenda of the CoP-16 meeting and CSOs. Additionally, he mentioned that a roadmap and concept note had been produced by the CCCSP on ways to strengthen climate change awareness dissemination via publishing a Knowledge, Attitude, Practice (KAP) report, the hosting of several climate change talk shows on TV, and especially the provision of technical support to climate change stakeholders. The last achievement is to support the development of climate change capacity which has already received grants through the first call for proposals launched in late February and which has received the endorsement of the CCCA TF.

Mr. Sum Thy added that the next step of the project will further develop the CCCSP within the ministries, assess the climate change capacity of the CCD and the NCCC, and develop climate change education, awareness, strategies, and action plans. Furthermore, the next Trust Fund's call for proposals will be opened at the end of 2011 or early 2012.

STRATEGIC PILOT PROGRAM FOR CLIMATE RESILIENCE (PPCR) PHASE 1 CAMBODIA

***Mr. Meas Sophal**, Deputy Director, GDANCP, MoE*

The overall objective of the presentation was to provide a brief look at the PPCR's implementation and progress in Cambodia.

Mr. Meas Sophal explained that Phase 1 of the project is to assess and strengthen institutional readiness for the PPCR/SPCR. It will have a further focus in three priority areas including water resources, agricultural/natural resources, and rural infrastructure development. Phase 2 is concerned with the implementation of the strategic programme (SPCR) and setting targets in three other priority sectors including policy framework, institutional capacity building, and on-the-ground investment.

The long-term purpose of the PPCR has three components:

- a knowledge based adaptation framework, vulnerability and adaptation assessments, community-based disaster risk reduction and adaptation, and ecosystem-based adaptation,
- capacity building, and
- investment

The PPCR sub-committee approved Phase 2 of the PPCR on 28 June, in Cape Town, South Africa. He emphasized that the project received a grant of US$ 50 million and a loan of US$ 36 million and will be administered by the ADB. The project will then select consulting firms to mainstream climate resilience into national and sub-national levels through science-based adaptation, planning, and outreach to ensure that Phase 1 of the project is well coordinated with climate change adaptation.

Finally, he asked for collaboration from the relevant ministries, NGOs, private sector, and academia in the project's implementation.

CLIMATE CHANGE AND HEALTH IN CAMBODIA

***Mr. Kol Hero**, Deputy Director, Department of Health Prevention, MoH*

The assessment of Climate Change and Health was led by the Department of Preventative Medicine, MoH, and facilitated by WHO public health consultants. The overall goal of the assessment was to build capacity and strengthen health systems in the country at the regional level to protect human health from current and projected risks due to climate change.

Mr. Kol Hero gave a brief overview of the assessment findings by saying that Cambodia is severely vulnerable to the impacts of climate change and that the current burden of climate-related diseases is high. The main impacts on health in Cambodia have been identified as vector-borne diseases, (e.g. dengue fever which is high in June and July) food security, water security, food-borne diseases, and the health consequences of extreme weather events.

Specific WHO guidelines for conducting qualitative assessments in resource poor settings were followed in order to identify the relevant stakeholders, describe the current burden of climate related health issues of the most vulnerable populations and regions, and projected future trends. In addition, the identification and prioritization of public health and health care interventions to reduce possible future health burdens, strategies to monitor and evaluate the burden of climate-related health issues, and determining what interventions will be needed. This being an agenda whose objective is to ensure the continual effectiveness of health interventions in a changing climate.

Mr. Kol Hero also pointed out the major challenges that arose during the assessment included insufficient capacity for assessment, research, and communication on climate-sensitive health risks because of limited data and research capacity. Moreover, the climate change topic is a crosscutting issue and a new concept to the health sector that needs more training on the potential impacts of climate change on health. The NAPA identified 39 adaptation projects, but the results show that most of the projects focus on environmental concerns rather than developmental or health issues.

Adaptation strategies to combat water-borne disease had given a secondary priority that comprises international cooperation, surveillance and research, vector control, epidemic preparedness, and early diagnosis and treatment. In the area of water and food-borne infection, the primary adaptation strategies had given to improving water supply and access, and improving sanitation; meanwhile, the secondary and tertiary gave to education and treatment respectively.

In the future, there may be challenges that involve direct and indirect effects on the population's health because of extreme weather events. These would include the exacerbation of food and water insecurity, poverty, disruptions in infrastructure, and health problems. The responsibility for reducing health impacts should, therefore, be shared by all government agencies and health related matters should be seen as a crosscutting issue of sustainable development that should be mainstreamed into all public policy and decision-making process.

The way forward should take into account the establishment of an institutional framework to coordinate response, setting up a research agenda, increasing the role and capacity within the Ministry of Health to meet challenges of climate change and health, initiating priority activities, and the implementation of adaptation options.

CLIMATE CHANGE AND FOOD SECURITY AND NUTRITION

***H.E. Srun Darith**, Deputy Secretary General of the Council for Agricultural and Rural Development (CARD), Office of the Council of Ministers*

This presentation reviewed the potential effects of climate change on food security in Cambodia, and the CARD adaptation strategy to ease these effects.

H.E. Srun Darith gave an overview of the current vulnerability to climate change in Cambodia. The vulnerability consists of the exposure to climate change, sensitivity to climate changes, and adaptive capacity. Exposure to climate related events might occur in the form of droughts, floods, cyclones, and so on. H.E. Srun Darith raised the point that when there is such exposure, it will cause damages and we need to look at the adaptive capacity to such exposure as well as tackling the problem. Cambodia, on the one hand, is vulnerable to the effects of climate change, but effects rarely exist.

Cambodia is sensitive to climate change for a number of reasons. Cambodia's economy is not diversified enough in that it still depends heavily on only a few sectors. For example, 80% of Cambodians depend on a livelihood that is based on rice production, which produces low yields and relies on a limited range of agricultural technical solutions. A large percentage of rice production is likely to depend on being rain fed and if the effects of climate change increase, the people will face food insecurity. Other dependable sources of food and income derived from forests and fisheries are important for the poor people, but it may affect through the utilization in an unsustainable way.

Food security refers to the availability, accessibility, and utilization of food. He emphasized that climate change and food security mutually affects each other. Climate change results in food insecurity and food insecurity makes people more vulnerable to climate change.

The effect of climate change may increase the frequency of crop pests, which lead to a long-term decline in agricultural productivity, affect fish catches, cause underground water salinization, seawater intrusion in coastal regions, and contribute to an increase in water-borne diseases such as diarrheal diseases.

To end his presentation H.E. Srun Darith discussed adaptation strategies in food security toward the effects of climate change that included providing farmers with proper and efficient water management systems, especially water harvesting and storage systems, the accessibility of seed resistant to climate change, promoting village based "grain banks", and diversifying farming systems to adapt to climate change. Appropriate research on this issue should be conducted and the findings need be distributed to stakeholders so that everyone becomes aware of the issues and effective adaptive strategies.

Through the CARD, the RGC has developed and approved the National Social Protection Strategy for poor and vulnerable groups under some programmes and actions. Among those, the Public Works Programme, income opportunities and productive infrastructure have been provided to the poor. Furthermore, cash transfers have been given to some vulnerable people to protect them from malnutrition and losing educational opportunities. Providing insurance to farmers against weather hazards and crop failure to reduce the impact of drought and floods were also considered.

QUESTIONS AND ANSWERS

Mr. Sok Piseth, **MoWA**, asked if the CCCA TF has the capacity for development funding for other institutions or stakeholders.

Dr. Heng Chan Thoeun acknowledged that it is obvious that the CCCA TF is open to all stakeholders, even NGOs or private sector. During Phase 1, sixty concept notes had submitted to the committees of the CCCA TF

for evaluation. Ten of those had selected for further development into full proposals and re-summited. In the end, eight proposals have officially awarded funding this year.

Mr. Duong Sarak, International Finance Corporation (IFC), sought details about rice seed purification and what has been done through the projects regarding rice seed purification.

Mr. Hok Kimthourn responded that the MAFF has been working closely with the CARDI to conduct rice variety trials. After the successful completion of the trials, CARDI will provide support both technically and financially in order to encourage the participation of farmers.

Dr. Geoffrey Blate, **WWF**, doubted whether there would be any future study of the sustainability of groundwater access for irrigation systems.

Mr. Hok Kimthourn stated that groundwater irrigation is not an area of focus, but the building of reservoirs to store water for irrigation is a priority.

Mr. Min Bunnara, Conservation International (CI), wondered whether there are any documentations published related to lessons learnt from climate change in Cambodia.

Dr. Heng Chan Thoeun said the report on "Vulnerable Rural Assessment" that illustrates the impacts of climate change on farmers and the poor is available. In addition, climate change posters for raising the awareness of local people illustrating adaptation strategies have been developed and will soon be developed further as lessons/lectures. Moreover, documentation on gender and climate change is being developed through cooperation between the MoWA and the MoE.

Mr. Heav Veasna, Mong Rithy Group, asked a question regarding the ideas of the RGC in addressing the climate changes facing Cambodia.

Mr. Sum Thy responded that there are two practical means in addressing climate change, namely mitigation and adaptation. For instance, concerning adaptation concepts, switching to rice varieties that are better adapted to grow under present climate conditions is a viable option. Likewise, the building of infrastructure, such as roads or bridges that are more accommodating to the climate change scenario could be in consideration.

Mr. Heav Veasna, **Mong Rithy Group,** raised the question whether all the projects that have been and will be implemented are designed to work with private sector.

Mr. Meas Sophal stated that the Cambodian government's strategies on development could not ignore the involvement of private sector. For instance, in reference to private investments, the RGC normally thinks about private sectors participation in three sectors: rural infrastructure, agriculture, and irrigation.

Mr. Liam Fee, UN-HABITAT, asked whether health assessment data is available and how to get it.

Mr. Kol Hero explained that health assessments were conducted by the cooperation of specialists from Australia and the data was analyzed according to WHO guidelines. Four areas of the impacts of climate change on health that had been identified are water-borne diseases, food security, water stress, and health consequences. The report and data are available upon request.

Dr. Kien Tran-Mai, MRC, expressed an interest in knowing from Mr. Hero the period of time the public health data represents. In addition, whether he has linked the health data to meteorological data since it is important to prove quantitatively the relationships of health and climate parameters.

Mr. Kol Hero said the impact of climate change on health is a new concept and many of the staff of the MoH still has limited awareness in this area. However, the MoH continues to collaborate with the relevant Ministries such as the MAFF and the MOWRAM to study further about the climate change, both historically and projecting into the future.

Mr. Sam Chanthy, Stockholm Environment Institute, wondered what could be done to land-use patterns to ensure proper food

security without causing environmental problems.

H.E. Srun Darith stressed that good land use planning is the answer. In order to provide good yields, crops need specific types of soil and if the soil is not suitable for that crop, then shifting to another location will be needed.

PARALELL WORKING SESSION 1
CLIMATE CHANGE MITIGATION – STATUS, PROGRESS, LESSONS LEARNT, POLICY GAPS AND RECOMMENDATIONS

Co-Chairs

1. **H.E. Dr. Sat Samy**, Secretary of State, Ministry of Industry, Mines and Energy, NCCC Vice Chair
2. **H.E. Chheng Kimsun**, Delegate of the RGC, Head of Forestry Administration

STATUS AND PROSPECTS OF A VOLUNTARY CARBON MARKET

***Ms. Marion Verles**, Executive Director, Nexus Carbon for Development*

This presentation intended to provide background information about the emergence of the voluntary carbon market, review its status and prospects locally and globally, and provide some policy recommendations for Cambodia to prepare for its participation in the future voluntary carbon market.

Ms. Verles explained that Nexus, a non-profit cooperative of field development practitioners, will contribute to the reduction of poverty and greenhouse gas emissions by creating pathways to access ethical climate financing for the implementation of climate friendly, equitable and sustainable development projects in a fair, transparent, and responsible manner. NEXUS also provided affordable funding for the mass dissemination of pro-poor low carbon technologies. Moreover, NEXUS is a partnership platform for responsible actors including private companies, institutions, or individuals.

She defined carbon finance as the transfer of resources from developed to developing countries to cover the costs of dealing with the impacts of climate change. Carbon finance can be obtained from emission trading, the CDM/JI, and the Voluntary Carbon Market (VCM). The VCM works with climate change finance in general and with compliance market. There are a number of differences between the CDM and the VCM. In principle, the VCM has more flexibility in its implementation compared to the CDM. For instance, it is non-Kyoto driven, less regulated by the UNFCCC, has a variety of standards, and has a shorter and less costly registration process. Additionally, the VCM can be either voluntary or mandatory, and it can be implemented in both countries who ratified or did not ratify the Kyoto Protocol (KP). She also presented some key facts and figures on the growth of the VCM market shows that 131 Mt CO_2e had been traded in 2010, an increase of +34% from 2009 at a weighted average price of \$6/t CO_2e.

She also underlined the existing and on-going VCM projects in Cambodia which include GERES-Improved Cooking Stove (VCS), NBP/SNV domestic biogas (VGS), Oddar Meanchey REDD (CCB and VCS), and hydrologic water filters (VGS). She indicated that the new mechanism implemented by the VCM might be accepted by the CDM in the few years. The VCM might become a strong opportunity for Cambodia, particularly in the agricultural and forestry sectors. However, attracting private capital, measuring and valuing "pro-poor benefits", a lack of available methodologies for land-use projects, and ensuring transparency and fairness are the challenges need to take into consideration.

She commented that the VCM might have a bright future. The three main trends seen in the VCM are the compliance market might be restricted to the LCDs, as the VCM is expected to surge in the non-LDC; implementation of domestic trading schemes; and the increased appetites of private companies that are not-subject to restrictions between "carbon neutral" or "climate friendly". However, there are risks of uncertainty that might persist.

COMPLIANCE CARBON MARKET: FROM KYOTO PROTOCOL TO NEW MARKET MECHANISMS

***Ms. Akiko Fukui**, Assistant Researcher, Market Mechanism Group, IGES*

The existing Kyoto Mechanisms in the compliance market and their status have been assessing, and potential future market mechanisms will be examined (i.e. post 2012

Kyoto, REDD+, as well as key proposals by selected parties to the UNFCCC).

Referring to the World Bank report, Ms. Fukui stated that the Kyoto demand unit of certified emission reductions (CERs) over the period of 2008-2011 was 1,392 Mt CO_2. However, the actual CERs supply was about 500 Mt CO_2 by 2010, which is close to 1/3 of the KP unit demand. Moreover, the IGES database indicated that the number of CDM registrations and the amount of CERs have rapidly increased since the end of 2010.

Lessons learnt that could be taken into consideration for the next steps were summarized. First, the uneven distribution of project types and countries, for example, 46% of CDM projects were taken by China whereas hydropower and wind power accounted for 52% of the total projects. Next, inability to cover fully the mitigation measures due to the limited activities of projects and programmes. Lastly, the registration process of projects and credit issuing are difficult and time consuming. These issues are significant for improvement to provide more opportunities to reduce costs and carrying out the necessary mitigation activities.

As the Kyoto Protocol will expire in 2012, promoting the CDM and new market mechanisms are being considered for post 2012. The market mechanisms can be discussed in two ways namely the AWG-KP (i.e. Ad Hoc-Working Group on Further Commitments for Annex 1 Parties under the KP) and the AWG-LCA (i.e. Ad Hoc-Working Group on Long-term Cooperation Action under the Convention).

She introduced the possible components of new market mechanisms based on discussions in the AWG-LCA and the submissions from the parties last February. In scaling-up these types of activities, a broad range of operational entities is required. These entities include the National Appropriate Mitigation Action-policy based action (NAMA), sectorial-based activities by transportation and power sectors, and another new one is REDD+. There are two types of mechanisms namely crediting and trading. Credit is issued after emission reduction activities are implemented and there is no penalty in case of excess emissions. As an example, Korea proposed the NAMA crediting mechanism. While, trading is distributing allocation in advance and in case of an excess of emissions the entity needs to buy the unit from others who have achieved the target and have some room for emissions. In terms of governance, there are two types including centralized and decentralized government. Regarding the centralized government, the Supervisory Board, proposed by the EU, which is similar to the CDM executive board has the authority to make rules and to decide on credit issuance. Under bilateral and unilateral mechanisms, each country government has some authority, and the system is expected to design based on country specific conditions

The status of the market mechanisms are now progressing somewhat. Twenty-two parties have submitted views on the new market mechanisms in February 2011 and the decision of the establishment of one or more market-based mechanisms will be further developed in December 2011. Most of the countries support applied market-based mechanisms. It will be in demand post 2012. It is a hoped that in the future there will be more effective and flexible measures for supporting mitigation actions in developing countries.

CDM STATUS AND IMPLEMENTATION OF CDM PROJECTS IN CAMBODIA

***Mr. Uy Kamal**, Head of GHGs Inventory & Mitigation Office, CCD, MoE*

Mr. Kamal gave a presentation on the status of the CDM implementation in Cambodia by briefly summarizing the background of the CDM, the status of the CDM, and future activities for Cambodia.

Cambodia ratified the United Nations Framework Convention on Climate Change in 1995, agreed to the Kyoto Protocol in 2002, and established a Climate Change Office and Designated National Authority (DNA) in 2003. This was the starting point to enable the CDM implementation in Cambodia. In the context of the CDM implementation, the Annex Countries invest in projects, which can reduce GHGs emissions in Non-Annex I Countries. This will result in the certified emission reductions (CERs) being counted toward Annex I Countries own projects. While the benefits for developing countries will be through the investment and technology transfer. Under the Kyoto Protocol flexible mechanisms can be

employed with the aim of reducing GHGs through joint implementation (Annex I + Annex I), CDM (Annex I + Non-Annex I), and Emission Trading (Annex I + Annex I). However, only the CDM is applicable for Cambodia.

In Principle, the CDM is the (1) voluntary participation by parties involved, (2) real, measurable, and having long-term benefits related to mitigation of climate change, (3) emission reductions are additional to any that would occur in the absence of the CDM project, and (4) achieve sustainable development.

The four main core criteria for the CDM, which has applied include:

- environmental protection and improvement,
- enhancement of income and quality of life,
- technology transfer, and
- economic benefits

As of September 2011, Cambodia is the leading country when compared to other LCDs having five registered CDM projects (i.e. 5 out of 21 registered projects). Kamal reported that the existing CDM projects in Cambodia consist of biogas, hydropower, waste/heat gas utilization, and biomass.

Mr. Kamal emphasized that the number of contracts for the CDM development has increased noticeably this year. Recently, the CDM baseline construction for the Phnom Penh Electricity Grid and rice husk gasification applications for Cambodia have been developed with the cooperation of the MoE and the IGES in order to boost CDM project activities in Cambodia in these related sectors.

Finally, he has prepared a draft on the future activities to expand the CDM development in Cambodia included:

- enhancing public awareness,
- exploring and identifying more potential projects and partners,
- project designs and feasibility studies,
- strengthening the R&D on programme activities and other new carbon market mechanisms, and
- enlarging the networking capacity with potential partners for finance, investment, coordination, and implementation for win-win mitigation options

ANGKOR BIO COGEN RICE HUSK POWER PROJECT

***Mr. Adisorn Chieu**, Managing Director, Angkor Bio-Cogeneration*

Mr. Chieu delivered his presentation on the successful CDM project-generating electricity using rice husks from rice mills in Cambodia. It is one of the CDM projects, which can generate up to 2MW of electricity. The project has two outstanding activities are:

1. it avoids methane emissions that would be produced from the biodegradation of the disposed rice husk in the absence of the CDM mechanism and
2. it replaces the use of fossil fuel diesel oil for the power generation of the rice mill itself

He also illustrated the annual amount of emissions reductions from this CDM project. The reduction of CO_2 emissions was about 3,729 t CO_2, which is equivalent to a 6.74% reduction compared to the baseline emissions of 55,349 t CO_2.

Video documentation was presented to explain the project activities since the beginning of the project until the start of operations. The local people were consulted prior to the start of construction in 2006. The power plant materials were mostly prepared in Thailand and transported to Cambodia by land.

He explained that this is the first time in the world to use TORBED technology to burn rice husk. As a result, the complete burning of the husk will turn them into amorphous silica. Interestingly, the amorphous silica ash is also an important ingredient to produce high strength concrete. He made a remarkable comment that the CDM has permitted the success of the project because without the CDM nobody (i.e. investors) would dare to invest in the project. In addition, owners may earn income from the sale of CERs.

Finally, he put forward recommendations for the CDM rules:

- flexibility of verification since a plant might have some minor details different from its original PDD

- more flexibility at the start of the crediting period, for instance, allowing to change the start of the crediting period more than one time

CAMBODIA REDD+ ROADMAP

***Dr. Keo Omaliss**, Deputy Director of Department of Wildlife and Biodiversity, FA, MAFF*

This presentation explained the background, process, objectives, key elements, key players, status, and next steps of the Cambodia REDD+ Roadmap.

Dr. Omaliss defined REDD as a programme that brings additional income from the forestry sector through the prevention of deforestation and forest degradation. Countries with high emissions are potential buyers of carbon credit. REDD+ covers five major activities such as:

- reducing emissions from deforestation,
- reducing emissions from forest degradation,
- conservation of forest carbon stocks,
- sustainable management of forests, and
- enhancement of the forest carbon stocks

REDD+ contributes to reducing and mitigating the impacts of climate change from deforestation and forest degradation, which contribute to around 17% of global emissions. REDD+ is important to implement in Cambodia due to the following reasons: Firstly, it is consistent with national policy and the RGC's goals especially the commitment to maintain forest cover. Secondly, REDD+ is also a part of the UNFCCC, and finally, REDD+ will provide economic, social, and environmental support particularly to forests and wildlife conservation.

Looking at the global REDD status, Dr. Omaliss reported that REDD+ under the UNFCCC, had been approved at CoP13, CoP15, and CoP16. Under this framework, developed countries have pledged and provided millions of dollars to support countries through bilateral and multilateral mechanisms. However, the financing mechanisms are still unclear. To date, Cambodia has received only a few US$ million from developed countries to implement REDD+.

REDD+ Cambodia has been included into many national policies including the NSDP (2009-2013) and the National Forestry Programme (2010-2029). Cambodia became a member of the Forest Carbon Partnership Facility (FCPF) (March 2009), the UN-REDD (October 2009) and the REDD+ partnership (May 2010). Presently, three pilot projects have been implementing in Oddar Meanchey, Keo Seima, Modulkiri province, and the Southern Cardamons. Furthermore, the REDD+ roadmap was also developed.

The REDD+ roadmap defined as a plan for the preparation and management of the REDD+ readiness process during the next 3-5 years. It is first step towards the establishment of the National REDD+ Strategy in Cambodia and can be used as a reference for fund raising.

The members involved in establishing the roadmap are the MAFF, the MoE, and the MLMUPC where the RECOFTC and the CLINTON Climate Change Initiative are the observers. The main sources of funding were from the FAO, the UNDP, and the UNEP. He added that in the process of setting up this roadmap, stakeholder consultations, workshops, and informal consultations with representatives of civil society and indigenous people were carried out.

The roadmap was completely finished in 2010, and it is now in step 2 of implementing the roadmap over the period of 2011-2014. It is projected that the full REDD+ roadmap will be implemented by 2015.

Dr. Omalis also outlined the major sections in the REDD+ roadmap. The six main sections are:

- management of REDD+ readiness,
- stakeholder consultation and participation,
- selection of REDD+ strategies,
- implementation framework,
- development of forest reference emissions levels, and
- development of the monitoring system

He also provided information concerning the status of the grants, which support REDD+ activities in Cambodia: US$ 10 million was

from the Japanese government, US$ 2 million (for 5 years) from the JICA, US$ 3 million (for 2 years) from the UN-REDD, and US$ 3.6 million (for 3 years) from the FCPF.

POLICY OPTIONS FOR PROTECTED AREAS REDD+

***Mr. David Ashwell**, Independent Expert*

The purpose of this presentation was to highlight the findings of the recent case study conducted by the Centre for Clean Air Policy (a Washington-based think-tank) in collaboration with the CCD, on policy options for REDD+ in protected areas (PAs).

The study covered the opportunity cost analysis on alternative land use options in Cambodia and the implications for the PAs and REDD+.

Mr. Ashwell mentioned that Cambodia has many beautiful forest areas and a large protected area system encompassing roughly 25% of the country, which is large enough to be called an 'international protected areas system'. In 2007, the Biodiversity and Protected Areas Management project reviewed the biodiversity status and it was found to be generally good for major forest types and species of international conservation significance. However, a few gaps had identified such as in dry evergreen forests, limestone ecosystems, the floodplains of Stung Sen, and island and marine ecosystems. Based on the review, it can be concluded that Cambodia has enough capacity to conserve the national biodiversity since they are located in core conservation zones, and supported by the complementary zoning of other lands.

The classification of management zones namely, core zone, conservation zone, sustainable use zone, and local community zone, were explained.

Core Zone: refers to a zone of *high value for conservation* of rare, endangered, vulnerable, and threatened animal and plant species, and having a delicate ecosystem.

Conservation Zone: refers to the zone located *next to the core zone*, which is of conservation value for natural resources, ecosystem, slope, and natural landscape.

Sustainable Use Zone: refers to a zone of high value in national economic development that directly serves the purpose of management and conservation of the protected area.

Local Community Zone: refers to a zone that *serves the economic and social development of the local community and indigenous ethnic minorities.* He believes that the Forestry Administration (FA) might have similar zoning mechanisms.

Mr. Ashwell mentioned that about 41% of protected areas have been experienced the impacts or are vulnerable to disturbance and another 57% that are relatively remote have a high percentage of disturbed forest areas. A blue print policy has developed and it has intended as a policy option as to how protected areas be developed in support of a national REDD programme. The Ministry used some of the findings as input for the roadmap process. A blueprint policy should consist of:

- principles,
- policy elements,
- barriers and challenges, and
- guidance for implementation

Mr. Ashwell shared the findings from the opportunity cost analysis on agricultural land use in coastal zones. The results show that the average cost for studied crop scenarios needs a carbon price of $5 to $12.5/ton in order to offset the market value of products that were looked at, which were maize, soybean and sugar. The cost is above most prices in the current voluntary market and a compliance market price is likely to yield substantial income for the country. An additional advantage may be gained through the enhancement of stock through forest rehabilitation.

Next, the major components of the policy blueprint were explained.

[1] **Principle for policy formation**: The REDD+ programme should preserve and enhance the carbon and biodiversity values in protected areas and protection forests; prioritize natural forests in protected areas, including both mature and degraded forests which act as carbon sinks and mitigate climate change; synergies between REDD and the Convention on Biological Diversity (CBD) should be harnessed to enhance the PA

management at national, sub-national, and local levels; and embrace the ecosystems approach that aims to ensure viable landscapes with adequate connectivity between natural areas.

[2] **Policy elements** constitute the National Protected Area System Plan (NPASP), rehabilitation of degraded forests, zoning, decentralization, and fund-based structures.

The NPASP should prioritize protection needs, identify existing and likely future threats for each protected area, the integrity of the overall system, and identify threats within individual protected areas. As well as use zoning as a tool for integrating effective clusters, regional and national level planning and implementation, synergies with regional planning, and cluster level implementation as this may reduce the cost of management.

In the rehabilitation of forests to identify areas of degraded and secondary forests suitable for rehabilitation and regeneration, semi-natural managed systems (i.e. agro-forestry based on hybrid systems), and intensively managed systems (i.e. agro-forestry and woodlots with silviculture).

A matching zoning system with the REDD+ objectives had described:

Use zoning as a tool for integrating effective cluster, regional, and national level planning and implementation to protect and enhance carbon stocks.

Identify Sustainable Use Zones, such as national cultural and heritage sites, ecotourism, wildlife conservation, recreational services, and biological rehabilitation. Enhanced carbon stocks can provide economic justification for land use in the *Sustainable Use Zone,* which support conservation values and other benefits.

Prioritization for investment in Rehabilitation, includes (1) a zoning scheme that provides an opportunity for enhancing carbon stocks under the REDD framework through enhancement of carbon stocks in non-degraded forests allocated to the Core Zone and Conservation Zone. Forest rehabilitation and regeneration of degraded natural forests may be focused in the Core Zone, Conservation Zone, and Sustainable Use Zone. Managed systems are to be limited to the Sustainable Use Zone and Local Community Zone; (2) Areas that are heavily degraded and not amenable to rehabilitation should be considered for excision from the PAs.

Decentralization, REDD+ is not an environmental impact assessment process. Long-term requirements for a sustainable presence can only be met by investment in institutional, organizational, and human capacity building at the sub-national, village, commune, and district levels. Failure will occur without frequent, tangible, and visible returns to all stakeholders. Benefit sharing requires that (1) gains associated with forest conservation are equitably and transparently distributed to those who do the work, (2) a dual income model is required to sustain livelihoods and the investment of a community's time and resources in sustainable use activities, and (3) regular receipts of carbon credits is therefore essential for all stakeholders.

Fund-based Structures: There is some scope in combining conservation funding under the CBD with the REDD+. This should ensure the consistency in protected area management and may be implemented on basis of clusters or individual areas or in a broader area, for example, the North East of Cambodia. Furthermore, a national REDD strategy that incorporates various objectives (e.g. biodiversity, local development, and indigenous peoples) will be more appealing to international funders, and so is more likely to obtain funding.

[3] **Barriers and Challenges** were discussed on two different levels including macro and micro levels. The Macro level focuses on the management of threats, national and regional land use planning, boundaries, and insufficient law enforcement., The micro level is concerned with resource management, low response capability for addressing problems, and lack of 3rd party monitoring.

[4] **Policy implementation guidance**: It is important to use a decentralized structure for implementation at sub-national levels. The Prime Minster has asked the in line ministries to look for a way to harmonize the project with sub-national authority governance as it is an

interesting opportunity. However, it will be a challenging issue for them because the service delivery focuses on intangible things like roads, schools, and health services. Natural resource management is considerably complex and people need to agree on their respective functions in the natural resource management of their community or district. Another opportunity to look at is the sub-set of PAs within natural regions. In reference to technical guidance, it is important to develop an ecological framework for a forest classification because the current classification is very broad in relation to the variety of forest types. If forest rehabilitation is needed a more refined forest classification is required to identify the appropriate rehabilitation strategy. Along with this, there is a big need for improving geographical information system function and clarification of the boundaries of the PAs and management zones, which are recognizable and enforceable.

QUESTIONS AND ANSWERS

Ms. Chim Kalyaney, **Deputy Director of Provincial Department of Environment, Preah Sihanouk**, asked the Angkor Cogen company about the replication or expansion of the operation in other places in Cambodia due to the vast availability of rice husk.

Mr. Adisorn Chieu replied that a company, a SME, has been implementing the project (i.e. gasification procedure) for small power plants in Sihanouk and its capacity is about 200 KW by using rice husks as fuel.

Ms. Im Phallay, **NGO Forum**, recommended that the consultation on the REDD+ should be comprehensive and inclusive, especially, including the ethnic people who protect the forests. Furthermore, educational materials should be translated into the national language and designed with understandable pictures to indigenous people who are participating in forest conservation and in the REDD roadmap development.

Dr. Keo Omaliss responded that in the process of the REDD Roadmap development: the World Resources Institute ranked Cambodia No. 1. At the beginning of the REDD roadmap implementation, stakeholder participation and consultation were considered. He would totally agree with the suggestion of adding figures and understandable pictures in the educational materials as this is also clearly mentioned in the roadmap that indigenous and local communities might not be able to read. In addition, in the national roadmap-working group, indigenous people, and civil society have represented in the consultation group that takes part in the preparation of educational materials. Therefore, the sub-national level cannot be separated from the national level.

Mr. Luos Seiha, **SAK Company**, asked, if a company wants to plant a forest to sell for carbon credits, to which authorities or ministries (MoE or MAFF) should the company apply for the license?

H.E. Chheng Kimsun responded that planting a forest and selling carbon credits falls under the CDM, and the CDM is generally good for the energy sector, while in the forestry sector the REDD+ is an option. If the projects to be located in the protected areas (23 sites) the MoE is the responsible agency to be contacted and the remaining sites should contact the FA.

DAY 2 –OCTOBER 4TH, 2011

WELCOME REMARKS

***Mr. Peter J. Brimble**, Senior Economist, ADB*

Mr. Peter J. Brimble welcomed the group and started by saying that climate change is the greatest challenge faced by humankind. Cambodia has experienced many devastating impacts of climate change via extreme climatic events such as Typhoon Ketsana and recently the widespread flooding throughout the country.

He mentioned that the most unfortunate fact of climate change is that the poorest suffer the most. As a LDC, Cambodia is also highly vulnerable to the impacts of climate change, which may severely affect its economic development. Therefore, the ADB, as a poverty eradication organization is strongly committed to assist Cambodia to meet the challenges associated with climate change. A core priority of the ADB's strategy 2020 regarding climate change is to support developing member countries, including Cambodia. There are five operational priories in addressing GHGs

mitigation and adaptation, scaling up clean energy, encouraging climate-friendly urban development and sustainable transport, enhancing carbon sequestration via sustainable land use, forestry, and agriculture, promoting climate-resilient development, and strengthening institutions, governance, policies, and capacity to address climate change.

He also said that so far the ADB has been supporting the RGC in other areas with substantial climate and development benefits. Some of these projects include renewable energy and energy efficiency, sustainable mass transit systems, climate friendly urban development in towns, enhanced carbon sequestration, and biodiversity conservation. Moreover, based on the ADB's Country Partnership Strategy 2011-2013, the ADB will assist Cambodia in the following areas:

- mainstreaming climate change challenges in sector analysis, planning and project design,
- continuing to develop improved approaches to resource conservation in the Tonle Sap basin,
- coordinating national and sub-regional programmes on climate change and the environment, and
- accessing finance from internal and external sources to support climate change activities in new and existing projects

Mr. Brimble ended his speech with the strong belief that this forum will provide participants a great opportunity to enhance their awareness of Cambodia's climate change issues particularly in adaptation, mitigation, technology transfer, development issues, capacity building, and financing. In addition, he hoped this event would also mobilize and galvanize additional support from development partners.

WELCOME REMARKS

***H.E. Suy Sem**, Minister of Industry, Mines and Energy*

H.E. Suy Sem started his speech by stating that climate change is a global issue contributing to the high frequency of natural disasters which pose greats threats to socio-economic development.

He also emphasized that RGC has a strong commitment in addressing climate change, particularly via adaptation and mitigation of greenhouse gases by including it in the National Rectangular Strategy Phase 2 and the National Strategic Development Plan Update (2009-2013). Additionally, Cambodia has been implementing numerous important actions pertaining to national, institutional, and technical capacity, and the capacity of the NCCC to mainstream climate change in national and sectorial plans.

He said energy sector development particularly in electricity is regarded as a priority sector by the RGC for accelerating national economic development. The RGC has been paying attention to this sector's development by working towards minimizing impacts to climate change.

Even though Cambodia signed the Kyoto Protocol, as a developing country it is not bound to mitigate GHGs. However, the country is very active in reducing its GHGs emissions by promoting production and consumption of renewable energy and promoting the development of cleaner energy. Through these efforts, Cambodia has reduced emissions approximately 570,000 tons per year through 7 CDM projects in renewable resources. The CDM provides an ideal opportunity for a developing country like Cambodia to collaborate with developed countries to transfer appropriate, clean, and environmentally friendly technology to implement emission reduction projects in order to promote sustainable development in the country. He also highlighted that the options for emission reduction cannot be applied if it is not socially and politically acceptable.

He suggested that some key recommendations addressing climate change should be discussed in this forum such as:

- Green Growth and perspectives related to climate change,
- renewable energy markets in the country,
- development of a national action plan for disaster risk reduction,

- an initiative on adaptation to climate change by the Mekong River Commission,
- utilizing regional and international experiences and lessons learned on effective adaption,
- a policy on carbon credit and coordination for aid effectiveness,
- using historical climate change impacts on biodiversity to formulate response measures, and
- climate change impacts and responses from a gender perspective

At the end of his speech, H. E. Suy Sem believed that participants would be active participants in discussions and contribute recommendations and practical inputs in addressing climate change.

PARALELL WORKING SESSION 2
CLIMATE CHANGE ADAPTATION – SUCCESS, CHALLENGES, AND LESSONS LEARNT

Co-Chairs:

1. **Mr. Ken Serey Ratha**
   Deputy General Director of GDANCP, MoE
2. **Mr. Koen Everaert**, Attaché, Cooperation, Delegation of the European Commission to Cambodia

STRATEGIC NATIONAL ACTION PLAN FOR DISASTER RISK REDUCTION

***Mr. Soth Kim Kolmony**, Deputy Director of Preparedness and Training Department, National Committee for Disaster Management*

This presentation highlighted the efforts of the National Committee for Disaster Management (NCDM) in addressing climate disasters, including the implementation status of the Strategic National Action Plan for DRR, highlighting community-based responses and lessons learned.

Mr. Kim Kolmony gave a brief overview of disasters that may affect the country's efforts in achieving the Cambodia Millennium Development Goals and influence public finance, which will lower incomes and raise expenses, especially additional expenses that would be incurred by the government to cope with these issues. Disaster may also have direct impacts on communities and livelihoods, which may interrupt the development process or forcing the process to be delayed or canceled.

In fact, Cambodia has been experiencing disasters in the form of floods, droughts, disease outbreaks epidemics, storms, lightening, forest and land fires, traffic accidents, and technological disasters.

Going through the structure of NCDM of Cambodia, Mr. Kim Kolmony explained the vision of the committee, which is to lead the disaster management in Cambodia in order to build a resilient community to natural disasters in accordance with Hyogo Framework for Action.

The five core strategic objectives of the NCDM of Cambodia are:

- to strengthen the existing disaster management system,
- develop human and institutional resources,
- reinforce disaster management information systems,
- strengthen disaster preparedness and response capacities, and
- integrate a disaster risk reduction perspective into the policies and strategies of the government in all sectors on all levels

Adopting the Hyogo Framework for Action (HFA) as the overall framework, the priorities of DRR identification in Cambodia is firstly to ensure that disaster risk reduction is a national and a local priority. In order to accomplish the formulation of policies and legislation in support of DRR as well as strengthening the national DRR coordination mechanisms or "National DRR Platform" need to be realized. The integration of DRR into national development policies and planning and the allocation of appropriate resources for DRR at the national level are needed.

The second framework is the strengthening of sub-national and community-based disaster risk management that can be organized by decentralizing DRR in both responsibilities and resources, and promoting the implementation of community-based DRR programmes.

To achieve the third framework of identifying, assessing and monitoring hazard risks, and

enhancing early warning systems, actions are required such as:

- conducting national and local risk assessments,
- establishing a disaster management information system,
- developing multi-hazard early warning systems that will assist in many ways to alert people of disaster risk, and
- collaborating with international and regional DRR initiatives

The fourth framework is using knowledge innovation and education to build a culture of safety and resilience and promote public awareness.

The fifth and the last framework are to mainstream DRR into policies and programmes of the relevant government ministries, and to strengthen disaster preparedness for effective response on all levels.

To end, Mr. Kim Kolmony stated that approaching disaster management and development as independent activities does not consider long-term challenges, but development integrated with disaster management is sustainable development.

MEKONG CLIMATE CHANGE ADAPTATION INITIATIVE (CCAI): EXAMPLE OF ADAPTATION FROM A REGIONAL PERSPECTIVE

***Dr. Kien Tran-Mai**, Climate Change Programme Officer, MRC*

Dr. Tran-Mai shared the MRC experience of the regional Mekong River Basin–based adaptation initiative entitled the "Climate Change Adaptation Initiative". His presentation specifically focused on four main points:

- climate change and development challenges from a regional Mekong-Basin perspective,
- introduction of the Mekong River Commission Climate Change Adaptation Initiative (MRC CCAI),
- some initial activities, and
- regional collaboration and partnership

In reference to climate change and development challenges from a regional Mekong-Basin perspective, Dr. Tran-Mai emphasized that no one country can tackle climate change effectively without regional strategies and supports to adaptation planning and actions at national and sub-national levels. This is the role and challenge of MRC CCAI.

He also talked about some previous study on the climate change impact that carried out by the Common Wealth Scientific and Industrial Research Organization in the region including the decreasing rainfall in the southern part of the basin, and increased flooding for all parts of the basin, particularly downstream.

Dr. Tran-Mai also highlighted some concerns about impacts caused by development specifically hydropower plants along the Mekong River and climate change in the basin, which were:

- the increasing frequency and intensity of disasters (i.e. floods, typhoons, drought, and forest fire),
- changing of river flow and water quality/availably,
- changes in sediment, nutrients, river and estuary morphology,
- changes in ecosystem services especially wetlands and biodiversity,
- economic factors especially in agriculture, fisheries, and infrastructure,
- livelihoods of poor people and marginal groups (e.g. women, children, the elderly, and ethnic minorities), and
- impacts by both upstream development and the rise of sea levels on the Mekong flood-plain and Tonle Sap Lake

The MRC CCAI defined as a collaborative regional initiative of Lower Mekong Basin countries aiming to support the countries in adapting to the impacts and new challenges of climate change through improved planning, implementation, and learning. This programme is one of the longest initiatives covering almost 17 years (2009-2025) and it works through three phases (i.e. five years per phase). In this programme, there are four objectives including:

- climate change adaptation, planning, and implementation,
- improved capacity to manage and adapt to climate change,

- strategies and plans for climate change adaptation, and
- regional exchange, collaboration, and learning

Dr. Tran-Mai also emphasized that the Mekong CCAI is not only working directly with the initiative of the National Mekong River Commission but is also working in cross-cutting initiatives with other sectors or programmes such as flood management and mitigation, drought management, hydropower, fisheries, agriculture, and irrigation. It is a unified effort of collaboration to help the member countries and their communities.

This project takes a holistic approach of different adaptation planning steps, development planning levels, and development sectors. The gender issue is also considered important to be mainstreamed into all steps of all sectors by not only just recognizing and collecting information from the beginning but also the involvement of women at different levels and steps to ensure their roles are included in the adaptation process. Additionally, the involvement of active stakeholders in the programmes including national and regional consultations, riparian and national experts, and other MRC programmes with regional partners is taken into account.

So far, the MRC CCAI has done a lot of work relating to raising awareness to climate change particularly relating to developing cartoon movies and posters in all member languages. Some initial activities have been carrying out by the MRC CCAI for initial demonstration projects on adaptation at local levels in each country, a basin-wide pilot to determine climate change impacts to wetlands and biodiversity, and some assessments on climate change impact. The best example is the study of saline intrusion in the lower Mekong Delta by modeling the future of rice production and other crops. The basin-wide pilot on climate change, impacts, and vulnerability assessment for wetlands and biodiversity in the lower Mekong is soon to be published.

At the end of his presentation, Dr. Tran-Mai emphasized that the MRC CCAI recognizes that it is important to establish initially the regional network of different national and regional collaboration demonstration projects with partners at both national and regional levels. The MRC CCAI continues to implement other pilot projects working through the MRC programmes. Two other important aspects, which the MRC CCAI is trying to work on are Mekong regional adaptation strategies and action plans to support national frameworks and different guidelines, and the Mekong Panel on Climate Change which is similar to the regional analogues of IPCC.

BARRIERS AND OPPORTUNITIES FOR EFFECTIVE ADAPTATION

***Mr. Alex Heikens**, Regional Policy Advisor climate change, UNDP Asia-Pacific Regional Centre*

This presentation discussed regional and global experiences in the implementation of adaptation activities with a focus on barriers, lessons learned, best practices, and key policy recommendations Cambodia may benefit from.

Mr. Alex Heikens commenced his presentation by reminding the audience that adaptation strategies learned from Asia is a process that has been taking place for the last 5 years. The lessons learned embrace the major challenges of climate change adaptation implemented in Asia. A process that needs the participation of all key stakeholders, including not only the government, but civil society and private sectors as well. Understanding these years of lessons learned on climate change adaptation has not been an easy task because it is a cross-sector issue.

Adaptation is about the capacity of local institutions and the practicality of implementation at local, district, and grassroots levels. Often roles and responsibilities are limited and not clearly defined. It is for this reason that to certain extent coordination with the national level is essential. An example of this may be seen in Indonesia's SCCF/GEF project "Strategic Planing and Action to strengthen climate resilience of rural communities" in which integration of climate change in key-institutions at provincial and district level are included. Another key message for adaptation is using country systems to implement CCA projects. The primary method is to reconsider traditional project implementation and begin to address weaknesses in country systems

especially in the field of public finance management and governance reform.

Finally yet importantly, the key message is to mainstream CCA in local development through local planning, budgeting, and regulation to ensure that the readiness of local systems to provide the necessary resources to the local community to deal with the effects of climate change in a sustainable manner.

BARRIERS TO EFFECTIVE ADAPTATION – INSIGHTS FROM THE CAMBODIAN HUMAN DEVELOPMENT REPORT 2011

***Dr. Richard Friend**, Institute for Social & Environmental Transition*

This presentation provided an overview of the findings of the Cambodia Human Development Report 2011, the main challenges of climate change, principles of action, opportunities, and risks in Cambodia.

Dr Richard Friend highlighted the uncertainty and risk to development with climate change. Humans are the center of development and development needs to look back at the meaning and direction of development. In the next 20 – 30 years, we might look back and see how it has changed from the past due the process of development. What we need now are new ways of accomplishing development and how to address the high degrees of uncertainty and risk associated with this issue.

In thinking of adaptation and ways to deal with climate change issues, we might think of resilience and its basic principles. Fundamentally, we need informed, strategic, and participatory planning and decision-making to be included in approaching climate change issues, and placing ecological considerations at the heart of development. Furthermore, we have to consider promoting adaptation and flexibility in all aspects of development, and be sure not to become complacent that it is 'safe to fail'.

The vulnerability of Cambodia toward climate change is due to the weak assets and entitlements of rural people, limited adaptive capacity, limited technical, financial, and human capacity, as well as institutional constraints, weak governance, and decision-making. How are we to strengthen people's assets and entitlements? The answers are evolving in strengthening social protection, disaster risk reduction, and access to productive assets, such as land, water, forest, and so on.

Typically, the need for local action is crucial in the process because climate change will be felt on the local level while requiring action at different levels that include not only the local level, but the national and regional levels as well.

Access to information on climate change is critically important in that we need to be aware of not only one accepted source but of many reliable sources of information. To ensure that people are well informed, information needs to be publicly available and all affected parties should be involved in the decision-making for fair and equitable outcomes.

Dr. Richard Friend finally pointed out that to approach (redress and remedy) the risks of climate change an effective legal framework is obligatory to establish standards relating to pollution or land use change to name only two areas of concern. It is vital to seek mechanisms to ensure accountability and transparency.

QUESTIONS AND ANSWERS

Mr. Ven Virak, Department of Environment, Kampot province, asked whether the term "prevention" can be used instead of the word "reduction".

Mr. Soth Kim Kolmony made it clear that the term "prevention" cannot be used for natural disasters since natural disasters such as storms, earthquakes, and so on cannot be prevented. In contrast, the term "reduction" can be used for natural disasters since it means to attempt to minimize serious impacts of natural disasters as much as possible through early warning systems.

Ms. Chhim Rumuny, CDRI, expressed her concern of how disasters caused by climate change and nature can be distinguished?

Mr. Soth Kim Kolmony said that as climate change causes disasters, if climate change impacts are reduced disaster impacts would also be reduced. Therefore, combining DRR and CCA must be considered since both of

them fall within the areas of "disasters". Combining DRR and CCA has been under consideration due to their similarity.

Mr. Toch Chan Krisna, MEF, suggested that warning systems should be available in order to inform people in advance about natural disasters.

Mr. Soth Kim Kolmony explained that the RGC is currently trying to update this system and the work needs to be done with multiple stakeholders. DRR is a facilitating tool only and each stakeholder has different responsibilities to mainstream information from the national level to the community level.

Mr. Aaron Watson, Technical Adviser, WOMEN, wanted to know if in the future the CCA structure would have a sub-National Committee like DRR.

Mr. Soth Kim Kolmony responded that, actually, the combining of DRR and CCA has been under consideration.

Mr. Kob Mat, RUPP, wondered why even though systems in Cambodia still have their limitations, that the improvement of the data collection system had not mentioned in the DRR's strategy.

Mr. Soth Kim Kolmony accepted that in the "DRR" strategy, the term "enforcement" was used. This means that all activities will be worked out together at all levels of involvement. For instance, the MOWRAM is trying to obtain reliable metrological information and keep it up-to-date in order to inform the public in a timely manner.

Mr. Yuk Sothirith, British Embassy, referred to the "DRR" strategy and asked about the committee's plan to evaluate the costs of impacts of natural disaster. He wanted to know the estimated costs associated with floods in Cambodia in the past few weeks.

Mr. Soth Kim Kolmony replied that a working group has done the evaluation of the costs of the impacts. Recently, the NCDM has been working with the Red Cross of Cambodia to anticipate the costs and the response needs. In addition, the NCDM has been working together with all involved ministries, such as the MAFF, MoH, MOWRAM, and so on to address this issue.

Mr. Meas Chandeth, MEF, asked for clarification on the meaning of decentralization of working-group responsibility and resources. In addition, she asked whether they are responsible for both managing the tasks and the financial resources by themselves and wanted to know the source of financing for this working-group?

Mr. Soth Kim Kolmony explained that they are responsible for both managing the tasks and the financial resources. However, the budget allocation for the working group is not available yet. Regarding the sources of finance, it may be obtained through variety of ways, such as fund raising and the like.

Mr. Nop Polin, Danish Church Christianity Aid (DCA/CA), doubted whether the project (CCAI) has been working with other partners like civil societies or the government from a capacity building perspective.

Dr. Kien Tran-Mai replied that the MRC has been working not only with the government but also with civil society including women's unions, youth unions, and farmer associations in each member country.

Mr. Nop Polin, DCA/CA, wondered if the MRC has any possibility for working even further with the existing regional networks beyond the MRC.

Dr. Kien Tran-Mai said that the MRC has been working with many existing regional networks, namely the Adaptation Knowledge Platform, the Asia Pacific Adaptation Network, the River Basin Organization, and others.

Mr. Kob Mat, RUPP, doubted whether the MRC could deal with the uncertainty of vulnerability and risk in order to work even more effectively in each phase of project implementation regarding climate change.

Dr. Kien Tran-Mai said that uncertainty is one of the most challenging aspects of their work. Nevertheless, the MRC is trying its best to minimize this uncertainty through updating and improving our modeling regularly as well as our technical expertise. The MRC is also trying to work together with its existing partners in order to share their knowledge and methodologies, and update and maintain the

tools being utilized. Therefore, it is believed that the level of uncertainty can be reduced once the accuracy and reliability of modeling prediction is improved.

Dr. Mak Soleang, MRC Consultant, wondered if the MRC utilizes historical data in order to predict future disasters with a level of accuracy that the local people can be well informed of such circumstances and is this information being disseminated?

Dr. Kien Tran-Mai said, actually, the MRC has been working on six different scenarios in gathering information or data to set up a reliable future prediction model. In addition, the MRC has established the "Information Acknowledgment Programme (IAP)" located in Cambodia. The main goals of the IAP are to consolidate and collect all possible information and conduct studies on behalf of its respective member countries with the most updated and high-tech modeling team.

Ms. Alice Burke, Cambodia Daily, wanted some clarification about dam projects. Whether there are any negative impacts if all of the dam projects take place?

Dr. Kien Tran-Mai explained that it is hard to predict, he is not sure whether all the projects will be implemented. Some projects had already been postponed and awaited further study in order to reduce impacts to an acceptable level.

Mr. Men Bunnara, Conservation International, asked how the "Integrated Sub-National Level" could be made more effective in working and managing the fund for the climate change adaptation projects.

Mr. Alex Heikens answered that it will depend on the local government system that they are dealing with, so what they have to do is work with them locally.

Dr. Kien Tran-Mai was interested in the challenges or difficulties in dealing with high-level task working groups, like on the regional level or international level in the process of negotiation.

Mr. Alex Heikens responded that the challenges inherent in this could be seen in the process of negotiation between each national level within the region in order to find a more comprehensive understanding of each other's interests. In tackling the solution for adaptation issues, technical, and political matters are also challenges.

Mr. Sok Piseth, **MoWA**, asked for the definition of "people's assets" and how "people's assets" can be built into addressing the impacts of climate change.

Dr. Richard Friend explained that "people's assets" are normally broken down into different categories. Natural Resource assets refer to land, water, forest, and fisheries. Human assets refer to skills, knowledge, information, and so on. Physical assets refer to roads, schools, hospitals, and so on. Economic assets refer to income, markets, and so on. Social assets refer to self-help groups, community groups, networks, and so on. When thinking about assets, we think about how people can turn all kinds of assets into benefits by considering how all of the assets come together and how people can take advantage of them.

Dr. Kien Tran-Mai, MRC, asked Dr. Richard to clarify the term "safe to fail".

Dr. Richard Friend explained the term "safe to fail" is used when the impacts of a given project or implication fail. However, a project needs to be properly managed in order to be safe.

Dr. R. Taber Hand, Wetlands Work, wondered if there is any consideration on the number and age distribution of people in Cambodia regarding project implementation.

Dr. Richard Friend said that number and age distribution of the people generally encompasses the youths, and the youth population is one of the challenges. There is a need to think about job markets, education, etc. The challenge facing us now is the inequality among people in the society and the poverty. What have been doing is trying to look at climate change from different perspectives and trying to find technical solutions for overcoming those issues, and fundamentally, it requires that the public be informed in advance.

Mr. Ven Virak, Department of Environment, Kampot, asked Dr. Richard to clarify the term "the effective legal standard".

Dr. Richard Friend replied that many countries around the world are struggling with this term. For instance, making standards of pollution in one country effective and placing it in force is very challenging. In short, many countries are facing this issue and it is just a matter of time before this is worked out.

PARALELL WORKING SESSION 2
CLIMATE CHANGE MITIGATION – STATUS, PROGRESS, LESSONS LEARNT, POLICY GAPS AND RECOMMENDATIONS

Co-Chairs

1. **H.E. Dr. Sat Samy**, Secretary of State, Ministry of Industry, Mines and Energy, NCCC Vice Chair
2. **H.E. Chheng Kimsun**, Delegate of the RGC, Head of Forestry Administration

GREEN GROWTH, LOW CARBON DEVELOPMENT

***Ms. Aneta Nikolova**, Environmental Affairs Officer, Environment and Development Division, UNESCAP*

This presentation examined the green growth concept, its linkages with climate change, and enabling factors for its successful application in developing countries.

Initially, Ms. Nikolova stated that green growth is not only a mitigation strategy, but also adaptation strategy. The borderline between adaptation and mitigation nowadays cannot really be separated. If we attempt adaptation strategies with low carbon intensive or not resource efficient, we end up in trouble.

The general situation analysis in the Asia-Pacific region is that it is on the move. The region needs rapid economic growth will bring significant gains in reducing poverty and hunger. However, this development is associated with other costs such as going beyond the carrying capacity of the natural environment; benefits are not evenly distributed; insufficient access to quality social protection; growth of joblessness; and economic uncertainty. Furthermore, this region is very vulnerable to external shocks because rapid economic growth is heavily dependent on export. Thus, looking at internal opportunities is important and to raise potential consumption. The region is also vulnerable to other impacts such climate change, natural disasters, the fluctuation of food and fuel prices, and other resources for production. She mentioned that risk and uncertainty in the region is relatively high. Moreover, resource constraints for production are another issue that the region is facing.

Agricultural production has been affected the most by the impacts of climate change and the impact to this sector affects the livelihoods of people. Therefore, the whole world needs a new economic reality. Our region has proposed the new strategy of bringing economic growth, which can help us. If we use that strategy, we would be able to have economic resources, environmentally sustainable economic growth, and development in our region. The United Nations Economic and Social Commission for Asia Pacific, the ADB, and the UNEP have shown this in different studies. She was happy to hear that the ADB would focus a lot on resources and policies for development in Cambodia. Our region is the most intensive in terms of resources used. Unfortunately, the region is also energy intensive and much of the energy is not renewable, so we have many emissions. She also presented a graph showing the increasing consumption of domestic materials in the Asia-Pacific overtime (1970-2005) that surpasses the rest of the world. According to the graph, showing carbon intensity related to the GDP in the Asia Pacific region, the region uses 3 times more resources than the rest of the world.

The Asia-Pacific region also faces many constraints such as little productive area, limited water resources, and a high population density. We also have problems with non-food crops, a high rate of hunger, and the health and productivity of ecosystems are declining as well. In order to solve these problems one needs to look at the quality of economic growth in an integrated manner – economic, ecological, and social. This is what is behind the proposal for the greening of economic growth. The current model of development that we are copying and applying in our region is not sustainable for our region given the constraints we have. Moreover, we are not looking in the right direction, as we need to look also at the Green Growth concepts of invisible and visible economic infrastructures.

She answered the question most people ask, whether green growth is applicable to developing countries, as green growth is not about the money and technology but about political commitment and policy framework. As an example, in 2008 Cambodia was the leading country among the developing countries to develop a green growth road map. The road map was prepared in collaboration with the concerned ministries and led by the MoE. The road map had been presented to the Prime Minister. All we have to do now is recalibrate the economy by creating the green growth engine, convert from a resource consuming culture to a resource saving culture, and create new jobs. The key is to use a green tax and budget reform to limit the over use of resources.

She also presented some success stories behind the green growth concept. For example, the "Trash in Cash" project in Bangladesh, Sri Lanka, and Vietnam; the "Solar Lantern Rental System" approach in the Lao PDR; fuel subsidies in Indonesia; sustainable transport in Malaysia; the Solar Tuk-Tuk in Thailand; and Micro-hydropower which does not need reservoirs to produce electricity.

RENEWABLE ENERGY MARKET IN CAMBODIA: SOLAR, PV, AND WIND TECHNOLOGIES

***Ms. Margaret Jane Ryan**, Partner, Khmer Solar*

This presentation examined from a private sector point of view the evolution, status, barriers, and outlook of solar photovoltaic and wind technology markets in Cambodia.

Ms. Ryan indicated that Khmer Solar (KS) founded in 1997, is a small company exclusively dealing with solar products. She highlighted the rationale why the company started its operations in Cambodia. Solar energy reduces the use fossil fuels and contributes toward mitigating the effects of climate change. It can raise the standard of living where there is no electricity in the near future. Solar energy is abundant and available year round, and system maintenance is well within the capacity of the people. There is no market for wind energy, as the windmill does not work well in Cambodia.

She explained the barriers to the expansion of the solar market in Cambodia in 1997. The barriers were import tax duty (35%), lack of public awareness, lack of solid data, lack of accessibility of qualified persons for maintenance especially in the rural areas where the systems installed, and affordability of the technology by the local people.
She expressed her pleasure in the progress made after 10 years. There was good news that the import duly dropped from 35% to 7%, a result of the joint effort between private sectors and the MIME. More than this, there was great donor assistance from Japan, the Netherlands, France, and the USA to sustain and educate them because they started without knowing anything.

Ms. Ryan raised the question "Did we create a market by coming in with a product that nobody knew anything about, and try to convince people over a period of years?" She responded that it could be a combination of these things because people who did not know about solar energy asked about it. Upon reflection, the number of solar companies in the yellow pages was only three in 1998 and in 2011 jumped to13.

She stressed that the MIME under the leadership of H.E. Dr. Sat Samy, created an atmosphere for donors to come in and work in this sector over a period of several years. Several intensive educational workshops and study tours had conducted to introduce the KS to solar home system and the ways that the market had developed in other countries. Of course, at that time KS had no idea it would develop the solar home system because KS's original intention was to supply the NGO market.

Furthermore, she talked about three different markets in Cambodia including Telecommunications, NGOs, and Solar Home Systems.

In the telecommunications sector, she provided the example of local people who like color TV and mobile phones, and now KS can provide solar systems to be used with these technologies. Another, example was the hybrid system applied in the communication towers in rural areas together with a cost benefit analysis of using a hybrid fuel and solar system.

She indicated that the NGO sector comprises a large portion of the solar market and normally, NGOs use solar energy where there is no access to public utilities. She briefly discussed two examples of NGOs, which have done this. They are the Rural Schools Project run by Kernie Krisher of the Cambodia Daily and by World Vision in partnership with the MoEYS. Additionally, she added that the management of solar systems has been excellent with the NGOs running the system, needing only occasional consultation with KS.

Lastly, she shared some experiences of the solar market in Battambang. KS launched a new office in Battambang in 2004 based upon reliable and accurate data from market surveys. She was pleased to inform the group that the number of solar home systems purchased has increased remarkably and the color TV system was in high demand. However, the payment procedures and the replication of the Battambang model still need further consideration.

EEP MEKONG: EXAMPLE OF MITIGATION FROM A REGIONAL PERSPECTIVE

***Ms. Kati Veijonen**, Counselor, Energy and Development, Embassy of Finland*

The purpose of this presentation was to share experiences of a regional Mekong Sub-region initiative entitled "Energy and Environment Partnership Programme (EEP) – Mekong" to promote sustainable energy development and GHGs mitigation.

Ms. Veijonen said that because of the successful implementation of the programme initially created in Central America in 2002, the programme has replicated in other regions of the world with its adoption based on local conditions and needs. This includes the programmes of the EEP Mekong, the EEP Southern and Eastern Africa in 2010, and recently the EEP in Indonesia and South America have begun operations. The objectives of the EEP Mekong are to contribute to improved access to energy and energy services and the reduction of greenhouse gas emissions. It is expected that because of the EEP activities, rural households, livelihoods, and SMEs will have better access to renewable energy (RE) services and technology. The EEP Mekong programme in Asia covers Cambodia, Laos, Thailand, and Vietnam and two provinces in Indonesia.

She claimed that currently, the EEP Mekong Phase 1, funded by Ministry of Foreign Affairs of Finland and the NDF with a grant of 7.9 million Euros for 3 years (2010-2012) is at the half way of its implementation. Moreover, all main EEP Mekong components contribute to mitigating the impacts of climate change and support national policy, legislation and institutional frameworks, development of RE, WTE and EE technologies and services, and information and capacity building on RE, WTE, EE, and energy markets.

Normally, the EEP has two calls per year and so far, there have been three calls. The eligible applicants may be any kind of organization, however, private individuals and other funding organizations such as international organizations and trust funds are not eligible to receive these funds. This is a partnership project, thus at least two parties (i.e. partners) are required to be in the project team.

Additionally, the technical focus of the programme is on renewable energy (e.g. biomass, biofuel, biogas, Energy Efficiency (EE), and solar energy). There are certain activities that are eligible for applying for the call for proposals including

- pilot projects,
- demonstration projects,
- pre-feasibility studies,
- capacity building/training,
- strategic/policy studies

However, strategic and policy study need to be proposed with national coordination only. There are technical restrictions for projects that apply for funding. Projects of biofuel production for export and hydropower with a capacity of less than 10 MW are not eligible because of environmental impacts and wood security issues. The project selection process explained from the submission of the project proposal until the contracting process. An independent evaluator does the evaluation process.

She also summarized the results for the first three calls for proposals in which 162, 105, and 105 proposals were submitted for the first, second and third calls respectively. However, only 6 projects (first call), 10

projects (second call) and 14 projects (third call) are being implemented. The selected projects cover all technical applications and half of them are pilot projects. The maximum funding for the first call was EUR 400,000 and EUR 200,000 for the second and third calls.

She also gave some examples of the Cambodian EEP projects, which are being implemented including Energy Saving Siem Reap, improving access to solar energy for rural electrification, and energy for floating communities.

She reported that Phase 1 is now half way in its implementation. However, Phase 2 (2013-2015) is in the planning phase. It is expected that the fourth call for proposals will be launched at the end of this year or early next year if Phase 2 is initiated

CARBON CREDIT POLICY: REGIONAL/GLOBAL EXPERIENCES AND BARRIERS TO EFFECTIVE MITIGATION IN CAMBODIA AND PROPOSED RESPONSES

***Dr. Thanak De Lopez**, Managing Director, Ecofia*

This presentation focused on some of the most successful and relevant models of carbon credit policies related to ownership, taxation, and management, and discussed barriers, lessons learned, best practices, and key policy recommendations Cambodia may benefit from.

Dr. Thanak made a simple remark on the severe global financial crisis - there will be less money around to buy carbon credit. It is very difficult for countries to pass any legislation to curb GHGs emissions, which is not politically acceptable. Many countries (e.g. USA, Japan, and the EU) which used to buy carbon credits from Cambodia do not have enough money to do so as they are more focused on creating jobs and improving their local economies. Therefore, it will be very difficult in the carbon market because of these issues. Another point is that international negotiations have made little progress toward a successor regime to the KP. The first commitment period of the KP will end in 2012 and the future of the KP is still uncertain and no agreement in sight.
Dr. Thanak pointed out that markets do not like the uncertainty. After 5 years of growth, the total value of the global carbon market stagnated in 2010, and market volume and the value of project transactions fell by about 50% for CERs.

The carbon market is a buyers' market. The CDM will be a little bit difficult post 2012 due to low demand and low supply. Another constraint is that only a few new CDM projects have started, as buyers prefer cheap, low risk, and already issued CERs.

However, there are opportunities for quality carbon offsets from Cambodia. After 2012, offset sources in LDCs, including Cambodia may still be eligible for the EU ETS (i.e. the EU still has the right to buy carbon from Cambodia). Moreover, clean energy projects from LDCs remain a rare commodity. However, they may be sought after by ethically minded buyers and high quality carbon offsets from LDCs may obtain premium prices.

Dr. Thanak said that the VCM should not be underestimated due to the following reasons:

- buyers do not have a legal obligation to offset their emissions, but voluntarily decide to buy carbon credits,
- small volumes compared to compliance markets (i.e. less than a percent), but the voluntary market segment is experiencing rapid growth (i.e. more than 30% in 2009-2010), and
- a rapid increase in credits from REDD which provides more opportunities for Cambodia

Dr. Thanak provided a couple of examples of the CDM and carbon policies in China and Vietnam. In China, the government owns emission reduction resources, the project developer owns the emission reductions, and revenues from CERs jointly owned by both (i.e. that share of CER revenue to support climate change activities). Vietnam has provided a lot of incentive for CDM projects such as fast deprecation of fixed assets, exemptions for import tax, exemption for land use levy, and price subsidies on products used by the projects. The project developers own the CERs and must register the receipt, allocation, and sale of CERs with the Vietnam Environmental Protection Fund (VEPF). The VEPF collects the CERs sale fees (1.2 to 2%) and fees must be paid in full before the transfer of the CERs.

In reference to the Carbon Project in Cambodia, he briefly described the existing CDM project and voluntary carbon offsets. He stated that there is no legal requirement for project developers to inform the DNA in the context of the VCM and presently, at least four projects have been implementing in Cambodia including improved cook-stoves, biogas digesters, rice husk gasifier, and community forestry. As has been seen, there is a good balance between the compliance market and voluntary market, so the focus should not be only on the CDM as there might be opportunities in the VCM as well.

Projects are concentrated in large industrialized countries where carbon credit can be produced cheaply. It is expensive to produce carbon credit in Cambodia as in other LDCs. The potential for carbon offsets in Cambodia consists of small-decentralized projects which involve higher management and administration costs per credit produced.

Dr. Thanak also provided an analysis of the strengths and gaps of the Cambodian carbon offset scenario. The strengths are a working CDM governance structure (i.e. well-functioning DNA with clear procedures), growing interest among local NGOs and private sector firms, no taxation of carbon credits produced in Cambodia, and ownership of carbon credits by project developers. He stated that to follow the rules of the case studies from Vietnam and China are quite complex, while for Cambodia it could be of advantage due to fact that the procedures are really streamlined.

However, there are some gaps such as:

- no clear national regulatory framework for carbon credits,
- limited awareness of technologies for sustainable energy (e.g. renewable energies, energy efficiency) and of carbon sequestration in forestry,
- limited capacity and experience to develop carbon offset projects,
- no private financing available for project developers (i.e. limited awareness among financial institutions),
- no public finance (e.g. grants, investments) available for project development, and
- limited public support for project development (including in-kind)

In the last section of his talk, he highlighted the practical issues to be considered for a national carbon policy, which the RGC aims to formulate. He provided three examples (i.e. Chruk Skome Swine Farm, Prei Reul Forestry, and Teuk Tchou Hydro) of existing projects in Cambodia to reflect on the question "Who owns carbon credits?" These examples demonstrated the different involvement of stakeholders together with the different complexities inherent in each project. He stressed that the ownership of CERs may be different from one country to another depending on domestic laws. However, in the case of Cambodia, clarification of the property rights of project participants may give investors the confidence that CDM projects can be safely implemented in Cambodia. Currently, within the framework of international law there is a presumption that Cambodia has a sovereign right to the GHGs reductions achieved by CDM projects hosted within its jurisdiction as well as the CERs. In the absence of domestic laws, it may be assumed that these rights are transferred by Cambodia to the CDM project participants by the approval of the project by the DNA.

He then posed the question "what domestic policies can support carbon offset projects in Cambodia? He mentioned that it is hard to develop profitable carbon offset projects with high sustainable development benefits and taxation of carbon offset projects (i.e. CDM and voluntary carbon markets). There is a need for clarification of the following:

- fiscal incentives, exemptions from taxes (e.g. income tax, VAT, and levees on credit sales) and import duties,
- subsidies and preferential treatment for projects with high sustainable development benefits (should there be a priority list?), and
- how should revenues from CERs or Verified Emissions Reductions (VERs), project assets, and business revenues be taxed? Should there be preferential tax treatment?

In addition, the roles of government agencies in supporting carbon offset had also introduced such as:

- providing free access to available data on energy production and forest inventory,
- help liaise with local authorities and other stakeholders,
- share experiences of carbon offset activities in Cambodia,
- promote Cambodian carbon offset activities with foreign buyers and investors, and
- provide clarification on the official government position on carbon policies

He, concluded by saying that there is only so much a carbon credit policy can achieve since market based mechanisms depend on the broader economic and investment context of Cambodia. Consultations with local developers and stakeholders on the key elements of a carbon policy may provide a participatory basis for future legislation. A complex layer of carbon legislation, clarification of taxation, and ownership rights that are more appropriate are necessary

QUESTIONS AND ANSWERS

Mr. Sok Piseth, **MoWA**, asked, what are the differences between green growth and green economy?

Ms. Aneta Nikolova stated that there is not much difference. The differences are that green growth first originated in our region before it became green economy. Green economy also tries to involve developed countries that are actually controlling their growth, and they are doing a lot more managed growth especially during the financial crisis as they have very few chances for growth. The green growth concept has been accelerating due to the ambition of developing countries, for example, the countries want to achieve 8-10% annual GDP growth. How to make economic growth feasible and sustainable was the objective of the green growth approach. Actually, this happened in 2007. It happened in the Republic of Korea. Korea is the leader of green economic growth in our region. Therefore, there is not much difference in the sense that green economy is looking at solutions for poverty, because without solutions for poverty there is no buy-in for the green economy. It just creates a common ground between the developed and developing countries.

Mr. Teak Seng, WWF Country Director, posed several questions beginning by saying that to change from the current economic model based on fossil fuels and old technology will be very costly. It needs high political commitment and private sectors to work closely with government and other partners to achieve green growth/green economy. However, for the current situation in Cambodia or in the GMS region, what does it take to replace the old technology when current economic development pretty much relies on it while maintaining the economic growth of the region and in the country?

Secondly, when will the concept of green growth/green economy be accepted by private sectors or in particular by companies to move towards green economy and green development for the region?

The third question is what the government should do to make this happen as it is costly to promote green growth and probably private sectors will not agree to commit the needed resources.

Fourth and this is important, when talking about ecological tax reforms which are going to be taxed on a number of commodities, payment for environmental services could be taxed on a product made from the resources. Would you see these linking up to government strategies to alleviate the poverty?

Ms. Aneta Nikolova, first, answered about how to get out of the fossil fuel trap. One option is to study the cost of using fossil fuels in a country and to see which sector is using it the most and how this could be reduced and then generate savings from not buying the fossil fuel. Micro financing is very important. A case study in Bangladesh 'Shati' focuses exactly on energy supply tools for villagers, one of which is biogas which is already being done very well here in Cambodia. This is also a good solution, but it is better to combine everything – biogas (CH4), solar power, windmills, and other types of renewable energy especially in areas where you do not have any energy.
In answer to private sectors buy-in and how the government deals with this issue, she mentioned that green growth is the interaction

between three parties. The government takes the lead, and private sectors and stakeholders need to provide the supports.

What is the common ground? The common ground is economic instruments, for example, the subsidy for countries to use fossil fuels. In reality, imported fuel is costly, but it is sold at a reasonable price due to the presence of subsidies. So, how can fossil fuels be replaced? There are many emerging technologies such as solar trucks and solar paint, which is not expensive. The private sector will start buying in when they analyze how expensive the resources are they are using really cost. For example, in China, a leather company has become very successful because they have reduced their use of natural resources throughout the whole production process. They conducted audits on every step of the manufacturing process. They reduced the costs of production while from the savings they realized in carbon they built factories in other parts of Asia. When the resources are priced appropriately, it is not only about payment for environmental services but about paying for them at the right price.

Everything used in developing countries is subsidized and the subsidy tendency to be reviewed. Development of the environmental taxes by not adding anything to anybody, but are charging for the real use of the resources. It is really about encouraging companies and users to reduce use, for example, not to leave the air-conditioning on when people go for lunch. We also do it in the UN buildings. Malaysia is a great example. When they say the government must reduce their use of electricity by 20%, they are very serious about it. Therefore, this is also something about which we have to think about. When we determine the real cost of resources, then resource saving becomes the natural incentive and natural behavior, because why waste something which is costly. We are ready to help the government of Cambodia to implement the green growth road map.

Ms. Chim Kalyaney, **Deputy Director, Department of Environment, Preah Sihanouk,** had doubts related to carbon/GHGs reduction in Cambodia and the importation of second hand vehicles that emit a lot of pollutants into the atmosphere. How can the authorities deal with this matter?

H.E. Chheng Kimsun suggested that for developing countries, the measurement of how the countries developed is based partly on carbon emissions, as seen when discussing the more developed countries with higher emissions of carbon. This is a source of pride for Cambodia, which has witnessed a lot of importation of second hand vehicles and it clearly shows the development and progress of Cambodia, but there are limitations in that we are able to import only second hand vehicles.

Ms. Aneta Nikolova explained that actions could be initiated to convert second hand vehicles into electric-vehicles and taking advantage of solar energy by creating a charge grid in the city of Phnom Penh. China produces electric engines and China has a preferential agreement in the ASEAN, of which Cambodia is a member. This can create new jobs, new enterprises, and develop new skills. Converting cars and motorcycles are the biggest opportunity and by doing so pollution will be drastically reduced and there would be a reduction in the number of cases of cancer in the future. In Thailand, for instance, 85% of cancer cases occur not only in the lungs, but also in the liver and pancreas and caused by air pollution from traffic and transport sources. Therefore, it is a serious issue.

Dr. Tin Ponlok responded to **Ms. Aneta Nikolova** in reference to green growth, that it came to Cambodia a couple years ago through support from UNESCAP in which US$ 2 million given by the Korean government to support its implementation. He thought that not too many people clearly understand this concept. Dr. Ponlok commented that for a technology to be applicable it has to be technologically proven, culturally and politically acceptable, environmentally friendly, and economically viable. Based on this, renewable energy be divided into two groups: those that can be competitive in the market, like big-scale renewable energy or biogas digesters, and those, which cannot enter the market like micro-hydro and solar power. If we look at developed countries, fossil fuel has a big share of the market, whereas renewable energy has only a small share as can be seen in the USA (1.5%). There is a long way to go for renewable energy to make structural changes to the energy profile of a country. Therefore, we need to approach green growth

development cautiously because Cambodia is a developing country. He thinks it is a fantasy to talk about solar systems on top of vehicles, as it is not commercially viable even though there is an annual competition in developing solar systems.

Ms. Aneta Nikolova responded to Dr. Tin Ponlok by reiterating that green growth is neither about money nor technology. It is about the development paradigm that is being pursued. She explained by giving an example that if one country is more rural and the rural development model needs to consider. The issue in Cambodia is that it has people dispersed in rural communities and they do not have access to any electricity at all. There is no light and they cannot study so they cannot learn. So, finding an energy solution for the local context is needed. Massive coal plants or nuclear power plants are not necessarily required for local people as the community has biogas. Moreover, biogas can provide light. She suggested that looking at the solution on the local level rather than copying big models is important.

Dr. Tin Ponlok said **Dr. Thanak** has given very good examples of how countries regulate carbon credit in the compliance market of the CDM. He is interested to know more because the carbon market is growing. In Cambodia, we have heard about a number of voluntary market projects as well. Therefore, how should a country like Cambodia approach this? Will the government have any rights in regulating carbon credits generated for this voluntary market?

Dr. Thanak stated that he has been trying hard to find out how the voluntary carbon projects in Cambodia work. There are projects that are registered in the MoE but maybe there are other people who are actually developing projects in Cambodia to follow the voluntary market and do not necessarily feel that there is a need to inform the government because there is no domestic law. The government might ultimately need to have some clarifications for voluntary project developers to inform the government, thus, the government may gain some idea who is doing what. This is really the minimum in the voluntary market. In the case of the compliance market, which is the second consideration of the CDM one, would need to go to the government. In Cambodia, you need to develop complicated frameworks for voluntary carbon projects that are the responsibility of the government and national stakeholders. There is nothing to prevent Cambodia from doing so. Some of the standards have been using, such as the WWF standard is the very minimum to inform the DNA when they are doing a voluntary carbon project. Some of the carbon buyers require even voluntary carbon projects to have some sort of no-objection letter from the government.

Ms. Khim Kalyany, **Department of Environment, Preah Sihanouk**, posed a question about the national policy on how the government works to reduce GHGs emissions. She suggested that the government should run a common bus line for students or other possible passengers as it would reduce GHGs emissions when compared to using private vehicles.

H.E. Dr. Sat Samy stated that actually, the government does not ignore the need for a mass transportation. In Phnom Penh, a public bus project was initiated and tested in cooperation with the JICA. However, it failed. Nevertheless, it would be a great contribution to future planning.

Mr. Luos Seiha, **SAK Company**, asked what the difference is between the compliance market and the voluntary market and when talking about "tax allowance policies", are there any countries developing carbon markets without tax allowance?

Dr. Thanak explained that basically, the compliance market comes from the Kyoto Protocol. Therefore, people are buying carbon credits because they have to buy carbon credits. Then, they have to go around and shop from different countries and different buyers. For the voluntary market, the company, institution, or individual could buy carbon credits but there is no legal requirement for that person or institution to do so. They are buying credits because of the personal value they place on the environment. The voluntary market is very small. Nevertheless, it is operating very smoothly. To answer that question quite simply, countries that have many projects like China and India definitely have some sort of levy or fee on CERs.

However, it also depends on the priorities of the government. For example, in China, the forest is the priority for sustainable development. Therefore, they are providing an incentive with low tax. However, if they think that the project does not bring sustainable development, an appropriate tax will be added.

PARALELL WORKING SESSION 3
CLIMATE CHANGE FINANCING

Co-Chairs

1. **H.E. Srun Dara**
   Under-Secretary of State, Ministry of Economy and Finance, NCCC Member
2. **Ms. Elisabeth Folkunger**, Environment and Climate Change Specialist, SIDA

AID EFFECTIVENESS AND COORDINATION

***Mr. Ros Salin**, Head of Policy and Aid Coordination Department, CDC*

This presentation discussed progress in promoting aid effectiveness with a particular focus on climate change in Cambodia.

Mr. Salin stated by saying that since the first national election, aid has increased noticeably, especially in the social sectors. He confirmed that there was a published document on "Aid Management in Cambodia" (updated in 2004), which clearly defines the responsibilities of the respective government ministries to implement the aid. The Ministry of Foreign Affairs and International Cooperation is the diplomatic window in the negotiation process between Cambodia and DPs. The MEF prepares the macroeconomic framework for the medium term and concessional loans and the MoP prepares national planning. For example, the NSDP (update 2009-2013) cooperating with other ministries and agencies, prepares the 3-year public investment plan. In addition, the CRDB/CDC manages and coordinates official development assistance(ODA) through national policy mechanisms and tools in terms of aid management. Line ministries prepare sectorial strategy, public investment, and play a role as the implementing agency. All mechanisms must be in line with the entire national development plan in order to support and achieve the Second Phase of the National Rectangular Strategy.

As stated by Mr. Salin, all mechanisms have implemented based on specific policy documents. These include a framework for managing aid, which clearly defines the roles of government and DPs and the Harmonization Alignment and Results (HAR) Plan. A 5 year action plan that was implemented from 2006 to 2010, reflecting the harmonization between the government and DPs, DPs and DPs, and aligning the aid given by DPs with the government's priorities and concentrates on output based activities rather than focusing on the pressure from the DPs. The roles and responsibilities of the government ministries are also covered in the action plan.

On the global mechanism level, the Paris Declaration has initiated in 2005 in which all partners must comply with the following conditions, harmonization, understanding based on government priorities, ownership, which means using the existing tools, and output based activities. Aid effectiveness is assessed every two years for all partner countries.

In reference to monitoring mechanisms, the CDCF is to be scheduled every 18 months and is chaired by the Prime Minister. This 2-days forum will discuss the progress made in the NSDP, resource mobilization, and to enhance mutual accountability. In the forum, the relevant ministries will present their respective plans and strategies to the DPs to have a better understanding of government priorities and the key priorities of DPs.

Furthermore, in respect of mutual accountability, what we have achieved on the national or sectorial levels will be emphasized among the DPs and relevant ministries. This forum will assist DPs to gain an understanding how aid is being used and managed and achievements thus far. Gaps, which require collective solutions at the national policy level, will also be discussed through the involvement of stakeholders.

Another mechanism called "GDCC" is to be scheduled every 4 months, chaired by the Deputy Prime Minister and the Minister of the MEF. This forum will follow up on the agreements made in the first mechanism, the Cambodia Development Cooperation Forum (CDCF) in which joint monitoring indicators had adopted. The line ministries who received

aid from DPs defined 20 indicators. The indicators vary from one ministry to another according to their specific sectors of activity. Generally, there are one or two indicators for each respective sector. For example, MOEYS and MoH have their own indictors. The agreement between the government and the DPs had also made in order to define the context of workable and implementable indicators for Cambodia. In principle, DPs provide aid together with the indicators that the implementing ministries must achieve. Sectorial and cross-cutting issues (i.e. gender and climate change) will also be discussed to ensure that these cross-cutting issues can be implemented in all relevant sectors. What are the roles of the MoE, the NCCC, and other concerned agencies and how are the coordination mechanisms to be carried out? For instance, we have experience with gender and education, they have their own TWG and sub-group to deal with sectorial issues in which the minister functions as the focal point. The emerging issues, such as natural disasters, the global economic crisis, and others are also topics to be discussed in this meeting.

The TWG at each ministry is a core team who deals with implementing, monitoring, and reporting progress related to the HAR Action Plan and reports to the above two meetings. This group is organized into sub-group or group, which consists of about 30 members from different ministries.

Mr. Salin stated that it is under consideration if the MOE can have a separate TWG because climate change is a broad crosscutting issue, which requires a clear mechanism, which easily to work out with DPs, and in line with existing mechanisms.

He also mentioned that during these forums, proposals or suggestions from both parties (i.e. DPs and government) would be raised in order to find solutions that would implement the aid in an effective manner. Because of this, the aid to Cambodia keeps increasing.

Presently, Mr. Salin said we are applying programme-based approaches, which have been modified to fit the Cambodian context. This approach will provide options to DPs to support Cambodia in the form of funds, pooling funds, or individual projects. However, it must support sectorial development, for example, the NAPA, so projects must be in line with it according to the set indicators. Recently, more sectors have been implementing in this manner, as in fisheries and gender.

Finally, Mr. Salin explained the ODA database, which is used for managing the funds allocated for development in each sector in Cambodia, including the final assistance for climate change.

ADAPTATION FINANCING

***Ms. Sophoan Phean**, Regional Policy Advisor*

This presentation discussed the status of adaptation or mitigation financing from both the demand and supply side focusing on the LDCs.

Ms. Sophoan's presentation was mainly based on the report entitled "Owning Adaptation" from Oxfam, which described adaptation financing in six countries one of which is Cambodia.

To start with, she gave an overview of the reasons why many countries, especially LDCs requires climate change financing. Depending on the CoP meeting and agreement, LDCs/DCs demand US$ 100 billion annually from developed countries to assist in mobilizing the needed resources to adapt to climate change. The budget will be used to solve problems such as impacts from disasters, insurance on agricultural productivity (i.e. crop insurance), and infrastructure construction (e.g. sea intrusion, flood management). Cambodia has identified 39 projects with 20 priority projects under the NAPA. However, the adaptation capacity at the community level was not included.

However, she emphasized that of the approximately 32 billion USD pledged, only about 2 billion USD has been given so far. Moreover, the distribution of climate change funds is not balanced between adaptation and mitigation, where the amount for adaption (14%) was relatively low compared to mitigation (79%).

Ms. Sophoan also talked about the shortcomings of the existing funds that result from the lack of clearly identified leadership or adequate coordination, and the lack of

participation and accountability of civil society and vulnerable communities, women in particular. These will lead to the use of these funds in an inefficient manner.

The GCF is another climate change financing mechanism, which has been agreed upon. However, it still does not exist. The GCF provides the potential to build a new approach for managing climate change finance at the global level. Accountability, transparency, and country ownership are the conditions set out in the GCF.

Accountability means governments and international agencies must be held accountable for the fair and equitable distribution of adaptation resources.

Transparency is the decision-making process of how adaptation funds are managed and allocated, and must be transparent and involve local communities.

Country ownership means that governments and local communities must be fully engaged in the process of designing and implementing adaptation programmes and projects. To achieve the goal of country ownership, financing by the GCF should be based on:

- National Level Strategies;
- Direct access to finance by a national level entity or led by the government;
- Meaningful and inclusive civil society and community-level participation;
- Full accountability to civil society and vulnerable communities in determining how funds are disbursed and used;
- Gender equality and women's leadership in the development and implementation of national strategies;
- A robust monitoring and evaluation process of the implementation of climate finance that includes full participation of stakeholders; and
- Full transparency regarding the specific funding and plans for programmes and activities

What would work for Cambodia? Ms. Sophoan stated that this forum provides a great opportunity as Cambodia is preparing itself to formulate the national strategic plan to address climate change. She added that to have an effective adaptation strategy, major challenges need to be solved such as the capacity of institutions in how to manage, prepare, and implement the plans. Cambodia has two main programmes called the CCCA and the PPCR. These are opportunities for Cambodia to have its own trust fund as stated by H.E. Dr. Mok Mareth.

Ms. Sophoan confirmed that Cambodia is the only country that seriously promotes participation of CSO groups, for example, in the PPCR, which cannot be found in other countries, especially in developing countries. Gender is also a highly focused issue in Cambodia as we are learning through the presentations of this forum. Therefore, Cambodia is moving in the right direction.

Finally, she described projects that can be case studies to better understanding about the participation and gender issues. Those projects are health equity and global funds through participatory fund management, Civil Society and Pro-Poor market through community empowerment, and World Fish Center capacity building.

QUESTIONS AND ANSWERS

Mr. Yuk Sothirith, **British Embassy**, asked Ms. Salin to provide a bit more detail on how to manage and coordinate in the area of climate change.

Mr. Ros Salin said that, actually, the aid for climate change and the existing mechanisms have been applying. However, it has not yet been implemented on a large scale in Cambodia. So far, we (the CDC) have just gotten the "ODA" from donors as usual. It is just the starting point. Moreover, the technical working group (TWG) has not established yet so using it as policy dialogue to negotiate with our donors cannot be done at this stage.

Mr. Alex Heikens, UNDP Asia-Pacific Regional Centre, asked would the climate change financing go through the ODA to Cambodia or will it be given to Cambodia in a different form than the ODA?

Mr. Ros Salin responded that the CDC has been asking for help from DPs to develop the data code of the ODA database and upload it online so that all the donors can fill out their details of ODA provided by Cambodia. In any case, it is just the starting point for Cambodia and we (the CDC) have not brought up the

topic concerning climate change financing with donors yet.

Mr. Sovanny, **Department of Environment, Ratanakiri,** asked that of all the top 20 priority projects, why only two projects could be implemented?

Mr. Ros Salin answered that the budget is still unavailable to implement those projects. He suggested that the MoE might be a good place to obtain more information on this.

Mr. Sovanny, **Department of Environment, Ratanakiri**, asked, why isn't there any cooperation between NGOs and government agencies in terms of information sharing?

Mr. Ros Salin said that, for a variety reasons, we can work together in sharing information but we fail to do so.

PARALELL WORKING SESSION 3
CLIMATE CHANGE CROSS-CUTTING ISSUES

Co-Chairs:

1. **Mr. Meng Monyrak**, Vice-Director of Department of International Conventions and Bio-Diversity, MoE
2. **H.E. Kul Vathana**, NCCC Member, Under-Secretary General of CMNC

H.E. Vathana highlighted that climate change is a cross-sectorial issue, which requires sectorial involvement to deal with the problems as was clearly stated by H.E. Deputy Prime Minister and the Senior Minister. The two main activities in climate change are adaptation and mitigation. He clearly stated that an integrated approach is currently popular and effective in the context of sustainable development, and it best addresses the impacts of climate change.

BIODIVERSITY AND CLIMATE CHANGE

***Dr. Geoffrey Blate**, Senior Advisor, Landscape Conservation and Climate Change, WWF Greater Mekong Program, WWF*

This presentation focused on credible evidence of past climate change impacts on Cambodia's biodiversity under different climate change scenarios, potential impacts of response measures to climate change on biodiversity, priority areas for future research, and some key policy recommendations.

Dr. Blate started his presentation by defining biodiversity as "life on earth which is not just species but also different levels of organization and function". Biodiversity in Cambodia and the Mekong River region is extraordinarily diverse. The Biodiversity of the Mekong River is the second most diverse in the world and the largest inland fisheries, and a vital source of food and water security for 60 million people in the Basin. Furthermore, it is remarkable that Cambodia depends on its biodiversity and ecosystem services to support the people's livelihoods and the economy. However, the biodiversity in Cambodia is extremely threatened by not only the exacerbating effects of climate change but also by hunting, and overharvesting.

Up to now, there are no observed impacts on Cambodia's biodiversity definitively attributed to climate change and no literature due to lack of long-term studies, monitoring, and targeted research. The challenge is that the identification of climate change indicators has done in an "open systems".

The potential impacts of climate change on biodiversity directly impact species and biodiversity through changing ecosystems and affecting on species living in small ranges and restricted areas, poor dispersers, mountain-top and low-lying island endemic species, extreme niche specialists (i.e. a species that is very specialized depends on a very particular habitat), and species with narrow physiological tolerances.

Dr. Blate also described some potential impacts of climate change on biodiversity. Reptiles and amphibians are more likely to be severely impacted by climate change in South East Asia, including Cambodia since they are very sensitive to changes in temperature. The reduction of forested areas and displacement of evergreen forests by deciduous forest types, which tend to be better adapted to the changes in the climate.

Wetlands are also especially vulnerable because they tend to be shallow and will evaporate faster. Isolated wetlands actually dry up faster and they disappear from the

landscape sooner than wetlands that are well connected to the rivers.

Fire tends to favor a drier climate and higher temperatures. In SEA, Cambodia's economy is most vulnerable because it is significantly dependent on fisheries. If the economy is indeed tied to the fisheries, and many people depend on the fisheries, the potential negative impacts of climate change on the sustainability of fisheries are very high. Other potential impacts on biodiversity are changes in ecosystems, increasing invasive and/or tolerant species, and food insecurity as many people depend on agriculture, fisheries, and Non-Timber Forest Products (NTFPs).

Dr. Blate also highlighted that some adaptation and mitigation measures should be taken into account including:

- reducing fragmentation and ensure connectivity of habitats to allow species dispersal under different scenarios,
- landscape planning to ensure connectivity of core biodiversity habitats,
- utilize "soft or natural" infrastructure that is adaptable to climate change, and
- integrate ecosystems and communities in adaptation and development planning

Specifically, REDD might be a nice synergy for adaptation to maintain the resilience of the system as well as mitigation of the global problem. However, working from a regional perspective, collaboration is very important to implement the REDD effectively by managing "leakage", or losing carbon across borders.

The potential impacts from human responses to biodiversity are likely to dwarf and are much higher than the direct impacts of climate change on biodiversity. It is important to take a holistic perspective and to improve adaptation to biologically diverse systems providing resilience to climate change.

Some priority areas related to climate change and biodiversity requiring research are:

- impacts on ecosystem integrity and services at national and regional scales from planned development, and demonstrating alternatives to hard infrastructure,
- adaptability of institutional frameworks,
- areas for policy revision to enable and mainstream climate change adaptation and mitigation,
- develop integrated approaches to addressing climate change, and
- identification of capacity needs to develop integrated approaches to land use planning

Dr. Blate also mentioned the new institution called "ELAN" (i.e. Ecosystem and Livelihoods Adaptation) which is a consortium of groups working on adaptation. It is not a closed consortium and others are welcome. It is working on developing integrated approaches. Some of main reasons for this integrated approach are:

- vulnerable communities and ecosystems are at risk from climate change and other pressures,
- "Hard" infrastructure is dominant, but risky to invest,
- promoting local solutions to enhance the resilience of people and the ecosystems they depend on, and
- promoting "natural infrastructure." This does not mean that one should forget hard infrastructure since it is important in some cases. However, soft infrastructure should be kept in mind at all times

Lastly, Dr. Blate provided some key policy recommendations as follows:

- Supporting the idea to look at alternatives to hard infrastructure, as natural infrastructure always provides a lot of resilience. Investment in natural infrastructure not only provides resilience to structures, it is also good for adaptation and mitigation.
- Policies, plans, and infrastructure need to be flexible because the risks and uncertainty brought about by climate change.
- Planning and coordination is required across sectors and new partnerships are needed across sectors for learning and action.

- To develop a supportive and enabling environment (including improved governance) for successful adaptation and mitigation measures.
- As well as committing to regional collaboration to address climate change and the aggravating impacts that stem from development

GENDER AND CLIMATE CHANGE

***Ms. Annaka Peterson Carvalho**, Regional Program Coordinator, Oxfam America*

This presentation discussed climate change impacts and responses through a gender lens and provided lessons learned from the region for designing gender-proof climate response measures.

Ms. Annaka reported that some of studies have found more women than men died during disasters because of their different vulnerabilities. Women's vulnerability in many situations is the direct result of the gender roles in society and gender inequality is linked to vulnerability and risk. An increase in natural disasters and shocks from climate change can potentially exacerbate gender inequality. In Cambodia, more girls than boys dropped out of school to contribute to household income as the important strategy used by families in times of stress or shock. The amount of care and attention given to gender equality and climate change can positively influence or limit the effectiveness of efforts to address climate change. For example, one important intervention in Cambodia should be to get information about climate events to people, especially at rural areas, especially, women. Sixty six percent of men are more likely to access and receive information about climate events than women do (6%). It is important as people can respond to climate change events when the effort to get the information increases.

She asked "Why does climate change hit women harder?" In general, climate change affects women more significantly because of existing gender differences and inequality. Globally, women make up 77% of the poor and they have less access to and control over resources, services, and decision-making. Women tend to be very active in sectors most likely to be affected by climate change.

In Cambodia, women specifically play a major role in agriculture. Seventy one percent of women depend on agriculture as a primary livelihood, which is one of the most vulnerable sectors to climate change. At the same time, women are important actors in adaptation to climate change in this sector. On the other hand, women receive only 10% of agricultural extension services. In addition, both women and men play complementary roles in ensuring food security; however, women play vital roles in natural resource management and ensuring nutrition. An essential role of women is to access or to gather household water on which they can spend roughly 1 or 2 hours per day. In the dry season, the time of collecting water increases to 4 hours per day.

Ms. Annaka emphasized that in Cambodia, climate change will mean that women face:

- increased pressure because of climate change in order to find alternative ways of feeding their families, gathering natural resources, and finding alternative off-farm income
- increased competition for water and other natural resources, which means; women have to spend more time gathering these resources for the family
- negative health effects and increased responsibility they have as caregivers

She also raised two examples of NAPA projects, which are focusing on gender in Cambodia. The first project is Rehabilitation of a Multiple-Use Reservoir in Takeo Province that aims to improve water storage capacity for different uses including irrigation, water supply for urban areas, and biodiversity. The second project is Community Mangrove Restoration and Sustainable Use of Natural Resources in Kampot, Kep, and Koh Kong provinces, which aims to stabilize the shoreline, reduce seawater intrusion, reduce coastal erosion, and to provide protection to coastal areas from storms.

The NAPA is designed to contribute to the development of resilience in Cambodia. In order to ensure both men and women benefit from the projects it is necessary to use a gendered approach. In engendering the NAPA, things that need to be done are:

- vulnerability and risk assessments and analysis need to take into account differences amongst men and women while the NAPA focuses on the physical effects of climate change,
- criteria for prioritization and project selection should include gender equality,
- facilitate the participation and representation of both men and women in the process, and
- refine projects before implementation

A gender responsive climate change initiative must incorporate the principles of gender mainstreaming which include both advancing gender equality and promoting women's empowerment. Gender must be integrated into all aspects of programmes, projects, and policy cycles including analysis, objective research, monitoring, and evaluation. Since gender inequality is one of the root causes of vulnerability to climate change, adaptation efforts should focus more on social issues, as well as physical issues like water systems.

QUESTIONS AND ANSWERS

Ms. Chhim Rumuny, CDRI, stated that in the environmental concept, nothing comes free - all things have its own value. What are the compensations for the loss of biodiversity or natural resources, which are the results of climate change? Is there any policy that compensates losses caused by climate change?

Dr. Geoffrey Blate responded by saying, that at the present time there are no global policies like one that **Ms. Rumuny** is talking about. As is well known, the Kyoto Protocol is a global framework but there is no compensation in there. However, in Copenhagen, many countries made commitments with respect to REDD, adaptation, technology transfer, and capacity building. So, some of those things could be used, not necessarily as a compensation for biodiversity loss, but activities to prevent biodiversity loss.

Ms. Chim Kalyaney, **Deputy Director, Department of Environment, Preah Sihanouk ,** said that she is not clear with the terms "soft", "hard", and "natural" infrastructure, which need further clarification.

Dr. Geoffrey Blate answered the question by explaining that in the context of climate change adaptation, many options are available, for example, for flood, building a dam might be an option while drilling more wells or reservoirs might be options for droughts, or building sea walls to prevent damage from storms. These are called hard infrastructure. In general, hard infrastructure is costly, comes with a variety of high risks, including the risk of failure and many uncertainties in the future. Therefore, soft and natural infrastructure might be good alternatives. Soft infrastructure is about policy, insurance, zoning, land use planning, and limiting the exposure (one of the elements of vulnerability). That would be the first step before starting to make large investments in hard infrastructure. Natural infrastructure was illustrated by explaining that a lot of resilience exists due to the strong inter-relationships between large ecosystems in Cambodia and the rest of the region. These can be an advantage in terms of natural infrastructure.

Mr. Kong Kimseng, **IUCN**, said that from what he can see from the presentation is that policies, plans, and infrastructure need to be flexible to adapt to climate change. In contrast, to accomplish this is costly in his point of view. So, what approach would be appropriate to have the flexibility and sustainability towards climate change, but not the high cost?

Dr. Geoffrey Blate explained that the projections for the future of climate change are very uncertain, but flexibility is something to be maintained. For example, building a dam in a certain place, then in years to come due to political changes, or environmental problems the dam is seen as a problem. There should be no regrets in the solutions we choose. In all cases projects that are cost effective, low cost, designed with community engagement, and environmental friendly characterize the natural infrastructure approach.

H.E. Kul Vathana shared his thoughts on the term "flexibility" to mean that planning and strategies must be smooth and flexible according to the situation.

Mr. Sok Piseth, WoMA, asked that as Gender and climate change are both cross-cutting issues, what are the criteria to identify vulnerable people, for example, women?

Ms. Annaka Peterson Carvalho responded that there are many different frameworks for identifying potential vulnerability and risk. She was not referring to a specific issue, but, making sure everyone understood that gender mainstreaming principles can be applied in implementing vulnerability and risk assessment to where and when women and men are vulnerable.

Ms. Chhim Rumuny, **CDRI**, asked, what are the coping strategies to help women access food to maintain food security in the home when climate change occurs?

Ms. Annaka Peterson Carvalho mentioned that in Cambodia, people experience disasters quite frequently such as small-scale droughts, and floods. People use many coping strategies, such as gathering non-timber forest products or other natural products that they use as food, or migrating to find employment. The thing about climate change and coping strategies is that sometimes stress and the frequency of stress and shocks may increase, and the availability of resources that women depend on to help their family cope during times of stress could probably be predicted.

Dr. Geoffrey Blate responded to the point about women's use of natural resources that it was one of the real reasons why integrated approaches is needed. Because in terms of stress, disasters, and so on, families are going to turn to natural systems and as a result, natural systems will be further degraded. In the end, they will not have these systems as safety nets.

Dr. Kien Tran-Mai, **MRC**, commented on **Ms. Annaka Peterson Carvalho**'s presentation that it is good to use the existing approach for example the NAPA in addressing issues. However, why not to go around and think of helping the WoMA to mainstream gender into climate change and DRR as this may be a better framework for the entire country. What were the reactions of the NAPA implementers to this idea?

Ms. Annaka Peterson Carvalho responded that it is vitally important that the NCCC had taken a significant step by meeting with the WoMA in October 2010. She thinks that it will need a lot of effort to work with the MoWA to help mainstream gender into climate change strategies, sectorial-based strategies, and the existing activities of the WoMA. It is an important starting point in integrating gender and climate change. Therefore, it is vital to bring climate change and gender mainstreaming together. In reference to the reactions from NAPA implementers, of course, they were just examples, so no reactions or suggestions could be made.

PLENARY SESSION – CLIMATE CHANGE FINANCING

Co-Chairs:

1. **H.E. Srun Dara**, Under-Secretary of State, Ministry of Economy and Finance, NCCC Member
2. **Ms. Sophie Baranes**, Deputy Country Director, UNDP

LAUNCHING CEREMONY FOR THE APPROVED GRANTS FROM THE CCCA TF 1ST CALL

***Dr. Tin Ponlok**, Deputy Director General,* GDANCP, *Head of CCCA TF Secretariat, MoE*

Dr. Ponlok provided a concise overview of the CCCA. The CCCA is a comprehensive programme launched in February 2010 to address climate change and disaster risks in Cambodia. The overall objective is to strengthen the capacity of the NCCC to fulfill its mandate to address climate change and to enable line ministries and CSOs to implement priority of the climate change actions. The areas of focus are capacity building and institutional strengthening in preparing for and mitigating climate change risks and directly helping vulnerable communities by enhancing their resilience to climate change and other natural hazards.

On the other hand, the CCCA TF is a financing facility to support activities under the CCCA Programme, which is sponsored by the EU, SIDA, Danida, and the UNDP. The CCCA TF is managed by the MoE on behalf of the NCCC and administered by the UNDP. The CCCA TF aims at supporting key line government ministries/agencies and CSOs with a key focus on building their capacities to address climate change. It is also compliments a parallel WB/ADB-administered PPCR programme which directly provides funds to key sectors to implement climate change resilience actions.

Dr. Ponlok reported that the first call for proposals was launched in Febraury 2011. The CCCA TF solicited the climate change adaptation projects in the following key sectors in line with existing national priorities: Agriculture, Forestry, Fisheries, Water Resources, Meteorology, Infrastructure, and Health. As a result, eight projects had been approved out of 60 concept notes submitted in which most of vulnerable provinces covered taking sectorial and crosscutting issues into consideration are.

Finally, he concluded, Cambodia needs to improve its absorbing capacity and the CCCA TF serves as a precursor toward a more permanent funding mechanism for Cambodia, a unified engagement point for DPs and a multi-donor financial facility to provide resources for climate change activities in Cambodia. The future TF should be built based on key principles such as national ownership, stakeholder representativeness, trust building, transparency, professionalism, accountability, neutrality, competiveness, effectiveness, and efficiency.

REMARKS FROM THE 1ST CALL'S WINNER

***Dr. Kao Sochivi**, Deputy Director General, Fisheries Administration, MAFF*

Dr. Sochivi presented the issues related to the fisheries sector, which is one of the most important parts of Cambodia's economic development and vital to the livelihoods of the people. She stressed that it is important to understand what the possible coping measures to deal with the impacts of climate change in this particular sector are. The Fishery Administration (FiA) has attempted to determine the mitigation and adaptation options in order to address climate change in the fisheries sector and contribute to sustainable development. FiA prepared a proposal with the cooperation of potential partners and submitted it to the CCCA TF for funding. Luckily, it was one of the eight approved projects, which successfully received an award for funding. This project has three main objectives. First, awareness raising on the causes of climate change and its impacts on aquatic ecology and fishing communities in order to respond to the needs of adaptation to climate change at national, sub-national, and community levels, and for the stakeholders. Second, capacity building for all levels of fisheries administrative officers from national to sub-national levels, national resource managers at the community level, and DPs to address climate change through the integration of policy, strategic planning and other guidelines. This means that the strategic plan will be formulated for the fisheries sector to adapt to climate change. The final objective is to demonstrate the appropriate options to address climate change in the fisheries sector.

She added that this project will be implemented with the collaboration of the FiA and the World Fish Center. Finally, she thanked the CCCA TF and donors who supported this project. The support that is urgently needed for the fisheries sector to deal with climate change.

REMARKS FROM THE 1ST CALL WINNER

***Mr. Chea Sarith**, President, WOMEN*

Mr. Sarith recognized that climate change does exist and it affects the livelihoods of people especially those who live in rural areas. He is well aware of the negative impacts of climate change, which cause changes in annual temperature, the rise in sea levels, and changes in precipitation. Thus, the government and CSOs together with local communities have planned to adapt to these changes. However, adaptation to climate change is a new concept that we are collectively working very hard on to cope with it.

Mr. Sarith mentioned that WOMEN, a local NGO, founded in 1993 have various major projects mainly related AIDS issues.

He hoped that the newly approved climate change project would be successful and produce satisfactory outputs as in other previous projects. A project called "Together Addressing Climate Change Initiative - Prey Veng" was evaluated and approved for funding under the CCCA TF.
The project is expected to function in multiple sectors engaging the participation of the provincial authority and the local community in order to enhance the capacity, coordination, and participation of all stakeholders and improving the awareness of natural resources management and climate change. The project will work with the relevant departments, such as agriculture, fisheries, and environment in order to help local people in technical

knowledge. We will also work closely with people who are in the most vulnerable groups, such as the poor, fishing communities, women, youth, and the local community in responding to climate change in order to support these groups in being able to adapt to the negative impacts of climate change.

IMPRESSION REMARKS

***Ms. Kristina Kuhnel**, Minister Counselor, Country Director, SIDA*

Ms. Kuhnel mentioned that, as we are all aware of, the negative impacts of climate change are increasing as evidenced on the global level, regional, national, and local levels. At the same time, however, competing interests resulting from the effects of the current global financial crisis may challenge progress in this area and overall international commitments to fight and limit the effects of climate change.

Nevertheless, the situation in Cambodia and in other developing countries is that women and men need to respond and adapt to the impacts of climate change and demands that we take action now, despite uncertainty at the global level. The recent flooding here in Cambodia is perhaps the signal of what may eventually become the norm in a world of a changing climate. We ask the cooperating partners "Are they pleased to be engaged in an initiative such as the CCCA?" This initiative is able to demonstrate concrete actions as we have seen today and build institutional capacity, establish systems and coordination mechanisms that with the RGC in the driving seat to provide the national response to climate change.

She also highlighted the progress made this year with the CCCA is encouraging having taken the important steps of approving eight grants as seen here very clearly today. We are beginning the process. It is now possible to invest in a nationally owned system that is a Trust Fund. This fund can ensure an increase in the harmonization and coordination among relevant ministries and CSOs, as well as support the integration of climate change into international and sectorial programmes and plans.

The grant components of the programme play important catalyst functions. Many of the projects deal with crucial issues as we have heard about today such as building climate change resilience for small scale farmers, integrating climate change activities across sectors of government, increasing awareness on climate change, and ways to cope with climate change and related hazards. We as the cooperating partners look forward to continue our cooperation with the RGC, the UNDP, CSOs, and private sector to ensure this programme becomes a success.

Finally, on behalf of the Swedish embassy, The EU delegation, and the DANIDA, she would like to extend her deepest congratulations to the eight projects that were able to obtain the grants today. We look forward to following closely the implementation of the projects and very importantly experiencing results on the ground that will improve the life and livelihoods of the poor, and the vulnerable women, men, and children in Cambodia. Thank you very much for your attention!

First Call's Winners (CCCA, 2011)

ORIENTATION TO CCCA TF

***Ms. Reiko Kurihara**, Trust Fund Administrator, CCCA TF Administrator, MOE*

Ms. Reiko Kurihana spoke in reference to the CCCA TF. The CCCA TF is a pilot mechanism set for building preparedness toward a society resilient to climate change in Cambodia and the presentation today further orientated the CCCA TF to the Applicants.

The CCCA TF aims to build preparedness via knowledge sharing and mainstreaming of climate change issues into different sectors making the issues widely known and understood. At all levels, the CCCA aims to facilitate partnerships amongst the government and civil society, and prepare Cambodia step by step for climate change financing and implementation.

The CCCA TF principally supports the initiative of building preparedness at national and sub-national levels to bring it in line with national priorities, understand and address climate change as a development issue, build capacity, and foster national ownership.

The CCCA TF will seek to provide grant-funding support for the capacity development and institutional strengthening of the NAPA, NSDP-Update, and the CCCSP, and projects, which will facilitate and ensure the integration of climate change considerations into national policy, strategy, plans, and programmes. Other possible funding projects should be the ones that seek to integrate climate change considerations into other mainstreaming actions for other cross-cutting issues, raise awareness and preparedness in the government and the broader society, and contribute to the establishment and operation of a climate change Knowledge Management and Learning Platform.

The process was clearly outlined by Ms. Reiko Kurihana that all interested applicants who either are qualified from government institutions or in partnership with CSOs may apply for the funding. CSOs or International Organizations must be in partnership with government institutions. The funding allowance for each project of government applicants is up to US$300,000 or up to US$150,000 for CSOs applicants and the duration of the project will be defined for each call.

Ms. Reiko Kurihana suggested that each project should find relevance of climate change within their area of work rather than something new or from their own area of expertise and consider climate change as one of the risks that pose the greatest threats to our lives – "not in isolation" to other issues.

QUESTIONS AND ANSWERS

Dr. Kao Sochivi, **FiA**, wondered whether the successful applicants in the first call of the CCCA TF would be eligible for the next call.

Dr. Tin Ponlok stated that in principle, there are no restrictions in applying in the next rounds. Practically, the selection of applications primarily depends on the quality of the proposal and evidence to prove the applicant's capability to handle the issues of climate change adaptation in the priority areas of the RGC.

Mr. Sok Piseth, **MoWA** and **Mr. Paulo Lopes**, **NEXUS**, raised a similar question, which related to the criteria used to evaluate the projects under the CCCA TF.

Ms. Reiko Kurihara clarified that the guidelines explain in detail what areas the CCCA TF is looking for. Things like national ownership appropriately promoted, sustainability and capacity-building activities are relevant. Generally, there are six or seven criteria, which are used in the evaluation process. Each rejected application will receive a written letter to explain the weaknesses and strengths of each proposal. Two key issues that the CCCA needs are partnership (applicants are required to bring a partner, and the quality of the partnership is vital) and sustainability.

DAY 3 –OCTOBER 5TH, 2011

WELCOME REMARKS

***Mr. Rafael Dochao Moreno**, Charge d'Affaires*
Delegation of the European Union to Cambodia

Mr. Rafael Dochao Moreno noted that this Second National Forum on climate change provides an excellent opportunity for practitioners and policy makers to discuss and exchange information on adaptation and mitigation to climate change. He also highlighted the prominent role of the EU as a driving force in initiating an agreement on the UNFCCC in 1999, and the Kyoto Protocol in 1997. Furthermore, he said the EU has been a world leader in climate change action particularly in the reduction of emissions. Its strong commitment of reducing emissions has increased gradually and it strongly believes that the reduction of emissions will increase from 80% to 95% by 2050. He also mentioned that the main interest of the EU is to be a volunteer and very active in action against climate change and promoting green growth in order to avoid climate change hazards and provide the EU with energy saving consumption strategies, energy security, new jobs, international competitiveness, better air quality, and improving health.

He also emphasized the success of the Cancun Agreement for the global fight against climate change, which obligated the entire international community to keep the global temperature increase below 2° C as compared to pre-industrial levels.

Additionally, on behalf of the EU, he believed that the forth-coming meeting in Durban on 28 November to 9 December 2011 will be a great opportunity in shaping multilateral actions against climate change which can be a further step up in operationalizing the decisions taken in Cancun and addressing unresolved issues from Cancun.

Those unresolved issues are the legal form of the global future climate change regime to improve on the current inadequate climate regime, which is not comprehensive enough and with a legally binding framework that covers all parties, and retaining and improving the essential elements of the Kyoto Protocol for the future regime by including broader debates on MRV (Measurement, Reporting, and Verification) following the Cancun Agreement. In this sense, the EU still reiterates its position in terms of its willingness to consider a second Kyoto period in the case of having an agreement in Durban on a clear roadmap and timelines to achieve a comprehensive, robust, and legally binding framework with the participation of all major emitters.

The future international climate change regime is also important for Cambodia, a country emitting extremely little GHGs, in terms of the future climate change financing. It will determine the operationalization of a new Green Climate Fund and how much of this will support Cambodia for its climate actions. As a good example, Cambodia has been receiving a Green Climate Fund from the EU group to operate its two largest climate change initiatives in Cambodia, the CCCA, and PPCR.

He also highlighted a "Strategic Dialogue for Disaster Risk Reduction and Climate Change Adaptation", which is a key for Cambodia to connect its current disaster risk management efforts and efforts to promote climate change adaptation by understanding the extent to which current disaster management practices reflect future adaptation needs. Finally, he suggested that regarding climate change, our collective responsibility for all should be taken up, our mitigation actions must be collective, and our adaptation actions must be now.

WELCOME REMARKS

***H.E. Ros Silva**, Deputy Secretary General of the MEF*

H.E. Ros Silva started by appreciating the efforts of the MoE for organizing this Second National Forum on Climate Change and gratefully thanked the UNDP, the EU, and other development partners for their strong support for all of the programs addressing climate change.

He emphasized that this important national event provides the opportunity for researchers, policy makers, and other relevant stakeholders in all sectors to enhance their awareness relating to climate change. He also said this forum has been organized at the right time when many nations in the world including Cambodia are facing natural disasters as the inherent consequence of climate change, which severely damages economic, social, and environmental sectors including the lives of humans and animals. Responding to current climate change issues, the RGC has shown strong commitment by ratifying and signing the UNFCCC in 1995, the Kyoto Protocol in 2002, and many other instruments for the purposes of collaboration with other nations to mobilize finance and technical supports for climate change related activities. Additionally, the RGC has been working on the development of policy and strategic plans strongly concentrating on not only mainstreaming climate change in relevant sectors but also implementing priority projects. In particular in promoting climate resilient water resource management and agricultural practices in rural areas, a programme on climate change and health, mitigating greenhouse gases, innovative market mechanisms, and promoting community adaptation via existing agricultural based communities. Moreover, all of the programmes and activities relating to climate change are cross-cutting issues, which is strongly needed, as well as solid active engagement from all relevant stakeholders, particularly in financial and technical capacities.

Finally, H.E. Silva strongly believes that these forums will provide the RGC with many new and practical lessons and recommendations relevant to climate change to ensure sustainable development.

PLENARY SESSION: CLIMATE CHANGE POLICY FRAMEWORK-TOWARDS A CAMBODIA CLIMATE CHANGE STRATEGIC PLAN

Co-Chairs:

1. **Mr. Douglas Broderick**, Resident Representative, UNDP
2. **H.E. Nuth Chansokha**, Under Secretary of State, Ministry of Planning

CLIMATE CHANGE POLICY AND STRATEGIC PLANS – INTERNATIONAL AND REGIONAL EXPERIENCES

***Mr. Valdemar Holmgren**, Chief Technical Advisor, CCCA, MoE*

This presentation provided an overview of selected regional and international experiences of developing and implementing climate change strategies and action plans in support of the development of climate change policy.

Mr. Holmgren brought in the experience of other countries in making a climate change strategy and/or action plan, which can assist in building a good model for Cambodia by drawing some lessons, formats, strategic structure, and action plans through a review of climate change policies. The strategies and action plans of five Asian countries were highlighted including Bangladesh, India, Philippines, Vietnam, and Thailand. The overview of the CCSAP of each country focused on the name and duration of the CCSAP as well as the responsible implementing entities.

First, he spoke about Bangladesh. Bangladesh has been quick in organizing a CCSAP because it faces many difficulties in different ways. It is a low-lying country, has a large population, and many issues related to water and rising sea levels. It is very interesting that Bangladesh's CCSAP has been used by many countries in reference to their own contexts and structures. The duration of this strategy and action plan is from 2008 to 2018 and coordinated by the Bangladesh Ministry of Environment and Forest under the National Steering Committee on Climate Change, which is quite similar to Cambodia's ministerial organization. The Bangladesh CCSAP is adopted almost entirely from the Bali Action Plan using it as their guideline for strategic action. The action plan covers 16 themes such as food security, social protection, health, comprehensive disaster management, infrastructure, research and knowledge management, mitigation, low carbon development, capacity building, institutional strengthening, and so on. A National Trust Fund was also established to draw the money to fund the Bangladesh CCSAP. Implementation will be carried out by individual sectors and the 16 themes are organized and broken down into 37 programmes with each respective sector being responsible for their area of work.

In India, the CCSAP is known as the "National Action Plan on Climate Change". Its implementation period is from 2008 to 2017 and hosted by the Prime Minister's Council on Climate Change. The action plan is split into eight missions or strategies in order to achieve the climate change goals and priorities, which have been identified: solar energy, enhanced energy efficiency, sustainable habitat, water issues, sustaining Himalayan ecosystems, Green India, sustainable agriculture, and strategic knowledge for climate change. An interesting structure of inter-sectorial groups includes the Ministry of Finance, Planning Commission, industry experts, and CSOs. The climate change agenda in India is part of a large national body to help with the organization's implementation activities. CSOs play a big role in the Indian National Action Plan on Climate Change. However, its implementation is delegated to individual sectors. Therefore, the inter-sectorial groups provide guidelines on how the sectors should organize this work. The Indian version of the climate change national action plan equally focuses on adaptation and mitigation by emphasizing energy and natural resource management.

In the Philippines, the CCSAP is recognized as the "National Framework Strategy on Climate Change". Its duration is from 2010-2022 and nested in the Climate Change Commission/Office of the President, at the highest level. It provides guidelines for the National Climate Change Program having key

result areas or strategies. There is an interesting aspect on how to integrate or list all energy from mitigation and adaptation. A major portion includes a cross-sector disaster risk management programme. Based on the implementation timeframe, it should provide more concrete national action plans from which the local governments could define how they are going to tackle climate change. As a result, the national action plan gives the guidelines for local level work in the Philippines, which also includes the guidelines of how from initiation of activities the sub-national levels should be managed and how investment processes for climate change should be accomplished.

In Vietnam, there is the National Target Program formed in 2008 (under revision) under the Ministry of Agriculture and Rural Development. It is strongly oriented toward tackling flooding in the delta of the Mekong River and comprises both adaptation and mitigation measures. The next phase will be called the "Vietnam Climate Change Strategy" which is based on the national adaptation plan and a low carbon development strategy because it is recognized that there are many related but separate policies and programmes to deal with climate change. Even the rise in sea level is a priority. Vietnam has recognized the importance of the dealing with these issues on a sectorial basis.

In Thailand, CCSAP is called the "Climate Change Strategic Plan (CCSP)". Its mandate is from 2008 to 2012 and coordinated by the Ministry of National Resources and Environment under the Office of Natural Resources, Environmental Policy, and Planning. Thailand has included these areas of work in both previous and the current national economic and development plans. Climate change is clearly recognized as an important part of the national development agenda. In Thailand, the climate change strategy is organized into six different sub strategies. These include capacity development for climate change adaptation, reducing vulnerability, promotion of GHGs mitigation activities, support of research and development on adaptation and mitigation, raising awareness and public participation, and supporting international cooperation. These cover both adaptation and mitigation aspects and include rural and urban issues in climate change strategies. Each of these sub-strategies has its goals to guide each particular programme and sub-programme. Each strategy also has its own action plan. These strategies had revised to a new 10 years-Climate Change Master Plan that includes agriculture, industry, energy, health, infrastructure, and tourism.

In conclusion, Mr. Holmgren summed up some main points drawn from the national programs he referred to

- most of Strategic Action Plans (SAPs) are aligned with national development plans;
- all SAPs need engagement for implementation from local levels by individual sector agencies;
- some SAPs include components of research that feed back into SAPs development and all "SAPs" had climate change awareness raising and institutional capacity development;
- there is no single best model to follow for developing CCCSP, so experience that may be gained from others is required

However, some interesting lessons from the presented SAPs can be drawn for CCCSP development in Cambodia such as:

- from Thailand, in the CCSP set up and its development to a climate change Master Plan with rural livelihood and DRR
- from India, in building public awareness about climate change as support for CCCSP development and implementation;
- from Vietnam, in the sectorial and provincial mainstreaming of climate change into development plans;
- from Bangladesh, in the establishment, operationalization, and marketing of the National Climate Change Trust Fund;
- from the Philippines, in recognizing the synergy of mitigation and adaptation in implementing CCCSP

SECTORAL POLICIES RELEVANT TO CCCSP

***Mr. Khim Lay**, Assistant Country Director, Environment and Energy Team Leader, UNDP*

This presentation analyzed the existing sectorial and cross-sectorial policies and programmes related to climate change in Cambodia and provided an update on the engagement in the development of CCCSP by sectors.

Mr. Khim highlighted that in the Sectorial Policy Analysis, four main points were looked at the proposed sectorial intervention in the NAPA and the SNC, compatibility and relevance to the NAPA, the SNC, and the Cambodia Human Development Report (CHDR) on climate change, policy recognition, and policy recommendations. The key sectors of the policy analysis included agriculture, water resources, health, DRR, decentralization and de-concentration, forestry, fisheries, land, and energy.

Agriculture and water resources have been determined as the priority sectors in the NAPA. Twenty out of thirty-nine proposed projects are concerned with these sectors. These projects primarily focus on "No regret interventions" meaning that the projects aim to contribute to poverty reduction, adaptation and mitigation to climate change such as in water management, crop protection, public awareness, agricultural productivity, and access to water.

Strategies for Agriculture and Water Resources (SAW), 2006 - 2010, that has acknowledged that climate change has affected agriculture and aims for poverty reduction, food security, economic development through growth in agricultural production, and effective water resource management. These proposed actions and programmes are considered as "No regret interventions" and relevant to the NAPA. Three approaches had been proposed in the SAW, which contribute to the development of resilience in agriculture, water resources with agro-ecosystems, watersheds, and river basin planning approaches. These approaches are very important for these sectors to build better adaptive capacity if these approaches are to be widely used and taken seriously. The SAW proposes the following recommendations:

- to study and assess climate change impacts on surface water and groundwater, crop forecasting, and seasonal planning,
- to forecast effects on agriculture and design measures to mitigate adverse impacts, and
- to carry out interventions to effectively deal with disaster preparedness by establishing and implementing agriculture-centered disaster preparedness measures.

The NAPA has identified the health sector as one of the five key sectors in reducing the vulnerability of people. Four projects out of 20 prioritized projects in the NAPA relate to the health sector focusing on production of bio-pesticides, development of health facilities; provision of safe water in high-risk malaria regions, malaria education, and mosquito's habitat clearance campaigns. The Health Strategic Plan (2008-2015) has recognized that environmental pollution and global climate change affect human health and that it is vital to strengthen and improve environmental quality, reduce environmental risks, and consider financial and human resources to deal with these problems. The National health policy has also recognized the impacts of climate change and environmental impacts on human health and proposed the development of the National Health Policy and the National Environmental Health Action Plan (NEHAP). The NEHAP aims to protect human health and the environment particularly given Cambodia's rapid recent economic and industrial development. It has identified Seven National Thematic Working Groups that include climate change, ozone depletion, and ecosystem change. The NEHAP proposes to address the linkages and impacts of environmental health due to global and regional climate change.

DRR is recognized as a crosscutting issue in the NAPA and is prioritized for disaster preparedness and response. The Strategic National Action Plan for Disaster Risk Reduction (SNAP-DRR) 2008 -2013 envisions building a resilient community to natural disaster in accordance with the Hyogo Framework for Action and covers a number of themes relevant to climate change adaptation and mainstreaming disaster risk reduction into national, sectorial, and local development policies and plans. The SNAP-DRR proposed is in alignment with the NAPA by identifying and supporting common activities and projects to address community vulnerability to hazards.

Decentralization and de-concentration had not mentioned in the NAPA. However, they are part of the implementation of the 39 projects under the NAPA that had designed and to be implemented by the technical ministries and its line departments on the sub-national level. The National Programme for Sub-national Democratic Development has acknowledged the role of the sub-national level to participate in national development and noted that climate change is the crosscutting issue. This programme states that climate change needs to mainstream into management plans as well as the service delivery of sub-national authorities. In addition, it also suggests that a framework for the development of capacity assessment at the sub-national level for adaptation and mitigation to climate change. It also identifies and transfers the first package of tasks including appropriate activities on climate change issues to councils of each sub-national authority (SNA) and recommends guidelines and procedural development for climate change mainstreaming in all SNAs and conducting relevant training as well as establishing a pilot system for assessing environmental costs in the SNA.

The fisheries sector was also identified in the NAPA, but not in a comprehensive manner. Related to this, a strategy called the Draft Strategic Planning Framework for Fisheries (DSPFF) 2010 – 2019 is the base document for the fisheries sector to improve process in managing, conserving and developing sustainable fisheries resources to contribute to ensuring food security and socio-economic development. The DSPFF acknowledges that climate change is a threat to the fisheries sector and recognizes the importance of properly understanding the likely effects of climate change. The DSPFF has also stipulated the importance of implementing the framework along with the decentralization and de-concentration framework and emphasized the importance of addressing climate change and mainstreaming climate change issues through its policies, laws, and institutions.

The forestry sector was partly included in the NAPA, which mainly deals with community agro-forestry in deforested watersheds and coastal areas as well as community based soil conservation. The National Forestry Programme (2010 – 2029) defined its vision for Cambodia for 20 years of sustainable forest management and proposed a programme for sustainable financing with the REDD based approach to raising funds from forests and carbon. This programme also advocates the rights of local communities and the importance of decentralized management of natural resources. Another, policy is the REDD+ (2010) Readiness Roadmap, which is the base document for Cambodia's preparedness to raising funds from forest management and carbon credits. In support of this policy, Cambodia has developed the REDD+ strategy as well as the National REDD Task Force. This roadmap might be a good example for other sectors in developing sectorial roadmaps for climate change mainstreaming action plans.

The National Action Programme for Sustainable Land Management (i.e. agricultural land and forestry land), 2011 – 2020 is being prepared with support from the UNDP. This action programme has a 10-year vision on sustainable agricultural land management and improved adaptation to climate change. The linkages between sustainable land use and climate change and the effects of climate change on agriculture will be analyzed. It also proposes a watershed approach for sustainable land management for climate change adaptation and mitigation on farm and landscape levels.

In the energy sector, the SNC is a document for providing recommendations toward climate change mitigation options in renewable energy. A Draft Cambodia Energy Sector Plan acknowledged the impacts of global warming and climate change and advocated the development of renewable energy sources such as biomass, solar energy, and mini-hydro, while ensuring the supply of electricity for industrial, commercial, and residential uses. The Green Growth Roadmap (2009), prepared by the MoE, identified renewable energy as one of the seven A's (i.e. Access points) in the Green Growth Roadmap. As well as having analyzed the drivers of green growth, identified paths for greening economic development and proposed interventions for the short term (2-5 years), the medium term (5 -10 years), and long term (10 – 20 years).

Mr. Khim Lay mentioned that the prioritization of the sector is the responsibility of the NCCC. The expected sector inputs are:

- a sectorial climate change strategy/climate change roadmap with implementation plan developed to guide investment,
- priority sectorial climate change issues and options for climate change adaptation and mitigation identified
- sectorial climate change assessment approved by the Minister/Head of the agency, and
- sectorial climate change strategic objectives and activities reflected in the CCCSP and stakeholder engagement strenghtened

For the inputs and the approach, the CCCA provides about US$ 25,000 to key prioritized sectors to develop a sectorial roadmap based on stakeholder consultations.

To design the sectorial roadmap, it is important to look at the quality of planning and using an approach based on consultation with stakeholders. The CCCA will provide US$ 25,000 for two expected results [1] a sectorial climate change mainstreaming roadmap and [2] a stakeholder engagement plan.

To end, Mr. Khim Lay insisted that the sectorial roadmap of some of the prioritized sectors should be used for further programme or project development. It is an incentive for sectors to be ready to design strategies toward their own sectorial development.

TOWARDS CAMBODIA'S CLIMATE CHANGE STRATEGIC PLAN

***Mr. Sum Thy**, Director of CCD, National Project Coordinator of CCCA, Climate Change Policy Development and Knowledge Management Project, MoE*

This presentation aimed to provide the background, rationale, objectives, and draft contents of CCCSP and its roadmap for implementation, particularly emphasizing an introduction to the concept of CCCSP, a guideline framework, as well as a roadmap.

Mr. Thy started by saying that the challenge faced by Cambodia is that it has no comprehensive national-level policy or strategic plan to address climate change. The previous policy or strategic plan for climate change was only project based. When the projects ended, the results of findings were not likely to be extended or used further, which is a sign of an unsustainable strategy. As a result, the formulation of CCCSP is considered one of the prominent accomplishments of the CCCA.

Mr. Thy also mentioned the rationale for CCCSP. The formulation of CCCSP is consistent with the NSDP (updated 2008-2013) which highlighted that Cambodia has to develop a national strategic plan for climate change. Furthermore, this strategic plan is also in line with Cambodia's commitment under the UNFCCC as well as the CoP's decisions including the Nairobi Work Programme on Climate Change Adaptation and the Cancun Agreement calling for Cambodia to formulate a national adaptation plan.

A framework to guide the coordination of crosscutting issues and opportunities of climate change are needed for the formulation of this strategic plan. As stated in the Cancun Annex I, countries promised to donate US$ 30,000 million until 2012 and from 2012 to 2020, they will donate US$ 1,000 million every single year to developing and vulnerable countries for climate change. Responding to this golden opportunity, a productive and strategic plan for national level implementation has to be formulated to be eligible for this UNFCCC fund.

Mr. Sum Thy also mentioned that the CCCSP also plays an important role for climate change. It assists Cambodia particularly the NCCC not only to be well prepared for the future predicted global and regional climate change impacts, but also to take advantage of the funding support for climate change initiatives under the UNFCCC.

A key guideline for the CCCSP's formulation was developed following announcement No. 433 of the Council of Ministers on 7 April, 2011 in order to assist in the formation, and avoid an overlap of responsibility and any inconsistencies. The guidelines, which are known as a roadmap for CCCSP was reviewed by the climate change technical team on 27th August, 2011. The draft of CCCSP was delivered to the NCCC and endorsed on 4th August, 2011with minor amendments proposed.

The scope of CCCSP covers several points including:

- CCCSP's definition to include justification and key guiding principles;
- climate change and climate hazard/risk profile in Cambodia to prioritize vulnerable sectors and sub-sectors caused by climate change to be included in CCCSP;
- climate change policy responses;
- sectorial strategies for adaptation especially priority sectors and sub-sectors;
- mitigation strategies concerning energy and non-energy sectors, particularly in the forest sector;
- strategies to address climate impacts and opportunities for cross cutting issues; and
- climate change financial strategies and proposed financing mechanisms

He also added that the priority sectors had also highlighted. However, these priority sectors will be re-examined to determine how to include them in CCCSP. All of the sectors have US$ 2,500 allocated by the UNDP for the expenses of consultation for each strategic plan.

The implementation approach for CCCSP starts by reviewing and synthesizing existing national and sector documents related to climate change in order to prepare a draft of CCCSP. The draft will focus on the vision, mission, and objective and then to be submitted to the NCCC for approval. In CCCSP, Cambodia's position on climate change in the context of sustainable socio-economic development and the rational for using natural resources had also defined. Moreover, a sectorial analysis of climate change policy in key sectors is also included in the strategic plan.

In ending his presentation, Mr. Thy summed up the engagement of related sectors including inter-ministries, and private sector in the formulation of CCCSP is a key to success by making a sense of being ownership of CCCSP. Priority sectors of CCCSP will be further discussed in another forthcoming comprehensive consultation workshop to develop CCCSP. Other CCCSP activities will start after the end of this forum.

KEY HIGHLIGHTS OF RECENT CLIMATE CHANGE NEGOTIATIONS

***Mr. Mozahurul Alam**, Regional climate change Coordinator, UNEP*

This presentation highlighted the latest developments of climate change negotiations, key outstanding issues to be discussed in CoP-17 in Durban, and potential outcomes of CoP-17.

Mr. Mozahurul Alam began his talk with the UNFCCC background that it was signed by consensus in New York on May 9th, 1992 after 5 years of considering climate change following the UN General Assembly in 1988. After the adoption of the UNFCCC, negotiations are still following principles of consensus where all decisions involve negotiation between all parties without the need of voting and hence the possibility of using vetoes.

The overall objective of the UNFCCC is to prevent harmful and destructive effects due to climate change. That the ecosystems will adapt naturally to climate change, food production is not to be disrupted and economic development is to proceed in a sustainable manner. Defining the dangerous anthropogenic implications is the major challenge that needs to be agreed upon by the involved political entities in the negotiating process because developed countries have one point of view and other countries have their own point of view.

The principles that have been agreed by UNFCCC are:

- the common, but differentiated responsibilities and respective capacities that different countries have in addressing climate change when climate change is the common challenge,
- DCs need special consideration on specific need and special circumstances
- the parties should take precautionary principle in the sense that uncertainty should not be used as an excuse for inaction,
- the right to sustainable development, and

- cooperation to promote the international economic system

Mr. Mozahurul Alam mentioned that the Kyoto Protocol has primarily targeted to reduce GHGs to 5.2% via three flexible mechanisms, which include the emission reduction unit under article 6, CDM under article 12, and non-project based activity under article 17.

The Bali Action Plan 2007 is one of the milestones in these efforts. The world community recognizes and requires comprehensive decision-making and action to address climate change mitigation and adaptation as well as the participation of the developed countries and LDCs. The Bali Action Plan has five key building blocks included:

1. a shared vision for long-term cooperation;
2. enhanced national/international actions on mitigation;
3. enhanced action on adaptation;
4. enhance actions on technology development and transfer to support action on mitigation and adaptation;
5. enhanced action on provision of financial resources and investment on mitigation and adaptation and technology cooperation

One of the major challenges of Bali to Copenhagen for the global community was the very high expectation in Copenhagen to deliver a comprehensive and decisive package. While on the other hand, the possibility of not delivering such an expected package, but one that may not be legally binding. Two important outcomes in this effort were a demonstration of unprecedented participation of global leaders and communities and the high level of political commitment.

The key elements of the Copenhagen Accords are:

- emission reduction targets that Annex-1 Parties commit to GHGs reduction of around 17% as the IPCC demands and a 25-40% reduction by 2020 from 1990s baseline in order to maintain temperature increase below 2^{o}C.
- NAMA by DCs that different countries have proposed as their reduction targets, but non-annex 1 parties will do the mitigation actions in their voluntary basis
- commitment by developed countries to provide financial and technological resources of US$ 30 billion for next three years for DCs to support DCs adaptation and mitigation efforts, and US$ 100 billion per year by 2020 for long term commitment, and
- Institutional setup and the governance structure to establish the Copenhagen GCF. After that, the UN Secretary General established a high-level panel to mobilize a US$100 billion fund by 2020 to design a mechanism to channel that fund particularly for projects in protecting agriculture and infrastructure, to propose strategies for boosting renewable energy, as well as clean technology investment in poor countries.

Cancun delivered five major mechanisms include, GCF, Technology, Mitigation, REDD and Adaptation. In the establishment of the GCF, it is necessary to develop an operating procedure that produces a transitional committee to tackle the major challenges of financing source identification. There are two elements in the Technology Mechanism, which include a technology committee and a technology center and network. The technology committee is to provide the overall guidance and provide the technical support to the technology center in terms of pending issues that need attention, the future of the Kyoto Protocol, the legal form of the Bali Road Map outcome, the legally binding nature of pledges, and how to close the emission gap. These are going to be the major issues in Cancun.

Climate change negotiation is complex because of the involvement of multiple institutions, which have many components. There are many bodies under the UNFCC. They are inter-related in dialogue and when they negotiate. Similarly, there are several key negotiating blocks for example, G77 & China, LDCs, EU and OPEC.

In Copenhagen, there are pledges in terms of GHGs reduction towards which a number of countries have made pledges. Initially, 106 countries supported the Copenhagen Accords and this number has grown to 117. Seventy-two members had specific national emissions reduction plans and would reduce emissions

to 49.7 to 51.5 billion tons by 2020. However, with financing of US$ 50 billion emissions could be reduced to 48 billion tons.

In the scenario of Business as Usual (BAU), emissions will reach 55.64 Gt Co_2e and in terms of the scenario of keeping the temperature increase within 2 degrees, it requires 44 Gt CO_2e. In terms of potential emission reductions following the pledges in the Copenhagen Accords in 2100, BAU has 1,055 ppm volume of CO_2e. The low-end pledges are 490 ppm and the high-end pledges are 487 ppm of CO_2e. In terms of investment to reduce GHGs emissions the required funding for mitigation is quite large, this being US$ 200 billion.

Mr. Mozahurul Alam said that what we are aiming for depends on what kind of reduction there is in the future. There are two critical issues on how quickly reduction will happen and when the peak is going to take place. The gap without action (i.e. BAU) will emit 12 Gt CO_2e and when moving from BAU to unconditional pledges (lower ambition) will reduce emissions 3 Gt CO_2e. Moving from unconditional (lower ambition) pledges to conditional pledges (i.e. higher ambition) the reduction will be 2 to 3 Gt CO_2e. Within this framework, ensuring 'strict' rules surrounding land use/forest accounting and surplus emission units will reduce emissions 1 to 2 Gt CO_2e. In total, the reduction can be about 7 Gt CO_2e leaving a gap of 5 Gt CO_2e. To reduce this gap, the main options are:

- To increase in ambition of country targets, specifically by the developed countries,
- National emission targets of DCs to be outperformed, basically an improvement for better performance,
- Mitigation in sectors not covered by national targets, an example being international aviation and maritime sectors, and
- Essential complimentary actions could be short-lived climate forcers, examples being black carbon, tropospheric ozone, and other gases such as HCFCs, HFCs, etc.

TOWARDS DURBAN, SOUTH AFRICA: DRAFT CAMBODIA'S POSITIONS

***Mr. Sum Thy**, Director of CCD, National Project Coordinator of CCCA-Climate Change Policy Development and Knowledge Management Project, MoE*

This presentation pinpointed the draft of Cambodia's position for CoP-17, to be presented and discussed in the up-coming meeting in November of this year.

Mr. Sum Thy mentioned that this second national forum would provide more input in order to strengthen Cambodia's position toward the CoP 17 in Durban. There will be many key issues to be discussed in this upcoming event. The KP is also on the agenda for discussion in the CoP 17 and its fate after 2012.

Mr. Sum Thy gave an overview of the draft position of Cambodia that consists of Adaptation and its associated means of implementation; Mitigation and its associated means of implementation; Financial Resources; Development and Transfer of Technology; and Capacity building.

To begin, Mr. Sum Thy emphasized that **adaptation** and its associated means of implementation as well as mitigation and its associated means of implementation have to be treated equally for the future climate regimes. Cambodia welcomes the *Adaptation Framework* established in Cancun and its provision for a process for the LDCs to formulate and implement national adaptation plans (NAP) to address not only the most urgent, immediate, and short-term needs, but also medium and long-term for both concrete actions on the ground and policy reforms to support these actions. The NAP should be driven by in-country priorities and flexible to revision. The COP17 needs to adopt guidelines and modalities to allow the LDCs to formulate and implement medium and long-term NAPs. Cambodia supports the Adaptation Committee established under the authority of the CoP of the Convention and calls for its rapid operationalization in Durban. The implementation of adaptation action should cover the full costs without incremental costs or co-financing, which is a challenge for DCs, an example being the GEF project in Cambodia. An adaptation mechanism for LDCs should be

established in the form of the GCF and regional and international adaptation centres should be established to provide support and input to better understanding the issues related to the impacts and vulnerability to climate change.

For the **mitigation**, Cambodia supports the Kyoto Protocol's second commitment period, while other countries wish to have different mechanisms. This commitment states that all Annex I Parties must take legally binding additional mitigation commitments or actions taking into account the Principles of the Convention. To reduce their GHG emission by at least 45% below 1990 levels by 2020 and at least 95% below 1990 levels by 2050, in order to ensure GHGs and aerosol concentrations are below 350 ppm and CO_2 equivalent and temperature rise below 1.5 degree C. The commitment of reductions must be measurable, reportable, and verifiable (MRV) in accordance with a compliance mechanism to be adopted by the Parties. In addition, Non-Annex I Parties shall take voluntary mitigation actions in accordance with the principles and provisions of the Convention. However, major DCs should show willingness to reduce voluntarily their emissions to contribute to the global goal of emissions reduction. Furthermore, mitigation efforts by the LDCs should be voluntary and be fully funded and enabled by technology, financing, and capacity building that should be provided by the developed countries. NAMA by developing country parties are those voluntary actions determined and formulated taking national circumstances into account in the context of sustainable development and enabled and supported through finance, technology, and capacity building from developed countries parties in a measurable, reportable, and a verifiable manner. Cambodia sees that over recent years a decision on REDD+ has been unduly delayed in spite of the fact that all developed and developing countries are ready to move forward. Cambodia wants to see the conclusion of discussions and catalyze meaningful REDD+ financing and actions.

For **financial resources:** Cambodia supports the provision of new, additional, and predictable finance from public sources by Annex 1 Countries, not from Official Development Assistance (ODA). Annex II contributions shall take into account historical responsibilities and principles of the Convention. He indicated that so far funds required for climate change adaptation and mitigation are not donations, but the commitments as stated in the Convention. For instance, the scaled up commitments for climate change actions shall be at least 1.5 % of GDP per annum of individual developed countries and 60% of them should be allocated for adaptation actions. Cambodia welcomes the establishment of the GCF and calls for the urgent operationalization of that Fund. Co-financing shall not be a barrier or condition to accessing the funds.

For the **Development and Transfer of Technology**: Cambodia supports the Technology Needs Assessment, particularly the urgent need for development and transfer of technologies for adaptation in all developing country parties. Cambodia also welcomes the establishment of the Cancun International Technology Mechanism operating under the authority of the COP. Cambodia supports the establishment of the Technology Executive Committee (TEC) and the Climate Technology Centers and Networks (CTCN). Cambodia supports the provision of necessary and immediate financial and capacity building support to develop national technology action plans through Climate Technology Centres and Networks and support specific and urgent measures to remove barriers arising from intellectual property rights in developing countries and environmentally sound technologies in the least developed countries.

Last, **Capacity Building**: Cambodia supports enhanced action on capacity building to improve the enhancement of the capacities and capabilities of developing countries. The capacity building should be a continuous process, be country-driven, participatory, and integral to enhance action on all elements of the Bali Action Plan.

QUESTIONS AND ANSWERS

Mr. Geoffrey Blade, Advisor on climate change, **WWF Greater Mekong Program**, wondered if Mr. Valdemar Holmgren has any observations on plans for international cooperation. For example, India and Bangladesh have just signed a 10-year agreement for a regional strategic development plan, or roadmap to deal with climate change collectively. These issues are

quite similar to the Mekong region, thus, it should be taken into consideration for this region. There are structures in place including the MRC as well as the ADB, and the GMS programme that could provide a mechanism or framework for that kind of regional collaboration. So, he was wondering if Mr. Valdemar Holmgren could comment on that and the benefits derived from that type of international cooperation in response to climate change.

Mr. Valdemar Holmgren acknowledged that what has happened in Cambodia has happened similarly in serious ways in other LDCs with similar socio-economic implications. However, the climate change strategy must begin with national priorities to articulate a strategy and the accompanying action plan of what it is the country has as its main issues to deal with and the needed timeframe – immediate, mid-term, or perhaps long-term. Therefore, it is important to look back at what has been highlighted in the socio-economic development plan, for example the NSDP Update in Cambodia. It is similar to many countries and acknowledges the need of a provision for climate change in the national development plan. Priorities are defined on a national level as well as on sub-national levels and then to understand what problems we share regionally.

This strategy must be aligned with not only the national strategy, but also the regional, and international strategy. The quickest way to do so is to start by setting up national priorities and policies related to partners or policies of regional associates, for example the MRC. Fortunately, such a network is already in place.

Mr. Alex Heikens, **UNDP Regional Centre**, provided some additional input to the presentation. When looking at the scope in the region, it can be seen that there are a couple of things, which are good and some things that are missing. Most of the strategies do not have a financing plan. They may give a figure of how much it is going to cost, but they do not give any indication how they plan to mobilize and deliver the resources. The implementation of plans is also quite often not very clear. They do refer broadly to sectorial ministries or perhaps local governments.. That is a weakness in all of these strategies. Last, but not least, what you do not see in many of these strategies is a monitoring framework. In the Philippines, however, their strategy is quite interesting because they are clearer on a number of these aspects. It is worth looking further into the case of the Philippines. The legal framework is clearly pointed out, they have also established or are in the process of establishing a national climate fund to support the actual implementation of the strategy. They take financing quite seriously. These are some of the main points to consider– the financing plan, the implementation component, and the monitoring framework with some additional considerations for Cambodia when they start preparing the strategy.

Mr. Valdemar Holmgren appreciated the additional information given by Mr. Alex Heikens. He claimed that the lack of financing in the strategic plan is due to the difficulty in formulating the financing aspect. Many countries are dealing with this issue and in Cambodia, we have just started look into what is best for Cambodia. CCCA has setup a pilot that perhaps can be a stronger model and needs some sort of transfer mechanism which is going to become a national climate finance operation. It is important to look at this issue from the onset if we do not want to lose time or ground in the next step. That is what we are working on in the CCCA as the experts. We already have a trust fund, but there is no one-fix-all model. We also have to work out a model that fits the Cambodian situation. We are also working on how to transfer finance from the national to local level in order to finance local activities on tackling the climate change issue.

Dr. Mak Soleang, **MRC's consultant**, indicated that as stated in the talk of **Mr. Rafael Dochao Moreno,** climate change concerns everyone and everyone must collectively participate in mitigation and adaptation. Therefore, everyone should be involved in making the strategic plan too. This participation can ensure that everyone has commitment and their ideas are considered for inclusion in the strategic plan.

Mr. Valdemar Holmgren replied that all of the countries in the Mekong region, he believes, have demanded from the public sector and institutions that there has to be stakeholder participation. This idea is clear in Cambodia because climate change affects

people on the grassroots level and that is where this concept has to be drafted and implemented. For example, in Thailand, there is an interesting development where public participation voiced their opinions of how the climate change strategy was set up and how the master plan was finalized.

Mr. Ven Virak, **Deputy Director, Provincial Department of Environment, Kampot Province**, commented that Mr. Valdemar Holmgren has provided different CCSP recommendations for Cambodia derived from Thailand, India, Vietnam, Philippines, and Bangladesh. Due to the countries situational differences, for example, economic and educational, do you think these recommendations are suitable for the current context of Cambodia?

Mr. Valdemar Holmgren stated that of course the final work is to prepare our own strategy. However, it is advantageous to look at the experiences of other countries to see how it works. What the inputs are, the responsible bodies, and the structure of national and sub-national activities. All of these can then be analyzed and translated into the Cambodian context if appropriate, as Cambodia has just started its strategy. However, it is important to work with what Cambodia already has as a system by looking at the governance conditions, capacity of institutions/experts, and so on. In addition, the formation of a local (i.e. Cambodian) team to handle the tasks is important. Of course, India has a completely different scenario with a large population, emerging economy, and many different socio-economic factors, but the climate change issues are often the same. It affects agriculture, river flow, water levels, flooding, and drought.

Mr. Christopher, **UN Capital Development Fund, Bangkok**, said that the strategy generally refers to what needs to be done, but what really makes the concerned parties implement it and how does it need to be done? Regarding the financing, the focus should be placed on the strategy for cooperation with partners because various funding sources come from the partners, so what sources are to be used for what? Some direction is needed from the government's strategy to know what exactly needs to be done, with whom, and develop a strategy and financing for these actions.

Mr. Valdemar Holmgren responded to what Mr. Christopher brought up, that the component of the strategy or action plan in Cambodia is called the CCCSP. How are the different components going to be implemented? This is done first through consensus building within the root of governance. There will be consultation meetings between the national and sub-national levels and there is going to be done within the ministries to insure that each ministry responds immediately to the climate change agenda. In this regard, the strategy for the partners is to determine which ministry works with which partner.

Does the climate change strategy for Cambodia have to have a particular emphasis or work area for partnership building? This depends on setting up a relevant climate change policy, which is solid enough that it has the confidence of development partners to work with it. In this way, Cambodia can tap into climate finance.

Mr. Geoffrey Blate, **WWF GMS**, asked what provision can be made within the current structure in the way the CCCA has been set up to ensure that the plan is flexible? As we have seen, there may be many uncertainties and different kinds of risks relating to climate change. In reference to climate change, it seems important to make sure that flexibility is built-in, so is that a priority?

Mr. Valdemar Holmgren said the point raised by Mr. Blate is an important one because climate change impacts might not be the same in the future (i.e. 2013, 2014, etc.) as they are in 2011. So it is important to have a flexible mechanism. However, for reasons of governance, it would be also reasonable to say that the climate change strategic plan would be valid for a certain structure and for a certain period and would be subject to review and modification when needed.

Mr. Aran, **WOMEN**, commented that Mr. Khim Lay has identified many key sectors. Are there any approaches for multi-sectorial cooperation toward climate change issues? In addition, what about the sub-national level?

Mr. Khim Lay replied that the coordination at the sub-national level is through a democratic

development programme. It requires a coordination mechanism on the sub-national level and provincial or district councils in addition to commune councils. These councils are mechanisms to gather different sectors at the sub-national level, and to facilitate and identify policy or planning under the direct control of the provincial governor. This mechanism exists and has been implemented. However, it is necessary to use and strengthen the mechanism for climate change related work. The sub-national level has acknowledged climate change issues and needs more capacity building programmes.

Mr. Sok Piseth, **MoWA**, commented that gender should be included in CCCSP; however, it was not included in your talk (Mr. Khim Lay)?

Mr. Khim Lay said that even though gender was not included in his talk, it does not mean gender is ignored. In many sectors, such as infrastructure and conservation, the analysis has not yet been done. During the sectorial roadmap development, we will have a chance to do analysis concerning the strengths and weaknesses of those sectors.

Mr. Manfred, **technical advisor, PPCR**, made a general comment on the overall presentation in the past two days of the forum. He noticed the lack of infrastructural consideration in the presentations. He was talking about something heavily damaging infrastructure. For example, if over the past weeks we traveled from Phnom Penh to Siem Reap, we have seen how the road is getting worse and if we have the same flooding next year as we did this year then we will not be able to reach Siem Reap by road anymore. If we travel from Siem Reap to Kampong Plok, then there is no road anymore. There are no children going to school because the school is under water. Women cannot reach the health centers anymore, because they are under water too. Therefore, he is referring to all infrastructures and this comes to an amount, which are not tens of thousands dollars or two million dollars. It is essential to provide investment for infrastructure as it is a central part of climate change adaptation and mitigation. He does not believe that any strategy that really wants to take climate change adaptation seriously cannot talk about infrastructure and the financial figures related to it.

Mr. Khim Lay agreed that infrastructure is important. If looking at the NAPA document, around 70% of the proposed projects are related to infrastructure, for example building irrigation systems, building dikes, and so on. The proposed budget, which is around 130 million dollars, is more related to the cost of building the infrastructure for Cambodia's adaptation to climate change. However, the sources of funding to build infrastructure for Cambodian to adapt to climate change is still unclear, because infrastructure building is very costly.

Mr. Khter Uzaman Sano, Save the Earth, Cambodia, questioned whether there is any specific or quantitative plan, for example, for there to be 10% or 20% of men in the decision-making process, to mainstream gender issues in the project, organizational or climate change issues. In the context of Cambodia the number of women in the population is more than the men, but the number of women in the decision making process is just 3%.

Mr. Khim Lay responded on mainstreaming gender into projects, the UNDP has selected four climate change projects to mainstream gender. It is required that the projects have a gender-mainstreaming plan built in, clearly identifying activities and indicators on gender aspects. Hopefully, next year we will have more lessons learnt concerning gender mainstreaming projects.

Mr. Khter Uzaman Sano, Save the Earth, Cambodia, said he has heard the term resilience used 61 times. Do you have any mechanism to make sure the programme you have been designing and implementing will become a resilient program?

Mr. Khim Lay replied that to make climate change projects resilient, we first make a pilot project on climate change adaptation with the MAFF. During the onset of the project, we conduct a vulnerability reduction assessment on target communes and beneficiaries to get their perceptions on their vulnerabilities and what are their needs in order to deal with these vulnerabilities. During the implementation of the project, we help them in education, building infrastructure, and so on. At the end of the project, we conduct another

evaluation using the same method. Through this approach, we can compare the vulnerability situation before the project and after the project. There are many tools for this resilience issue. The PPCR programme, for instance, does not create completely new projects, but it mainstreams climate change resilience into existing ADB programmes. This is another model, the success of which we still have to wait and see.

Mr. Khter Uzaman Sano, Save the Earth, Cambodia, asked if we want to see Cambodia as Green Cambodia, and out of many actors, the UNDP is the important role player. The UNDP has many projects with the government and CSOs. Do you have any plans to develop some projects in collaboration with government and CSOs?

Mr. Khim Lay responded that green growth in partnership with the government and civil societies has already taken place through a small grant, for example, to NGOs and certain government agencies. Yesterday, Dr. Tin Ponlok mentioned in his presentation that six government agencies and two NGOs are receiving grants from the CCCA. He can guarantee that we have done a great deal in these types of partnerships.

Dr. Mak Soleang, MRC's consultant, stated that there are no issues related to the MRC in the strategic plan preparation. She suggested the MRC's strategic plans, such as the Mekong River Basin Development, the Mekong Integrated Water Resource Management Project, basin development strategies, and flood mitigation programme, should be considered because Cambodia is a member of the MRC. In addition, trans-boundary issues should be also considered.

Mr. Khim Lay agreed with Dr. Soleang's comment that in the consideration of existing regional planning should be made and the MRC's documents must be studied for what can be of benefit to Cambodia.

Ms. Chim Kalyaney, **Deputy Director of Department of Environment, Preah Sihanouk,** raised three questions. [1] In decentralization and deco-centralization, there is a focus on mainstreaming activities related to climate change. Therefore, at the sub-national level, all plans must have activities concerning the adaptation to climate change. However, during its implementation, challenges have been encountered due to the lack of knowledge and experience related to climate change issues. She would like to request for the support of the international community and national communities to conduct training/workshops for those officials to equip them with enough knowledge to make the relevant plans; [2] Climate change is a global issue and requires the participation of all stakeholders. In Cambodia, however, there are sectorial policies, meaning a policy for each sector. She would like to request a more integrated approach on climate change issues; and [3] Can a strategic plan be developed to deal with climate change at the regional level?

Mr. Khim Lay responded that [1] obviously the capacity building of sub-national levels is an area of focus that needs strong attention. [2] He agreed to the idea that the national strategic plan should be cohesive with other sectors and that coordination is required to enable the cohesiveness of the climate change strategic plan. [3] He thanked Ms. Chim Kalyaney for the comment on regional planning. The two mechanisms, the MRC and GMS mechanisms encourage regional planning concerning climate change.

Mr. Kong Kimsreng, **IUCN**, had two questions. [1] Mr. Khim Lay mentioned that it is possible to get a fund of $25,000 for each sector to make a plan for its sector. Would you clarify at which level, national, provincial, or local level this fund is available and for what period may this fund be used? [2] Mr. Kong Kimsreng had a crazy experience related to gender issues in Koh Kong province. The IUCN in the province organized saving women groups, but during occasions, that involved decision-making women did not have any says and only men did. Therefore, in every activity concerning mainstreaming women in any kind of project, we should have mechanisms that allow not only participation but making decisions as well.

Mr. Khim Lay said the US$ 25,000 per sector is for assisting certain sectors or cross sectors to prepare a roadmap to deal with climate change. Therefore, it is dependent on each sector to decide whether to consult the sub-national level or not. This is a good initiative for empowering women in decision making.

Mr. Vong Silang, **USAID**, Mr. Khim Lay asked that in health issues such as malaria, bio-pesticide, and sanitation, are there any concerns related to child nutrition and food security in the document? If there are, are there any recommendations or can you share your own ideas on this issue?

Mr. Khim Lay said the NAPA did not specifically mention child nutrition, but more on food security. Therefore, it depends on the specific sectors or cross-sectors working on specific targets to coordinate with the target beneficiary whether it is related to children or women.

Mr. Heav Visna, MRT Group, commented that as the government is responsible for strategic development plans with the DPs, it should consider the linkages between climate change and disaster risk regionally in order to formulate a strategic plan which can be realized regionally. He recommended that the strategic plan should consider the private sectors since the impact of climate change not only impacts the local people, but also private sectors.

Mr. Khim Lay accepted the idea of regional and private sector cooperation. The UNDP has been assisting the MAFF in preparation of the NAP document. During the preparatory, consultations with private sectors, issues concerning sustainable soil management were discussed.

Mr. Nop Polin, DCA/CA, mentioned that there is planning and strategies but no monitoring activities that can ensure the responsibility and accountability of all stakeholders. This is important, as developed countries who are the funders also want to see how the budget is being managed and monitored against the achievements of actions in the strategic plan.

Mr. Khim Lay said M&E must be an essential component in the climate change national strategic plan and sectorial and cross-sectorial projects as well.

Ms. Im Phallay, **NGO Forum,** made recommendations based on the opening speech of H.E. Yim Chhayly. She requested the inclusion of an educational programme for climate change in school curriculums. Another point is that there is no early warning system in the MoWRAM's strategic plan. There is a flood warning system, but no drought warning system. She read about the PPCR, however, there were no drought activities in there. The strategic plan is not comprehensive unless educational planning for the local level is included. Especially informing them of important issues so that they are able to adapt and stay alive. The educational plan should be comprehensive and inclusive of the remote areas, especially ethnic minority groups. According to the NGO Forum's experience concerning educational programmes to date, famers have requested agricultural production techniques at the local level.

Mr. Sum thy mentioned that concerning the educational programme on climate change, the MoE has prepared pilot documents with PLAN International to mainstream education on climate change into high schools in Dambae District, Kampong Cham province and Sothnikom district, Siem Reap province.

Ms. Raffel, Nexus Carbon for Development, asked that, as the strategic plan is quite complex in engaging a sectorial approach in different ministries, could you enlighten us more on the timeframe for this strategic plan. Furthermore, as Durban will be commencing at the end of this year, what is the possibility of sharing the finalized draft or any policy paper before the end of this year?

Mr. Sum Thy responded that the strategic plan expected to be finished by the end of the first quarter of 2012. However, there will be some delay since the development process needs more time for consultation. Thus, he thought it would probably be finalized in the second quarter of 2012.

Mr. Sovanny, Department of Environment, Rattanakiri, displayed his interest in GHGs reduction for developing countries or LDCs, in that when reductions are made, does it have any effect on the national revenue/budget?

Mr. Mozaharul Alam said that when looking into the major suggestions of different measures of reducing GHGs in different sectors it is not being suggested to reduce any production within sectors while reducing greenhouse gases. Therefore, any measure that is going to be introduced related to GHGs,

either for agriculture or the industrial sector is not compromising production. If there is, then it will not be chosen as an option for sectorial mitigation.

Mrs. Chim Kalyaney, commented that the reduction of climate change impacts should be done by developed countries. In addition, she requested that all stakeholders strengthen law enforcement on deforestation.

Mr. Mozaharul Alam responded that key elements of negotiation and influencing developed countries are being dealt with by other UN agencies. The UNEP is trying to bring the signatories of climate change together and facilitate negotiation. He thought that at the national level they would respect the call in terms of participation and protecting the forests.

Mr. Geoffrey Blate, **WWF,** commented on the 2° C target. If looking at the projected 2° C increase in global temperature, there are serious consequences. Therefore, despite difficulties in cutting down what brings about the 2° C increase in temperature, the plan, especially for the developed world, should be more ambitious than that. The deeper the cut the lower the impacts would be. He is afraid that the target of 2° C due to the uncertainty in the projection will still cause impacts that are not acceptable to a country like Cambodia and many other vulnerable countries. He urges everyone to push leaders to negotiate in good faith and to be as ambitious as can be, and possibly go to Durban.

Mr. Mozaharul Alam totally agrees with Geoffrey Blate that with all the uncertainties, it is better to set higher targets.

Mr. Ven Virak, **Department of Environment, Kampot**, asked if there are any mechanisms for each country to reduce GHGs? Are there any monitoring systems? Does the fund from donors consider the damages that have taken place here in Cambodia due to floods and storms, etc.?

Mr. Sum Thy replied that there is a method to make an inventory of GHGs and the industrialized nations have an obligation to report to the UN secretariat on climate change every two years. The inventory has been going through independent reviewers or experts from the DCs. About balancing aid and loss/damages, there is no negotiation mechanism yet. A new initiative is being discussed is climate insurance. For example, if a country meets with a disaster and experiences damages worth whatever amount of money, there is compensation for that. However, comprehensive discussions or negotiations have not yet taken place.

Mr. Liam Fee, **UN-Habitat**, said, given the difficulties in the global economic condition, the debt crisis in Europe, and so on, is it realistic for LDCs to expect all of the financing to come from Annex 1 Countries without LDCs making a commitment to raise their own finances to tackle their own climate issues. He gave an example that in Great Britain it is a political suicide for the Prime Minister to commit massive amounts of financing in the current economic climate. Therefore, there is a need for LDCs to commit to raising their own finances to pay for adaptation and mitigation measures that are required in the longer term. He absolutely agrees that the negotiation position is a binding target for Annex 1 Countries, but there is no binding target for Annex 2 Countries. It seems like an uneven playing field, and that is a bit unfair. Is it realistic for Annex 1 Countries to agree to bind themselves to targets when those targets do not bind Annex 2 Countries?

Mr. Sum Thy replied that regarding the funding in LDCs to finance activities related to climate change, there is no mention of the responsibilities of LDCs to be ready for their own financing in the negotiation. However, each LDC will prepare an action plan for climate change. Certain countries already allocated state (i.e. national) budgets to deal with CC issues, as had Cambodia. However, the allocation of Cambodia's budget is not specifically categorized as a fund for climate change issues. Yet, in the negotiations, it is clearly stated that the developed countries must provide financial resources to developing countries.

Mr. Yuk Sothirith, **British Embassy**, asked how does Cambodia cooperate with the G77 as well as the ASEAN in preparation for Durban in December? What agreements does Cambodia expect to get from Durban? Regarding MRV, if the MRV is agreed upon by many countries and is complex, how does Cambodia make considerations related to this issue?

Mr. Sum Thy responded that before the main meetings, each G77 country convene a preparatory meeting to get ideas from each member country to develop one common position for negotiation. It is worth noticing that Cambodia is in a group of LDCs and part of the G77. Therefore, Cambodia's position always aligns with the LDCs and the G77 plus China. The coordination meeting with the ASEAN has taken place too. For the Durban forum, Indonesia and Vietnam are working hard to prepare the ASEAN position and statement, which Vietnam will make during the Durban forum. While, MRV is related to the monitoring of activities concerning GHGs reduction, Cambodia does not have the obligation to reduce GHGs. However, if implementing the NAMA, MRV will be required. Nevertheless, the financial support must be from the developed countries.

CLOSING CEREMONY

CLOSING REMARKS

***H.E. Dr. Mok Mareth**, Senior Minister and Minister of Environment, NCCC Chair*

H.E. Dr. Mok Mareth said that Cambodia has achieved impressive results in the efforts to address climate change over the last two years. He appreciated the contributions of all participants to the forum as well as contributions to support Cambodia to address urgent climate change priorities. Priorities such as climate change policy, developing a strategic development plan, technical and institutional strengthening, coordination, actual implementation of climate change response measures, resource mobilization, education and awareness raising, and climate change international negotiations, particularly the preparation of the country's position towards the CoP-17 in Durban, South Africa.

Dr. Mok Mareth warned that the future of humanity is at stake if we fail to recognize the 'wisdom' of fossil-fuel based development is not sustainable and that we must switch the development path into a greener, low-carbon, and more climate resilient mode. He reminded us that Cambodia is indeed the victim of a problem of which Cambodia is not the cause. However, Cambodia wishes to be a part of the solution of this global problem and can turn the climate change crisis into a new opportunity for more sustainable development.

Within its legal mandate given by the Royal Government, the National Climate Change Committee with the Ministry of Environment, Dr. Mok Mareth confirmed that the Secretariat is ready to fulfill responsibly its mission, to enhance cooperation, coordination, and partnership in an equitable, transparent, efficient, and credible manner. The NCCC is committed to creating and ensuring an enabling environment for all the climate change actors to have an equitable opportunity in participating in this climate change crusade.

In closing, he expressed gratitude to all those who had participated in this National Forum sharing their knowledge and experience and actively contributing to the discussions and providing valuable comments. As well as to private sector, national and international organizations, and NGOs for participating in the climate change fair. He also especially wanted to thank the sponsors for their generous financial support for this Forum.

PRESS CONFERENCE

H.E. Dr. Mok Mareth and Donors' Representative at Press Conference (CCCA, 2011)

A press conference was held to share the key results of the SNFCC with a host of national and international media. This event was held at 16:40 on October 5th, 2011 at the Intercontinental Hotel. The speakers were representatives of the RGC (MoE/NCCC), the EU, Oxfam America, the SIDA, and the UNDP. The chairman was H.E. Dr. Mok Mareth, a representative of the RGC.

To begin the event, H.E. Dr. Mok Mareth summarized the achievements of the Second Forum on Climate Change.

In the opening day of the forum, H.E. Yim Chhayly recommended six points focusing on encouraging the development of the resolution on climate change. To focus especially on the preparation of policy and strategic plans on climate change, which requires the concerned ministries and institutions to use the plan as the basis for mainstreaming climate change into the national plan and relevant sectors. In the following technical meetings, there have been interesting presentations concerning adaptation and mitigation to climate change; focusing on challenges, successes, lessons learnt, political gaps, and recommendations. In this forum, eight projects have been funded by grants from the CCCA in the first call. The next call for proposals will be opened in the near future. The discussions towards preparation of strategic plans to solve climate change in Cambodia have also been held, in the hope that the plans will be adopted soon in order for the concerned institutions to make use of them and in responding to the recommendations of H.E. Deputy Prime Minister. Other results included the discussion of the draft of Cambodia' position for the 17th Durban meeting in December of this year that will be submitted to the government for adoption. H.E. Mok hoped that the today's press conference would add to and provide answers to questions related to climate change. After that, he provided a chance for journalists to ask questions.

Mrs. Ouk Savory, Radio Free Asia, raised two questions related to climate change: Which points will the Climate Change Committee raise to discuss in the forthcoming CoP 17 in Durban? How does the government and NGOs mainstream awareness of climate change to the local people?

H.E. Dr. Mok Mareth replied to the first question that in the CoP 17, Cambodia as a member of the Kyoto Protocol and climate change treaty would focus on [1] green funds transference from industrialized countries. [2] technology transfer from developed countries to LDCs particularly in GHGs reduction, specifically related to renewable energy and energy efficiency, [3] capacity building for the Cambodian people, and [4] requesting developed countries to be actively supportive and take action on adaptation mechanisms.

Responding to the second question, he commented that it is a part of the National Strategy Plan to educate or mainstream climate change to the local people and to help them become aware of its impacts. This also requires the participation of the sub-national levels and communities to coordinate this and contribute to mitigation by reducing GHGs, preventing source emissions of GHGs, and adapting to climate change via projects supported by international development partnerships.

Mr. Rafael D. Moreno, EU representative, also added that regarding climate change, our mitigation actions must be collective, and our adaptation actions must be now. He also insisted on thinking and acting together globally, and for other countries, which are not Kyoto signatories, particularly China, Russia, and India to think about their responsibilities towards these issues.

Mrs. Sophie Baranes, UNDP Representative, emphasized that to improve local people's awareness about climate change, accessibility to documentation and information are greatly needed. The CCD is currently organizing information, education, and communication strategies to transfer knowledge and information on the potential impacts of climate change throughout the nation. It is vital for civil society to be engaged in these actions. In this mainstreaming awareness campaign, mass media, school curriculums, and farmer communities can be employed. Furthermore, on the sub-national level, particularly the commune and district councils have very important roles for sharing information with their communities in alerting them about disasters and long-term impacts of climate change on their livelihoods.

Mr. Brian Lund, OXFARM America, attracted the attention of the media by saying that the financial resources for climate change adaptation will be US$ 100 billion by 2020, and should be available now for those nations suffering from climate change like Cambodia. He acknowledged that climate change awareness raising is also an important issue in that people should be completely informed of the factors affecting their livelihoods.

Mrs. Elisabeth Folkunger, SIDA Representative, shared some ideas relating to

the variety topics to be discussed in the upcoming CoP 17 in Durban. Those topics are included to follow up the results of the Bali Action Plan especially in mitigation, adaptation, technology transfer, available financial allocations, and establishing the GCF for climate change. She also strongly recommended that Cambodia should have its own climate change mechanism particularly in financial assistance.

H.E. Dr. Mok Mareth added that Cambodia is not waiting for the GCF, which has already taken several years to negotiate in the CoP, and is actively working on a strategic plan for mitigation and adaptation on its own with support from development partners. The MOWRAM has already made a strategy related to adaptation to the climate change by creating a strategic plan to avoid flooding.

Mr. Uy Bunmy, TVK, asked the speakers three questions. What benefits are there for Cambodia in working on mitigation and reducing GHGs even it is not its responsibility to do so? Regarding the Carbon Credit System, how much carbon credit has Cambodia obtained so far. In the future, does Cambodia have any plans to reforest in order to obtain more carbon credits to support economic development?

H.E. Dr. Mok Mareth responded that Cambodia is not a heavy GHGs emitter like industrialized countries. However, in addressing climate change, mitigation actions must be collective and adaptation actions must take place now. Additionally, by participating in reducing GHGs, Cambodia also gets some benefits in environmental protection. Specifically, the forests, natural resources, and biodiversity in Cambodia can be protected. Regarding this fund, the government has determined that 50% of the fund will be used to support local community development and conservation activities. The fund will be used to enhance the local people's livelihoods living around protected forests through the rural development policy. In relation to reforestation, it is obvious that we are going to implement this as it in alignment with the government's policies. The RGC will use the carbon credits to replant forests in areas that forest degradation has occurred.

Mr. Kem Teang, APSARA NET Representative, had two questions. In climate change adaptation and mitigation, Cambodia has received eight projects. How much funding did the projects receive and what are their sources? With regard to climate change issues, what kinds of activities would be needed in case developed countries still do not sign the treaties?

H.E. Dr. Mok Mareth replied to the first question by saying that with regard to the climate change projects that have been implemented in Cambodia, his colleagues will provide the answer. Responding to the second question, he said now there are hot debates and disagreements relating to climate change policy, especially when the Kyoto Protocol finishes in 2012. It is still unclear whether the Kyoto Protocol will continue or not. Cambodia and other groups in the G77 still strongly demand to keep the Kyoto Protocol, which forces the industrialized nations to provide funding, transfer technology, and build capacity to DPs.

Mrs. Sophie Baranes (UNDP representative) responded to the first question that currently there are eight projects awarded by CCCA and managed by MoE on behalf of the NCCC. Those projects are relevant to forestry, fisheries, agriculture, water resource management, small irrigation schemes, urban planning, and local government capacity. Over US$ 2 million were given to those projects with each project receiving grants from US$ 200,000 to US$ 300,000. The sources of the funds come from the EU, SIDA, DANIDA, and the UN.

APPENDICES

APPENDIX 1- AGENDA

Day 1	Monday, October 3rd, 2011
	OPENING CEREMONY AT PEACE PALACE
08.00 – 08.30	- Arrival of participants - Arrival of distinguished national and international guests
08.30	- Arrival of H.E. Yim Chhayly, Representative of Samdech Akka Moha Sena Padei Techo Hun SEN, Prime Minister of the Kingdom of Cambodia
	Commencement of the Opening Ceremony
08.30	- Announcement of the Agenda for the Opening Ceremony - National Anthem of the Kingdom of Cambodia - Welcome Remarks by H.E. Dr. Mok Mareth, Senior Minister and Minister of Environment, NCCC Chair - Opening Speech by H.E. Yim Chhayly, Representative of Samdech Akka Moha Sena Padei Techo HUN SEN, Prime Minister of the Kingdom of Cambodia - Departure of H.E. Yim Chhayly, Representative of Samdech Akka Moha Sena Padei Techo HUN SEN, Prime Minister of the Kingdom of Cambodia and distinguished guests
10.30	- Closing of the Opening Ceremony of the Second National Forum on Climate Change
	AFTERNOON SESSION
12.30 – 13.30	**Registration**, Venue: InterContinental Hotel
13.30– 13.40	Announcement of the Agenda *by MC*
13.40 – 13.55	**Welcome Remarks** by Mr. Douglas Broderick, UN Resident Coordinator
13.55 – 14.10	**Welcome Remarks** by H.E. Dr. Mok Mareth, Senior Minister, Minister of Environment, NCCC Chair
	1. INTRODUCTORY SESSION
	Co-Chairs: 1. *H.E. Chay Samith, Delegate of the RGC, Director-General of General Department of Administration for Nature Conservation and Protection (GDANCP), Ministry of Environment* 2. *H.E. Pon Narith, Secretary-General, NCDM, NCCC Member*
14.10 – 14.25	**Latest updates on climate change Science, Impacts, Opportunities** This presentation will provide the most recent updates on climate change science, impacts and opportunities based on the IPCC 4th Assessment Report and other credible research results. ***Presenter:*** *Mr. Mozaharul Alam, Regional Climate Change Coordinator, Regional Office for Asia and the Pacific, UNEP (15 min)*
14.25 – 14.45	**Update on Recent climate change Developments and Key climate change Initiatives in Cambodia – CCCA, PPCR, USAID, AusAID, JICA, UNREDD, GEF, LCDF, UNIDO, WB, ADB, KOICA, Finland, etc.** The purpose of this presentation is to report on progress Cambodia has made in building its institutional capacity, mainstreaming climate change into national and sectoral plans, and implementation of key climate change initiatives. ***Presenter:*** *Mr. Uy Kamal, Head of GHG Inventory & Mitigation Office, CCD, Ministry of Environment (20 min)*
14.45 – 15.05	**Presentation of the Key Findings of the Second National Communication**

This presentation will provide a summary of GHG inventory for 2000, results of GHG mitigation analysis and vulnerability and adaptation assessment as well as other information included in the Cambodia's Second National Communication to the UNFCCC.

Presenter: *Dr. Tin Ponlok, Deputy Director General, Administration for Nature Conservation and Protection, Head of the CCCA Trust Fund Secretariat, Ministry of Environment (20 min)*

15.05 – 15.35	Q & A (30 min)
15.35 – 15.50	Coffee Break

15.50 – 17.35	**Parallel Working Sessions**

Parallel Working Session 1:

2. climate change Adaptation – Successes Challenges, and Lessons Learnt	3. climate change Mitigation – Status, Progress, Lessons Learnt, Policy Gaps and Recommendations
Venue: Ball Room II, InterContinental Hotel	*Venue: Ball Room III, InterContinental Hotel*
Co-Chairs 1) *Mr. Ken Serey Ratha Deputy Director General of GDANCP, Ministry of Environment* 2) *Mr. Koen Everaert, Attaché, Cooperation, Delegation of the European Commission to Cambodia*	Co-Chairs: 1) *H.E. Dr. Sat Samy, Secretary of State, Ministry of Industry, Mines and Energy, NCCC Vice Chair* 2) *H.E. Chheng Kimsun, Delegate of the Royal Government of Cambodia, Head of Forestry Administration*
1. Status of NAPA Implementation and the Project "Promoting climate change Resilient Water Management and Agricultural Practices in Rural Cambodia (NAPA Follow-Up) This presentation will highlight the overall status of NAPA implementation as of present and progress of the MAFF-implemented NAPA Follow-Up project **Presenters:** 1) *Dr. Heng Chan Thoeun, Deputy Director of Climate Change Department* 2) *Mr. Hok Kimthourn, National Project Manager, Project Support Unit, Ministry of Agriculture, Forestry and Fisheries (15 min)*	**1. Status and Prospect of Voluntary Carbon Market** This presentation will provide background info about the emergence of the voluntary carbon market, review its status and prospect locally and globally, and provide some policy recommendations for Cambodia to prepare its participation in the future voluntary carbon market. **Presenter:** *Ms. Marion Verles, Executive Director,Nexus Carbon for Development (10 min)*
2. The Cambodia Climate Change Alliance (CCCA) and the Pilot Programme for Climate Resilience (PPCR) (15 min) This presentation will describe the objectives, key activities, progress and next steps of two major initiatives: CCCA and PPCR.	**2. Compliance Carbon Market: from Kyoto Protocol to New Market Mechanisms** Key existing Kyoto Mechanisms under the compliance market and their status will be assessed, and potential future market mechanisms will be examined (post 2012 Kyoto, REDD+, key proposals by selected parties to the UNFCCC). ***Presenter:****Ms. Akiko Fukui, Assistant Researcher, Market Mechanism Group, IGES (10 min)*

Presenters:

1) *Mr. Sum Thy, Director Climate Change Department, National Project Coordinator of CCCA-Climate Change Policy Development and Knowledge Management Project, Ministry of Environment*
2) *Mr. Meas Sophal, Deputy Director General Administration for Nature Conservation and Protection, Ministry of Environment*

3) **Climate Change and Health**

This presentation will provide latest updates on the MoH/WHO initiative to address climate change in the health sector.

Presenter:*Mr. Kol Hero, Deputy Director, Department of Health Prevention, Ministry of Health (15min)*

4) **Climate Change and Food Security: the Cambodian Context**

This presentation will review the potential effects of climate change on food security in Cambodia, proposed policy recommendations and CARD activities to address this issue

Presenter:*H.E. Srun Darith, Deputy Secretary General & Head of TWG-FSN Secretariat Council for Agricultural and Rural Development (CARD) (15 min)*

3. CDM Status and Example of CDM Project in Cambodia (15 min)

This presentation will summarise the current status of CDM project implementation in Cambodia, followed by an example of an on-going CDM project – Angkor BioCogen Project.

Presenters:

1) *Mr. Uy Kamal, Head of GHG Inventory & Mitigation Office, CCD, Ministry of Environment*
2) *Mr. Adisorn Chieu, Managing Director Angkor Bio-Cogeneration*

4. Cambodia REDD+ Roadmap

This presentation will explain the background, process, objectives, key elements, key players, current status and next steps of the Cambodia REDD+ Roadmap.

Presenter:*Dr. Keo Omaliss, Deputy Director of Department of Wildlife and Biodiversity, Forestry Administration, Ministry of Agriculture Forestry and Fisheries (15 min)*

5. Policy Options for Protected Areas REDD+

The purpose of this presentation is to highlight the findings of the recent case study conducted by Centre for Clean Air Policy on policy options for REDD+ in protected areas.

Presenter:*Mr. David Ashwell, Independent Expert (15 min)*

	(Each presentation to be followed by 10 min Q & A)
17.35 – 17.45	Summary and Closing
17.45 – 20.00	**Cocktail Reception**, Venue: Imperial I (3rd Floor, InterContinental Hotel)

DAY 2	TUESDAY, OCTOBER 4, 2011
07.30 – 08.45	**Registration** Venue: InterContinental Hotel
08.45 – 09.15	**Opening Session**, Master of Ceremony
	Welcome Remarks*by Mr. Peter J. Brimble, Senior Economist, ADB*
	Welcome Remarks *by H.E. Suy Sem, Minister, Ministry of Industry, Mines and Energy*
09.15 – 09.25	Summary of Day I and Overview of Day II
09.25 – 09.40	Coffee Break

09.40 – 11.45 **Parallel Working Sessions (cont.)**

Parallel Working Session 2:

3) Climate Change Adaptation – Successes Challenges, and Lessons Learnt

Venue: Ball Room II, InterContinental Hotel

Co-Chairs

1) *Mr. Ken Serey Ratha*
   Deputy Director General of GDANCP, MoE

2) *Mr. Koen Everaert, Attaché, Cooperation, Delegation of the European Commission to Cambodia*

5. Disaster Risk Reduction (DRR)

This presentation will highlight the efforts of NCDM in addressing climate disasters, including the implementation status of the Strategic National Action Plan for DRR, highlighting community-based responses and lessons learnt.

Presenter: *Mr. Soth Kimkolmony, Deputy Director of Training and Preparedness, NCDM (20 min)*

1. MRC CCAI: Example of Adaptation from a Regional Perspective

The purpose of this presentation is to share experiences of a regional Mekong river basin-based adaptation initiative entitled "Climate Change Adaptation Initiative"

Presenter: *Dr. Kien Tran-Mai, Climate Change Programme Officer, Mekong River Commission (20 min)*

7. Barriers to Effective Adaptation - Global and Regional Experiences - and Possible Policy Recommendations for Cambodia

This presentation will discuss regional and global experiences in implementation of adaptation activities with a focus on barriers, lessons learned, best practices, and key policy recommendations Cambodia may benefit from.

Presenters (2 x 10 min):

1) *Mr. Alex Heikens, Regional Policy Advisor Climate Change*
   UNDP Asia-Pacific Regional Centre
2) *Dr. Richard Friend, Institute for Social and Environmental Transition*

4) Climate Change Mitigation – Status, Progress, Lessons Learnt, Policy Gaps and Recommendations

Venue: Ball Room III, InterContinental Hotel

Co-Chairs:

1) *H.E. Dr. Sat Samy, Secretary of State, MIME, NCCC Vice Chair*

2) *H.E. Chheng Kimsun, Delegate of the Royal Government of Cambodia, Head of Forestry Administration*

6. Green Growth, Low Carbon Development

This presentation will examine the green growth concept, its linkage with climate change and enabling factors for its successful application in developing countries.

Presenter: *Ms. Aneta Nikolova, Environmental Affairs Officer, Environment and Development Division, UNESCAP(15 min)*

2. RE Market in Cambodia: Solar PV & Wind Technologies

This presentation will review, from a private sector point of view, the evolution, current status, barriers and outlook of solar PV and wind technologies market in Cambodia.

Presenter: *Ms. Margaret Jane Ryan, Partner, Khmer Solar (15 min)*

8. EEP Mekong: Example of Mitigation from a Regional Perspective

The purpose of this presentation is to share experience of a regional Mekong Su-bregion initiative entitled "Energy and Environment Partnership Programme – Mekong" to promote sustainable energy development and GHG mitigation.

Presenter: *Ms. Kati Veijonen, Counsellor, Energy and Development, Embassy of Finland (15 min)*

9. Carbon Credit Policy: Regional/Global Experiences and Barriers to Effective Mitigation in Cambodia and Proposed Responses (15 min)

This presentation will focus on some of the most successful and relevant models of carbon credit policies related to ownership, taxation, management, etc. and discuss barriers, lessons

	learned, best practices, and key policy recommendations Cambodia may benefit from. **Presenter:***Dr. Thanak De Lopez,Managing Director, Ecofia*
(Each presentation to be followed by 15 min Q & A)	
11.45 – 13.45	**Lunch** Venue: Imperial InterContinental Hotel
13.45 – 14.55	Parallel Working Session 3
Climate Change Financing *Venue: Ball Room II, InterContinental Hotel* Co-Chairs: *1) H.E. Srun Dara Under-Secretary of State, Ministry of Economy and Finance, NCCC Member* *2) Ms. Elisabeth Folkunger, Environment and Climate Change Specialist, SIDA* **1. Aid Effectiveness and Coordination** This presentation will discuss progress in promoting aid effectiveness with a particular focus on climate change in Cambodia. ***Presenter:*** *Mr. Ros Salin, Head of Policy and Aid Coordination Department, CDC (20 min)* **2. Adaptation Financing** This presentation will discuss current status of adaptation financing from both the demand and supply sides, in particular for LDCs. Presenter: *Ms. Sophoan Phean, Regional Policy Advisor, Oxfam America (20 min)*	**Climate Change Cross-Cutting Issues** *Venue: Ball Room III, InterContinental Hotel* Co-Chairs: *1) Mr. Meng Monyrak, Vice-Director of Department of International Conventions and Bio-Diversity, Ministry of Environment* *2) H.E. Kul Vathana, NCCC Member, Under-Secretary General of CNMC* **1. Biodiversity and Climate Change** Focus will be on credible evidence of past climate change impact on Cambodia's biodiversity, potential impacts on the biodiversity under different climate change scenarios, potential impacts of response measures to climate change on biodiversity, priority areas for future research, and some key policy recommendations. ***Presenter:*** *Dr. Geoffrey Blate, Senior Advisor, Landscape Conservation &climate change, WWF Greater Mekong Programme, WWF (20 min)* **2. Gender and Climate Change (20 min)** This presentation will discuss climate change impacts and responses through a gender lens and provide lessons learned from the region for designing gender-proof climate response measures. **Presenter:***Ms. Annaka Peterson Carvalho, Regional Program Coordinator, Oxfam America*
(Each presentation to be followed by 15 min Q & A)	
14.55 – 15.10	Coffee Break
15.10 – 16.20	**4. Plenary Session – Climate Change Financing (cont.)** Co-Chairs *1) H.E. Srun Dara, Under-Secretary of State, Ministry of Economy and Finance, NCCC Member* 2) *Ms. Sophie Baranes, Deputy Country Director, UNDP*

	1) Launching Ceremony for the Approved Grants from the CCCA TF 1st Call This event will introduce the background of the CCCA TF and will present 8 new grants selected by the CCCA Trust Fund under its 1st Call for proposals. ***Speakers: (30 min)*** *1. Dr. Tin Ponlok, Deputy Director General, Administration for Nature Conservation and Protection, Head of CCCA Trust Fund Secretariat, Ministry of Environment* *2. Dr. Kao Sochivi, Deputy Director General, Fisheries Administration, Ministry of Agriculture, Forestry and Fisheries* *3. Mr. Chea Sarith, President, WOMEN* *4. Ms. Kristina Kuhnel, Minister Counselor, Country Director, SIDA*
	2) Orientation on CCCA Trust Fund (20mn) This presentation will provide an orientation on the CCCA TF to potential applicants. ***Presenter:*** *Ms. Reiko Kurihara, CCCA Trust Fund Administrator, Ministry of Environment*
	Q & A (15 min)
16.20 – 16.30	Summary of Day and Closing

DAY 3	**WEDNESDAY, 5 OCTOBER 2011**
07.30 – 08.30	**Registration** Venue: InterContinental Hotel
08.30 – 09.00	**Opening Session**, *Master of Ceremony*
	Welcome Remarks *by Mr. Rafael Dochao Moreno, Chargé d'Affaires ,a.i. Delegation of the European Union to Cambodia*
	Welcome Remarks *by H.E.Ros Seilava, Deputy Secretary-General, Ministry of Economy and Finance*
09.00 – 09.10	Summary of Day 2 and Overview of the Day
09.10 – 10.00	**5. Plenary Session: Climate Change Policy Framework: towards a Cambodia's Climate Change Strategic Plan**
	Co-Chairs:
	1) Mr. Douglas Broderick, Resident Representative, UNDP
	2) H.E. Nuth Chansokha, Under Secretary of State, Ministry of Planning
	1) climate change Policy and Strategic Plans – International and Regional Experiences This presentation will provide an overview of regional and international experiences in developing and implementing climate change strategies and action plans in support of Climate Change policy development. ***Presenter:*** *Mr. Valdemar Holmgren, Chief Technical Advisor, CCCA, Ministry of Environment (20 min)*
	Q & A (20 min)
10.00–10.15	Coffee Break
10.15–11.05	**2) Sectoral Policies relevant to CCCSP: SAW, Fisheries, Energy, Forestry, Health, DRM** This presentation will analyze existing sectoral and cross-sectoral policy and programmes related to climate change in Cambodia and provide an update on the engagement in the development of a Cambodia's Climate Change Strategic Plan (CCCSP) by these sectors. ***Presenter***: *Mr. Khim Lay, Assistant Country Director, Environment and Energy Team Leader, UNDP (20 min)*

	Q & A (30 min)
11.05-11.35	**3) Towards a Cambodia's Climate Change Strategic Plan** This presentation will provide the background, rationale, objectives and draft contents of the CCCSP, and its roadmap for implementation. ***Presenter:*** Mr. Sum Thy, Director Climate Change Department, National Project Coordinator of CCCA-Climate Change Policy *Development and Knowledge Management Project, Ministry of Environment (20 min)*
11.35 – 11.55	**Q & A** (30 min)
11.55 – 14.00	**Lunch** Venue: Imperial I, InterContinental Hotel
14.00 – 15.20	**5. Plenary Session: Climate Change Policy Framework: towards Cambodia's Climate Change Strategic Plan (cont.)**
	Co-Chairs:
	1) Mr. Douglas Broderick, Resident Representative, UNDP
	2) H.E. Nuth Chansokha, Under Secretary of State, Ministry of Planning
	4) Key Highlights of Recent climate change Negotiations This presentation will highlight the latest developments of the climate change negotiations, key outstanding issues to be discussed in CoP-17 in Durban and potential outcomes of CoP-17. ***Presenter:*** *Mr. Mozaharul Alam, Regional Climate Change Coordinator, UNEP (30 min)*
	5) Towards Durban, South Africa: Draft Cambodia's Positions Draft Cambodia's positions for CoP-17 will be presented and discussed. ***Presenter:*** *Mr. Sum Thy, Director of Climate Change Department, National Project Coordinator of CCCA-Climate Change Policy Development and Knowledge Management Project, Ministry of Environment (20 min)* Q & A (20 min)
15.20 – 15.35	Coffee Break
15.35 – 16.05	Summary of Two Days Proceedings
16.05 – 16.20	**Closing Session**
	Closing Remarks *by H.E. Dr. Mok Mareth, Senior Minister and Minister of Environment, NCCC Chair*

APPENDIX 2 – OPENING AND CLOSING REMARKS

OPENING REMARKS – DAY I

by H.E. Deputy Prime Minister Yim Chhayly, representative of Samdech Akka Moha Sena Padei Decho Hun Sen, Prime Minister of the Kingdom of Cambodia

Dear Venerables;
Excellencies, Ladies and Gentlemen, national and international guests;
All the participants to the Forum, and students;

It is my great honor and pleasure to be part of this 2nd National Forum on Climate Change – a landmark event in the country's effort to address this most threatening challenge. I warmly welcome all the national and international participants from the Senate, national Assembly, Government ministries and agencies, development partners, representatives of diplomatic corps in the Kingdom of Cambodia, private sectors, academia and all the participants of this Forum to review the progress we have made since the 1st Forum and to discuss and identify priorities for future actions to address climate change.

We all know that new scientific evidences and results of recent studies indicate that climate change is real and has caused impacts on the socio-economy and environment, which are the foundation to support the very existence, progress and sustainability of our societies. Emissions of huge amount of greenhouse gases, in particular carbon dioxide, from human activities from the energy, transportation, agriculture, deforestation, waste disposal, etc., in particular in major industrialized countries, have caused increasing concerns about climate change and its severe effects on humanity. Global warming, change in precipitation, sea level raise, and extreme climate events have caused increasing losses of human life, damages to economy and environment in countries all over the world. This is a clear testimony that climate change is closely linked with human development in terms of both its cause and effect. It is not just a separate environmental problem. Nevertheless, poor, least developed countries such as Cambodia are the most vulnerable to impacts of climate change because of their agriculture-based economies, week physical infrastructures and human resources, limited financial capacity, and lack of access to appropriate technologies for addressing climate change.

The Royal Government of Cambodia (RGC) clearly recognize climate change in the country development process, as well as its moral commitment, as a victim of this problem, to work with the international community to address this vital problem for humanity. Cambodia ratified the United Nations Framework Convention on Climate Change back in 1995 and acceded to the Kyoto Protocol in 2002. We started to integrate climate change into the Rectangular Strategy Phase 2 with a particular focus on promoting the implementation of the National Adaptation Programme of Action to Climate Change. RGC considers environment in a broad sense that is covered in implementation of the entire Rectangular Strategy Phase II for growth, employment, equity, and efficiency in Cambodia. Furthermore, climate change has become a priority in then National Strategic Development Plan Update 2009-2013 being extensively integrated into all relevant sectors. This is our precious achievement in our effort to address this threatening problem.

H.E. Senior Minister Mok Mareth, Chair of the National Climate Change Committee (NCCC), has just reported on the work progress Cambodia has achieved over the past 2 years in the effort to implement the recommendations of the First National Forum under the auspicious of Samdech Akka Maha Sena Padei Techo the Prime Minister. Overall, we have made good accomplishment we can be proud of in technical capacity building, institutional strengthening, mainstreaming climate change into relevant national and sectoral plans, contributing in international negotiations, resource mobilization for implementation of both adaptation and mitigation measures, etc. On behalf of the Royal Government of Cambodia I highly appreciate the Chair, Vice Chairs and all the members of the NCCC and of the concerned ministries and agencies of the RGC for their efforts in responsibly carrying out their duties to achieve good results. At the same time I would like to thank all the bilateral and multilateral donors and NGOs for their cooperation with the RGC in our joint effort to implement extensive climate change activities from the policy level to the actual implementation of response measure at the community level. This is a clear testimony of our recognition of the importance of coordination and cooperation in effective response to climate change. Despite this impressive success, there is a long way to go for us to achieve a greener and more climate resilient society and to ensure equitable and sustainable development under climate change condition. In this respect, allow me to outline some recommendations which can be considered for making decisions to response to climate change at both national and international levels.

First, development of policy and strategic plan on climate change. Till recently, climate change activities in Cambodia are supply-driven, and many priorities have been identified by funding sources on a project-by-project basis, not facilitated by a coordination mechanism and not guided by a national policy. This has caused fragmentation and cost-ineffectiveness, and has not been able to effectively facilitate sustainability and institutional capacity strengthening. The approval and implementation of the National Adaptation Programme of Action to Climate Change (NAPA) and subsequently the inclusion of climate change and its mainstreaming into relevant sectors of the National Strategic Development Plan (NSDP) Update has become a positive step in the planning process of Cambodia. In this regard, there is an urgent and immediate need to develop a unified climate change policy and strategic plan to guide coordinated climate change activities for a more comprehensive, in-depth and targeted actions in the future. The national climate change policy and action plan shall support the four pillars revolving around the Good Governance core of the Rectangular Strategy, namely: enhancement of agricultural sector, further rehabilitation and construction of physical infrastructure, capacity building and human resource development, and private sector development and employment generation.

The National Climate Change Committee shall be responsible for the coordination the process of preparation of this document by creating an enabling environment for broad participation of relevant ministries and agencies, and for consultation with concerned development partners and non-governmental organizations. This plan shall give priority to the sectors that are the backbone of the national socio-economy such as agriculture, water resources, fisheries, forestry, protected area management, energy, physical infrastructure, as well as to other cross-sectoral issues such as institutional strengthening, human resource development, research, resource mobilization, application of appropriate technologies, education and awareness raising, gender at both national and sub-national level. The priority actions must be “rigorous options” that fully support to the government effort to poverty reduction and should be prioritized based on quality, reliable, and verifiable scientific research. As such it is important that relevant ministries and agencies use this strategic plan as the basis for mainstreaming climate change into sectoral plans and ensure that activities to be implemented are consistent with those proposed in the plans.

Second, institutional, technical strengthening and coordination. Since climate change is cross-sectoral and multi-disciplinary and relates to the mandates of many ministries/agencies, it is crucial to have a national level mechanism to guide and coordinate the preparation of draft policies, regulation and plans; the implementation of responses; research work; resource mobilization; and inter-ministerial and international cooperation. In this regard, the RGC established a National Climate Change Committee and appointed the Ministry of Environment to

be the Chair supported by an inter-ministerial Climate Change Technical Team (CCTT). The NCCC shall continue to fulfill its mandate as given by the RGC, in particular in making climate change policy and strategic plan, which is one of the most urgent priorities. In this regard, I call upon development partners to provide further support to and coordinate with the NCCC, a policy making body of the government, to ensure national ownership and be responsive to the need of the country. In the means time lime ministries have to assign units to be responsible for climate change in accordance with their respective mandates and strengthen technical capacity of the concerned staff, ensure close coordination with the national coordination mechanism, both on policy and technical aspects. Capacity building has to start from the sub-national levels, both institutional and technical, from the municipal, provincial, city, district and *Khan* to commune/ *Sangkat* councils so that climate change can be mainstreamed in both project planning and implementation projects to address climate change at the local level.

Another key aspect of focus is capacity strengthening and implementation of scientific research activities by line ministries and agencies, research institutions and academies on future climate change in Cambodia and its impacts on key sectors.

Third, implementation of climate change response projects. Negotiations on climate change issues for the last nearly twenty years, i.e., from the time the world adopted UNFCCC in 1992, have not resulted in substantial outcome as expected. Although commitments have been made again and again on GHGs mitigation, their emission increasingly continues to build up. Line ministries and agencies shall build on the strategic plan to mainstream climate change in their respective sectoral action plans. In fact, under current climate scenarios our short term responses are implementation of most immediate and urgent actions in areas of national development priority such as agriculture, water resources, fisheries, and physical infrastructure. Here, I would like to give additional emphasis on agriculture, as more than 80 percent of our population are rural and dependent on agriculture for their livelihood. Having experienced the global economic crisis in 2008, Cambodia has refocused on its agricultural development as a key to promoting local livelihood and national economy through expansion of export and agro-industrial processing. However, the sector is vulnerable to climate change as our agriculture is mainly rain-fed. Thus adaptation measures that support realisation of Rectangular Strategy and NAPA such as enhancement of productivity, expansion of cultivated land, increased cropping index and crop diversification have to be promoted. Priority should be given to those community based adaption measures appropriate, easily implemented, and cost-effective technologies that can be applied with most vulnerable communities and geographical areas.

In climate change mitigation all the win-win solutions that support sustainable development such as clean development mechanism, renewable energy, energy and fuel savings, protection and conservation of forests in protected areas, protection forests and forest reserves. In forestry sector, carbon projects with high economic efficiency and substantial social and environmental co-benefits have to be implemented those that promote local community livelihood in particular.

Implementation of climate change projects would have not been successful without involvement by all relevant stakeholders. In the sense, Public-private partnerships and with all development partners have to be strengthened by creating an friendly environment conducive to increasing private investment in climate change projects, both for adaptation and mitigation.

Fourth, financial mobilisation. Responses to climate change would not be effectively delivered without financial support. Build on the key UNFCCC's principles we seek to advocate for developed countries parties to make their financial support as pledged to developing country parties to address climate change. Under an optimistic scenario in which industrialized nations meet their commitments for climate change response finance at $US30 billion for the period between 2009 and 2013 and $US 100 billion annually by 2020, sharp increased financial flow to developing country parties is expected. In order for Cambodia to fully embrace the opportunity to access the finances clear understanding of the financial mechanisms under UNFCCC will be required and appropriate national capacity, both institutional and technical, is needed to

maximize access to and targeted use of the resources on an effective, accountable, and transparent manner, and with better risk management and sufficient and rigorous monitoring. Thus, NCCC shall collaborate with Ministry of Economy and Finance, Council for Development of Cambodia, and concerned DPs to explore and provide recommendations for establishment of a climate change financial framework that is responsive to the above prerequisites. The immediate priority is consideration on establishment of a national climate change Trust Fund responsive to the national needs for addressing climate change and for it to function as a unified engagement point for participation by DPs, both bilateral and multilateral, in the provision of unconditional funding for climate change in Cambodia. I would like to take this opportunity to thank concerned DPs such as EU, Sida, Danida, and UNDP for supporting the initiative to pilot a CCCA Trust Fund that provides opportunity for government's line agencies in partnership with civil society and International Organizations to access grants to strengthen climate change activities in relevant and priority sectors. My sincere thanks also go to other DPs and concerned civil society for their on-going contribution with the government to respond to climate change. My particular thanks go to the government of Japan through JICA for the practical support it provides to the Ministry of Water Resources and Meteorology and Forestry Administration of the Ministry of Agriculture, Forestry and Fisheries for strengthening capacity to address climate change in the two priority sectors.

Fifth, Education and awareness raising. Education and awareness raising on climate change is a long term and efficient investment to prepare the public and future generations in particular, to survive and enjoy their own development and contribute to national sustainable development with climate change. I understand that The Ministry of Education is to cooperate with the Ministry of Environment and other line ministries, DPs and civil society to consider the possibility for mainstreaming climate change issues in the current education curriculum, both in formal and informal systems. At the same time, awareness raising through multimedia should be promoted to ensure information on climate change is well understood in the public. Regular contest programme should be organized to select champions, whether individuals or agencies, from among civil servants, students, artists, private firms, or the public at large, who can take on the role model in addressing climate change.

Sixth, international negotiations to address climate change. As a party to the UNFCCC, Cambodia fully supports efforts to address climate change issues based on the three basic Convention's principles, 'common but differentiated responsibilities and respective capabilities', 'the specific needs and special circumstances of developing country parties, particularly countries most vulnerable to climate change and their right to pursuit sustainable development' and 'the precautionary measures'. Moreover, Cambodia's position at negotiation is developed linked with the G77+ China and the least developed country group (LDC). The principles provide an important basis for the RGC to use the national position in the international negotiation process in addressing this most challenging global issue.

a. <u>Adaptation to climate change</u>

Climate change causes additional burden on poor countries as they have limited resources to respond to issues they did not create. Commitments and their realisation will, therefore, have to be strengthened, to support for climate change adaptation in LDCs. The support must not come with any condition and must be country driven and not lead to heavier debt on the part of the recipient countries. Cambodia reaffirms that implementation of climate change adaptation remains a real challenge. In the context, the country calls upon developed countries to make their contribution to the Green Climate Fund as committed in Copenhagen and Cancun.

b. <u>Mitigation of GHGs</u>

All countries have to participate in mitigating global emission by at least 85 percent of the 1990 level by 2050 based on the 'common but differentiated responsibilities' principle and historical emission. Developed countries should provide necessary finance and technology for developing country's participation in their best effort to mitigate emission. In relation to the future of post Kyoto regime Cambodia fully supports for all the GHGs emission mitigation actions in forestry through the promotion of appropriate incentives in a fair and competitive manner and to protect

local community benefits. At the same time, resource allocation for improvement of forest carbon reservoir/ sink shall not affect the effort to mitigate GHGs.

c. Technology transfer

Measures for both GHGs mitigation and climate change adaptation would not be successfully realized without transfer of advanced technology to the developing countries, particularly the LDCs and this is clearly stipulated in Article 4 of the UNFCCC. This is the win-win solution for global climate as promotion of energy efficiency, reduced environmental pollution and GHGs emission would enable developing country to bypass traditional pattern of economic development while sustainable socio-economic development can still be achieved. Cambodia, therefore, supports the promotion and enhancement of national and international cooperation for appropriate and environmentally-friendly technology development and transfer to the developing countries to support adaptation and mitigation actions. To fill the gaps additional control is needed with the aim to ensure that climate friendly technology can be transferred to developing countries. In addition, the LDCs lack human and financial resources and are vulnerable to climate change. Technology transfer to these countries is therefore must be holistic and has to come with at least tools, equipment, skills, relevant information, capacity building, and financial resources.

d. Financing

Cambodia calls for a conclusion of a fair, ambitious and legal binding agreement in the process to addressing climate change in which developed country parties should provide at least 1.5 percent of their respective GDP mainly from the public source as new and predictable funding in addition to pledges under ODA and in which 70 percent should be earmarked for climate change adaptation and capacity building in LDCs, and promotion of technology transfer without condition for co-financing.

Venerable, Excellencies, *Lok Chumteav,* ladies and gentlemen!

Economists indicate the report "The Economics of Climate Change" that climate change is the greatest and widest-ranging market failure ever seen. Natural resources exploitation, production, consumption, their disposal back into the natural environment in addition to the absence of mechanism for internalizing externality, widespread of consumerism globally is stimuli to enhancing natural resource exploitation particularly fossil fuels and resultant emission into the atmosphere at a unprecedented rate in the human history. This vital challenge is historical for mankind to prove its capacity in addressing the survival and continuity of its civilization. Each individual, agency, country has their respective role in addressing the issue depending on their knowledge, capability, capacity, role and responsibility, and their share in creating the problem. For Cambodia, we have many immediate priorities: development of strategic policy and plans, mainstreaming climate change into relevant sectoral plans, strengthening and building technical capacity, establishment of Climate Change Fund, mobilization of resources for implementation of adaptation and mitigation projects, cooperation and coordination for actions, education and awareness raising, research work, strengthening the role of private sectors, preparation to participate in international negotiation, and more.

The RGC, under the wise leadership by Samdech Techo Prime Minister, has strong commitments and high political will to join with other stakeholders' efforts at all levels, from the national and international organizations to the grass-root organizations to respond to climate change the effects of which undermine the progress toward meeting the national millennium development goals. Consequences from not taking actions in this important circumstance is very big and thus requires us to take actions now to ensure a future that is resilient to climate change. At the international arena, Cambodia prepares to contribute to the global effort to take responsibility for the fate of mankind by addressing climate change based on the spirit of the key principles under the UNFCCC. We strongly believe that Cambodia's commitments will stimulate the same from all DPs.

I strongly believe that the coming two days of the Forum will provide special opportunity for all of us to make a reflection of the achievements made so far, to understand, learn and discuss the key themes, and to move to the formulation of practical recommendations essential to developing a

greener kingdom that is more resilient to climate change and ensuring an more inclusive, fairer and sustainable development with climate change.

In conclusion, I would like to wish all the venerables, excellencies, lok chumteav, ladies, gentlemen, students and all the participants the four gems of Buddha's blessings and with this I declare the 2nd National Forum on Climate Change open.

Thank you!

WELCOME REMARKS – DAY I

by H.E. Dr. Mok Mareth, Senior Minister, Minister of Environment and NCCC Chair

Dear Venerables,
Excellency Yim Chhay Ly, High Representative of Samdech Maha Akka Moha Sena Padei Techo Hun Sen, Prime-Minister of the Kingdom of Cambodia,
Excellencies, Lok Chumteav, Members of the Senate and of the National Assembly,
Excellencies, Lok Chumteav Deputy Prime Minister, Senior Minister, Minister and members of the RGC,
Excellencies, Lok Chumteav, Members of the NCCC,
Excellencies, Lok Chumteav, Ambassadors, Representatives of Diplomatic Crops, DPs, Civil Society, NGOs, Private Sectors,
Excellencies, Ok Nga, Lok Chumteav, ladies and gentlemen, distinguished national and international guests, and participants to the Forum,
All the students and participants!

First of all, on behalf of the organizing committee and chair of the NCCC and myself, I would like to warmly welcome and express my sincere thanks to HE Yim Chhay Ly, high representative of *Samdech Maha Aka Sena Padei Techo* Hun Sen, Prime Minister of the Kingdom of Cambodia and Honorary Chair of the NCCC for taking your pressing time to preside over in the opening of the Second National Forum on Climate Change, making the event ceremonial. My sincere thanks also go to Excellencies, Ok Nga, *Lok Chumteav,* ladies and gentlemen, distinguished national and international guests and students for participating in the opening of the event.

Excellencies, ladies and gentlemen!

It is now universally recognized that climate change is a global threatening challenge that may lead to severe negative impacts on the progress made for socio-economic development in Cambodia as well as in other countries in the world. In the recent years, countries in the world, including Cambodia experience abnormal natural phenomena more frequently and severely such as floods, droughts, typhoons, causing destructive impacts on water supply, agriculture, infrastructure, food security, loss of live, health, and people's livelihood, particularly of those in the rural area. The RGC under the wise leadership of *Samdech* Prime Minister through the NCCC and MoE clearly understands the threatening cross-cutting issue. RGC has ratified the UNFCCC in 1995 and also acceded to the Kyoto protocol in 2002. We have developed the first national communication for the UNFCCC and have submitted to the Conference of the Parties in 2002. In 2006 RGC endorsed the National Adaptation Programme of Action to Climate Change (NAPA). Broad response measures to climate change have been mainstreamed in the Rectangular Strategy and National Strategic Development Plan Update (NSDP 2009-2013). These proved the strong commitments by the RGC to respond appropriately and timely to impacts and effects of Climate Change as well as to capture the emerging opportunity under close collaboration with line ministries and agencies, DPs, private sector, and selected NGOs in implementing responses such as technical and institutional capacity strengthening, research study, mainstreaming climate change in the policy and development plans, mobilizing resources for implementing adaptation and mitigation projects, particularly projects under the Kyoto protocol, education and awareness raising.

I would like to share with the Forum that for the past two years upon receiving recommendations from *Samdech Techo* in the First National Forum on Climate Change in October 2009, MoE, as chair of the NCCC and in close coordination with line ministries and agencies, DPs, private sectors, selected NGOs, jointly implements activities to respond to climate change with the following achievements:

1. Established in 2006 NCCC has now 20 members from line ministries and agencies and is honorary chaired by *Samdech Techo* and chaired by me and recently an inter-ministerial working group on climate change was formed to support the NCCC's secretariat;

2. Cambodia had despatched a delegation led by HE Deputy Prime Minister Hor Nam Hong to participate in the CoP15 on Climate Change held in Copenhagen, Denmark, at the end of 2009, and had presented Cambodia's position on climate change, and then at the end of January 2010, the Kingdom of Cambodia had sent a letter endorsing the Copenhagen Accord to the secretariat of the UNFCCC. RGC had also sent 22 inter-ministerial delegates to participate in CoP16 held at the end of 2010 in Cancun, Mexico;

3. MoE has collaborated with the MoP and line ministries and agencies to incorporate climate change in the NSDP Update 2009-2013 for the line ministries and agencies to jointly implement climate change response actions in Cambodia;

4. MoE had created CCCA that was formally put into operation by the end of February 2010, with the aim to strengthen capacity of the NCCC and Department of Climate Change of the MoE to serve as NCCC secretariat in the development of climate change policy and strategic plan, provision of education and training and awareness raising, and establishment and management of Cambodia Climate Change Trust Fund. CCCA has secured $US8.9 million for 3 years (2010-2012) with $US3.3 million from EU, $US3 million from UNDP, $US2.1 million from Sida, and USF0.5 million from Danida. The programme is currently in the process to develop a national strategic plan on climate change and it is expected that the plan will guide climate change response actions in Cambodia. At the same time, the CCCA Trust Fund is planning to disburse its first package of about $US1.8 million in grant to line ministries and agencies for their implementation of 8 climate change adaptation projects;

5. MoE, MEF, WB and ADB are implementing a pilot programme on Climate Resilience in Cambodia through the development of a strategic programme for climate resilience that will use $US36 million in grant and $US40-50 million in highly concessional loan for supporting climate change mainstreaming in the key sectors such as agriculture, water resources, and physical infrastructure;

6. MAFF is implementing NAPA follow-up project to promote Climate Resilient Water Resource Management and Agricultural Practices in Rural Cambodia with $US3 million from adaptation fund for LDC and from UNDP;

7. MoE has started implementation of "Climate change vulnerability and adaptation assessment in coastal area with a focus on livelihood and ecosystem enhancement" with $US1.6 millions from UNEP and GEF and is in the process to receive $US2.2 million in addition from CCCA to scale up the activities under the programme;

8. MoE has signed on an investment agreement for carbon project for voluntary market over 400.000 hectares within the Aural and Phnom Samkos wildlife sanctuaries and is in the process to study draft investment agreement over 350.000 hectare forests in Virachey and Bokor National Parks, and Boeung Per Wildlife Sanctuary.

9. FA and MoE have been collaborating to develop and implement REDD project including sustainable forest management and forest conservation and forest carbon development following the developed REDD roadmap with $US3.6 million from UN Fund.
10. So far MoE in the name of the Designated National Authority for CDM has approved for 7 CDM projects on renewable energy, the private investment project with the potential for 570.000 tons emission reduction annually. Of them, 5 projects have been formally registered with the UN Executive Board, making Cambodia leading among LDC;

11. Recently MoWRAM has received assistance from the Japan government under the Green Mekong Initiative for Climate Change with $US11 million funding for a programme to improve climate change disaster management;

12. MIME is expanding its project implementation to enhance energy security and to contribute to emission reduction through implementation of energy efficiency and renewable energy projects such as hydropower, solar, biomass, biogas, and cleaner production;

13. To enhance the support for sustainable development and mitigate GHGs emission MoE has established GG Secretariat and developed GG roadmap and has signed on MoU with Global GG Institute in the early 2011 to mobilize financial resources for implementation of projects supporting low carbon GG;

14. MoE has been collaborating closely with line ministries and agencies, DPs and NGOs to promote awareness raising, education, training, and research on issues related to climate change through delivering training, workshops and media;

15. UNDP Cambodia, in collaboration with MoE and MEF, has recently published CHDR 2011 "Building resilience - The future of rural livelihoods in the face of climate change," an independent policy analysis document with contribution to support the development of policy and plan in response to climate change in Cambodia.

Sandech, Excellencies, Ok Nha, Lok Chumteav, Ladies and gentlemen!

The aforementioned achievements are the result of joint efforts by the management and members of the NCCC, staff of the MoE under continued and wise leadership of *Samdech Techo* Prime Minister. Nevertheless, Climate Change continues to be a most threatening challenge to socio-economic development that may result in adverse effects on our efforts to national development if without considerate responses to its effects appropriately and on a timely manner. To provide perspective and basis for development of strategic policy and plan to respond to climate change as well as for development of the national position for negotiation on climate change and discussion in the next two days national forum for a more prosperous, peaceful and greener and more resilient to the climate change Cambodia, the whole Forum and I would like to invite your Excellency Deputy Prime Minister to share your perspective, thought and recommendations in this important Second National Forum on Climate Change.

At my conclusion, I would like to wish all the venerable and Excellency Deputy Prime Minister, Excellencies, ladies and gentlemen, distinguished national and international guests, students and all the participants to the forum the four gems of Buddha's blessing.

May I invite your Excellency the Deputy Prime Minister to deliver your opening remarks for the Second National Forum on Climate Change.

Thank You!

អង្គការសហប្រជាជាតិប្រចាំប្រទេសកម្ពុជា
United Nations in Cambodia

WELCOME REMARKS – DAY I

by Mr. Douglas Broderick, UN Resident Coordinator

H.E Dr. Mok Mareth,
Chairman of the National Climate Change Committee and Senior Minister of the Ministry of Environment;
Excellencies;
Development Partners;
Honorable guests;
Ladies and Gentlemen,

First of all I would like to congratulate the National Climate Change Committee for their leadership in organizing this important event.

On behalf of the UN team in Cambodia, it is my privilege to be here this afternoon to participate in the opening session of the second national forum on climate change.

Today's discussions focus on a number of crucial issues including climate change science, impacts, and opportunities; recent climate change developments and key climate change initiatives in Cambodia; and successes, challenges, and lessons learnt on climate change adaptation and mitigation as we progress on implementation of the UN Convention on Climate Change.

Climate change impacts every sector of society. It is a global phenomenon and its impacts are obvious.

- **Heavier rainfall causes flooding in many regions.** Warmer temperatures have led to heavier rainfall in some areas, which can cause flooding.
- **Extreme drought is increasing.** Higher temperatures also cause a higher rate of evaporation and more droughts in some areas of the world.
- **Crops are withering.** Increased temperatures and extreme drought lead to a decline in crop productivity around the world. Decreased crop productivity can mean food shortages, which in turn have many social implications.
- **Ecosystems are changing.** As temperatures warm, species may either move to a cooler habitat or die. Species that are particularly vulnerable include endangered species, coral reefs, and polar animals. Global warming has also caused changes in the timing of spring events and the length of the growing season.
- **Sea levels are rising.** During the 20th century, sea levels rose about 15 cm (or 6 inches) due to melting glacier ice and the expansion of warmer seawater. Models predict that sea levels may rise as much as 59 cm (or 23 inches) during the 21st century, threatening coastal communities, wetlands, and coral reefs.
- **The temperatures of large lakes are warming.** The temperatures of large lakes worldwide have risen dramatically. Temperature rises have increased algal blooms in lakes, favor invasive species, increase stratification in lakes, and lower lake levels.
- **Warmer temperatures affect human health.** There have been more deaths due to heat waves and more allergy attacks as the pollen season grows longer. There have also been some changes in the ranges of animals that carry disease like mosquitoes.

In Cambodia, the impact of climate change puts vulnerable groups particularly at risk. Poor people and other vulnerable groups such as women-headed households, children and indigenous people, are those affected most. Extreme climatic events such as floods and droughts are already recognized as one of the main contributors to poverty in Cambodia.

Excellencies, ladies and gentlemen,

Understanding the impacts of climate change at global and country levels and building on lessons learned from past disasters in Cambodia, are essential for us to successfully fight climate change while promoting economic growth and poverty reduction.

I would like to suggest that there are two key concerns we must address if we are to meet the climate challenge in Cambodia. First, to understand vulnerability as a means to prepare a strategy for resilient rural livelihoods; and second to find ways to empower the poor or near poor to cope with the impacts of climate change.

Climate change for Cambodia is fundamentally a development challenge. Cambodia is highly vulnerable to climate change impacts. This vulnerability does not necessarily come from high exposure, but rather from low adapting and coping capacities.

These capacities can and should be strengthened, not only as part of a broader national response to the manifestations of climate change, but also to enhance the country's ability to respond to all natural disasters and to lessen their impacts on the poor and the near poor.

The best approach to building resilient rural livelihoods in the context of climate change will be to adopt approaches that provide benefits by addressing current development priorities. For example, establishing social safety nets and improving Disaster Risk Reduction efforts will provide immediate benefits in line with the Royal Government's goals.

At the same time, this will strengthen the resilience of vulnerable populations, improving their ability to respond to the potential impacts of climate change.

But this requires looking at long-term development objectives though a new lens, and supporting the kind of informed, deliberative public debate and decision making that can address the uncertainties and risks that climate change will bring.

Because climate change is a source of vulnerability and a threat to the Cambodia's development gains, it is important to pay special attention to rural poverty and vulnerability. With the vast majority of Cambodia's poor living in rural areas and depending on agriculture, understanding and responding to the root causes of rural poverty and vulnerability are essential to understanding the human development implications of climate change, and to developing the means to mitigate those effects.

Additionally, it is important to address the structural dimensions of poverty and vulnerability rather than solely focusing on climate change adaptation. I would like to propose three recommendations to empower the life of the poor and near poor to cope with the impacts of climate change:

- First, by building awareness, knowledge, information and capacity of rural people for planning and decision making
- Second, by ensuring that poor people have better access to financial and technical support
- And third, by strengthening access rights of rural people in terms of access to reliable information, right to control and make sustainable the use of natural resources (such as water, forest, fisheries and land) and rights to meaningfully participation in planning and decision making.

Excellencies, ladies and gentlemen

The United Nations has placed climate change high on its development agenda. We are committed to addressing climate change issues by supporting and assisting the Royal Government of Cambodia in close collaboration with key development partners, civil society and the private sectors.

We will continue to provide support to the Government to improve coordination, enhance awareness and understanding about climate change and mobilise technical and financial support to address gaps.

The UN will also continue to coordinate with key development partners and Government institutions to facilitate policy dialogue on climate change in different sectors and thematic areas.

The UN's current development strategy identified climate change as a priority and various UN agencies are working together on climate change in different sectors.

For example, FAO, IFAD and UNDP are working on climate change adaptation for agriculture and water resources and assisting to facilitate the annual forum on agriculture and climate change.

WFP and IOM are working on immediate disaster relief and preparedness.

WHO and UNICEFF are working on climate change impacts on health especially on women and children.

UNDP, FAO and UNEP are promoting sustainable forest management and building Cambodia's readiness for the Reduction of Emission from Deforestation and Forest Degradation.

UNIDO is working on energy efficiency and reduced emission.

And UN Habitat has been evaluating vulnerabilities and adaptive capacities in Sihanoukville.

Excellencies, Ladies and Gentlemen

I think we all agree that impacts of climate change could pose a significant threat to Cambodia's development progress.

Cambodia must prepare itself now through the development of climate change policy, institution, knowledge and information.

Cambodia must set up a strong and effective financing mechanism to absorb and manage the costs of climate change.
And it is critically important to empower vulnerable people especially the poor and near poor, children and youth, indigenous people and women to have better knowledge and capacity to plan and make decisions concerning their livelihoods in the face of climate change.

I believe we can and must act now to prepare Cambodia to face the challenges and impacts of climate change.

Thank You!

WELCOME REMARKS – DAY I

by H.E. Dr. Mok Mareth, Senior Minister, Minister of Environment and NCCC Chair

Excellencies Douglas Broderick, UN Resident Coordinator,
Excellencies and Lok Chumteav Vice-chairs and members of the NCCC,
Excellencies and Lok Chumteav, ladies and gentlemen the management and staff of the ministries and agencies at ministerial and sub-national government levels,
Excellencies and Lok Chumteav, ladies and gentlemen the Ambassadors and representatives of Embassies to Cambodia, Development Partners, Civil Society, and Private Sectors,
Ladies and gentlemen, distinguished national and international guests and participants to the Forum!

First of all, on behalf of the NCCC as well as the Ministry of Environment (MoE), I have a great honor and pleasure to preside over in this ceremonial Second National Climate Change Forum Cambodia. In this auspicious occasion, I would like to warmly welcome the presence of your Excellencies, *Lok Chumteav,* ladies and gentlemen, national and international distinguished guests and all the participants for taking your pressing time to participate in this important event.

Excellencies, Lok Chumtev, Ladies and gentlemen!

It is now generally recognized that climate change is a striking challenge facing the world. The fourth report of the Inter-governmental Panel on Climate Change (IPCC) of the United Nations and findings from recent scientific researches reaffirm with higher confidence that anthropogenic activities are the major cause for the climate change. Countries in the Mekong are vulnerable to climate change due to change in the Mekong hydrology, decline in agricultural and fisheries production, sea water intrusion, increased population, and lack of financial and technical resources, and appropriate physical infrastructure. For instance, Cambodia have in the last several years experienced more frequent floods, droughts, and storms and this has severe implication on food security, people livelihood, and national socio-economic development. While we gather together in the Forum, a destructive flood has been threatening a number of provinces in the country, causing loss of dozens of lives and severe damage to property and crops, and physical infrastructure.

Recent scientific findings presented in the Second National Communication to the United Nations Convention on Climate Change (UNFCCC) conclude that in the last half decade change in temperature and rainfall in Cambodia has already started. The projection for the next eighty years, however, concludes that the future temperature in Cambodia will continue to rise with the potential declined dry season rainfall while delayed arrival of the wet season regardless of the potential increased wet season rainfall. The change may vary in accordance with greenhouse gases (GHGs) emission scenarios. This means that many socio-economic sectors would be affected as a result. Mitigation efforts by international community to reduce emission would have direct consequences on Cambodia. This indicates that Cambodia needs to prepare to live up with the climate change scenarios requiring us to put in place new policy, change the way we work and our practices in all socio-economic aspects to ensure sustainable development with climate change.

Climate change is seen as an important priority in the government agenda and is gradually mainstreamed in the national policy and socio-economic development planning at both national and sub-national levels including in the relevant sectoral plans as it is a cross-cutting issue and directly relevant to the mandate of many line ministries and agencies. Moreover, climate change is integrated in the National Strategic Development Plan Update (NSDP Update 2009-2013) with the aim to promote participation by line agencies in responding more broadly and effectively to climate change to contribute to meeting the Millennium Development Goals (MDGs) within the framework of the Rectangular Strategy phase II. Much effort have been paid to develop

institutional and technical capacity, researches, policy development, and Strategic Plan on Climate Change, awareness raising and education, implementation of the UNFCCC, implementation of the provisions of the Kyoto Protocol through Clean Development Mechanism (CDM), implementation of National Green Growth Programme, strengthening cooperation and coordination across line government ministries and agencies and with donors.

Nevertheless, gaps remain in public awareness and understanding of the impacts and opportunity arisen from climate change as well as coordination for response measures. In the sense, the Second National Climate Change Forum as well as similar forum to be held on a regular basis in the future is of utmost important to review achievements made and share information and lessons, create constructive dialogues on policy development and strategic planning, promote climate change mainstreaming and strengthen cooperation and coordination among government agencies, development partners, non-governmental organizations and civil society.

Excellencies, *Lok Chumteav*, Ladies and Gentlemen!

This morning had heard meaningful speeches by the HE Deputy Prime Minister, high representative of *Samdech Aka Maha Sena Padei Techo* Hun Sen, prime minister of the Kingdom of Cambodia, addressing efforts made by Cambodia in response to climate change as a country most vulnerable to climate change and offering six policy recommendations relevant to: policy development and strategic planning, capacity development and coordination, implementation of projects, resource mobilization, education and awareness raising, and international negotiations, all serving as important inputs to support the process of the national forum for the next two and a half days to come.

I have a great pleasure to see national and international experts who will make presentation and participate in the discussion of broad themes such as the climate change sciences, mitigation of GHGs, climate change policy, financing climate change, and many other cross-cutting themes. It is also my pleasure to witness active participation by private firms and NGOs in displaying their environmentally friendly products. This is a positive signal indicating that private sectors in the country becomes more aware of its indispensible roles in addressing climate change and also prove the opportunity obtained in our response to the issue.

Excellencies, Lok Chumteav, ladies and gentlemen!

I strongly believe that for the next two days all participants will have the chance to gain practical knowledge, skills, information and lessons, able to participate in the discussion over key themes and to capitalize on this rare opportunity of the Forum for strengthening responses to climate change in Cambodia. The participation of all of you from broad range of agencies including from the government, development partners, civil society and private sectors, presents an encouraging positive move, a testimony to all of us about the shared focus and concern on climate change issues, and also affirms our common will and position to contributing to addressing the challenge in order to develop a greener and resilient to climate change Cambodia and to ensure more inclusive, equitable and sustainable development with climate change.

In conclusion, on behalf of the NCCC and the management and staff of the MoE, I would like to express to your Excellencies, Lok Chumteav, Neak Oknha, ladies and gentlemen, the gems of Buddha's blessing and I wish for a fruitful Forum.

Thank You!

WELCOME REMARKS – DAY II

By Mr. Peter J. Brimble, ADB Cambodia Senior Country Economist and OIC

Your Excellency, Dr. Mok Mareth, Senior Minister of the Ministry of Environment
Mr. Douglas Broderick, UN Resident Coordinator
Honorable senior management and staff of national ministries/agencies and municipality/provinces of the Royal Government; representatives of the diplomatic corps, development partners, the private sector and non-governmental organizations
Distinguished Ladies and Gentlemen

I am pleased to be here today to offer welcome remarks on behalf of the Asian Development Bank to this Second National Forum on Climate Change, the organization of which is timely and significant, taking place barely seven weeks to the UN Climate Change Conference of Parties (COP 17) in Durban.

Climate change is one of the greatest challenges faced by mankind. Here in Cambodia, we have been experiencing devastating impacts of climate change droughts, floods and extreme climate events occur with increased frequency and greater intensity. We all are aware of the tremendous destruction caused just over two years ago by Typhoon Ketsana, and even last week by the widespread flooding throughout the country.

Climate change also causes lower agricultural yields, increased water stress and the spread of infectious diseases. As an LDC with low adaptive capacity, Cambodia is highly vulnerable to such impacts. The most unfortunate fact of climate change is that the poorest suffer the most, even though they contribute the least to the problem. As an organization concerned with poverty eradication, ADB is therefore deeply committed to assist Cambodia in addressing the challenges of climate change.

ADB's Strategy 2020 recognizes environmental sustainability including climate change as one of five core priorities of support to our developing member countries. Within the climate change area, ADB has identified five operational priorities to address both greenhouse gas mitigation and adaptation in an integrated manner. These include: (i) scaling up clean energy; (ii) encouraging climate-friendly urban development and sustainable transport; (iii) enhancing carbon sequestration through sustainable land use, forestry and agriculture; (iv) promoting climate-resilient development; and (v) strengthening institutions, governance, policies and capacity to address climate change. ADB offers its support to Cambodia in all these five areas.

The Royal Government of Cambodia confirmed its commitment to address climate change by ratifying the United Nations Framework Convention on Climate Change (UNFCCC) in 1995, and acceding to its Kyoto Protocol in 2002. It prepared the National Adaptation Program of Action (NAPA) in late 2006. The NAPA and the Second National Communication to the UNFCCC presented yesterday are closely aligned with the Government's development objectives outlined in the "Rectangular Strategy for Growth, Employment, Equity and Efficiency" adopted in July 2004, and updated as Phase II in July 2009.

Ladies and gentlemen, ADB's specific approach to climate change in Cambodia is reflected clearly in the Country Partnership Strategy 2011-2013, prepared in close consultation with the Royal Government of Cambodia and in line with the National Strategic Development Plan Update 2009-2013, and endorsed by ADB's Board on 5 July 2011. The Country Partnership Strategy identifies environment and climate change as a critical cross-cutting challenge for Cambodia. In Cambodia, ADB will: (i) mainstream climate change challenges in sector analysis and planning and project design, (ii) continue to develop improved approaches to resource conservation in the Tonle Sap basin, (iii) coordinate national and subregional programmes on climate change and the

environment, and (iv) access finance from internal and external sources to support climate change activities in new and existing projects

As we heard yesterday, two major programmes on climate change are in place in Cambodia: the Cambodia Climate Change Alliance (CCCA) funded by EU, UNDP, DANIDA and SIDA for $8.9 million, and the Pilot Programme for Climate Resilience (PPCR) funded through Climate Investment Funds for about $87.5 million. These two programmes assist the Government to (i) develop appropriate climate change policies, (ii) mainstream climate change concerns into development, including budgeting for climate change at the national and sub-national levels, (iii) effectively engage civil society and private sectors in addressing climate change, and (iv) build capacity of institutions in science-based climate adaptation planning.

The PPCR is being implemented in two phases: Phase 1 is a preparatory grant of $1.5 million and is implemented by the World Bank, ADB and IFC. Phase 2 aims to achieve transformational change in mainstreaming climate change risks and resilience in development planning. It includes the implementation of 8 projects in agriculture, water resources and infrastructure sectors with a total budget of $US 86 million ($US50 million in grant and $US36 million in highly concessional loan) from CIF, and an additional co-financing of nearly $300 million from ADB.

ADB has also been supporting the Royal Government of Cambodia in other areas with substantial climate and development benefits. These projects include renewable energy and energy efficiency, sustainable mass transit systems such as railways, climate friendly urban development in towns such as Battambang through effective solid waste management, and enhanced carbon sequestration and biodiversity conservation in provinces such as Kok Kong and Mondulkiri.

Ladies and gentlemen, I am confident that this forum will provide us a unique opportunity to exchange knowledge, skills, information and useful experiences on ways to address Cambodia's climate change issues relating to adaptation, mitigation, technology development and transfer, capacity building and financing. I also hope that the Forum will help in mobilizing and galvanizing additional support from the development partners that have assembled here today.

I thank you all for coming and I wish you successful deliberations.

Thank You!

WELCOME REMARKS – DAY II

by HE Suy Sen, Minister of Industry, Mines and Energy

Mr. Peter J. Brimble, Senior Economist, ADB;
Excellencies, Lok Chumteav, Ladies and Gentlemen, representatives of diplomatic corps to the Kingdom of Cambodia, Development Partners, civil society, and private sectors;
Excellencies, ladies and gentlemen, distinguished national and international guests, and all participants to the Forum!

It is my great honour and pleasure to participate in this ceremonious Second National Forum on Climate Change. On behalf of the Ministry of Industry, Mines and Energy and myself, I would like to warmly welcome Excellencies*, lok Chumteav, Lok Ok Nga*, ladies and gentlemen, national and international guests for taking your pressing time to participate in today important event.

Excellencies, Lok Chumteav, Lok Ok Nga, ladies and gentlemen!

Climate change has been a threatening challenge to socio-economic development and may cause adverse effects on national effort to poverty reduction and development. Addressing Climate change is increasingly becoming an important theme and an emerging need of the word today. The natural disasters such as floods, storm, and earthquake have been occurring one after another and require global unified efforts to implement appropriate measures to mitigate climate change.

The Royal Government of Cambodia (RGC), under the wise leadership by *Samdech Akka Maha Sena Padei Techo* Hun Sen, the Prime Minster of the Kingdom of Cambodia and also honorary chair of the National Climate Change Committee (NCCC), had outlined in the first National Forum on Climate Change in 2009 that "Climate Change" emerged as an issue that cannot be ignored in the national development agenda. The National Rectangular Strategy Phase II and the National Strategic Development Plan Update (2009-2013) clearly articulates government's commitment to addressing climate change through adaption and mitigation of greenhouse gases. In the sense, Cambodia has been implementing numerous important actions pertaining to national institutional and technical capacity, the capacity of the NCCC to mainstream climate change in the national and sectoral plans in particular.

Excellencies, Lok Chumteav, Ok Nga, Ladies and gentlemen!

All of us in the Forum may be aware that electricity is given high priority by the government and the goal is to ensure reliable and effective production, consumption and management in a sustainable and transparent manner. The promotion of the sector development is key to accelerating national economic development and electricity is not only needed for the industrial, commercial, and agricultural sectors but also to serve the best interests of all people in their daily life. The RGC has thus paying attention on energy sector development in a way that its impact on the climate system is minimized.
As a developing country, but also a signatory to the Kyoto protocol, Cambodia does not have an obligation to mitigating GHGs. Nevertheless, the country has actively participated in implementing mitigation projects. In fact, we have been promoting production and consumption of energy from renewable sources to convert the types of natural energy to electricity to displace fossil fuels and promote the development of cleaner energy and thereby contribute to emission reduction.

Through the National Designated Authority hosted by the Ministry of Environment, Cambodia has approved on 7 CDM projects in renewable resources, the private investment projects, with the potential to reduce emission about 570,000 tonnes annually and there will be more such projects in the future to be developed and approved under CDM.

Through CDM, one of the three mechanisms under Kyoto protocol, developing countries can collaborate with developed countries to implement emission reduction projects while promoting sustainable development in the host countries. This win-win solution is indispensable to countries like Cambodia that needs foreign investment in appropriate, clean and environmentally friendly technology to implement emission reduction options in a number of priority sectors such as energy, transport and agriculture.

Good understanding of emission reduction options in these sectors now and in the future is the prerequisite to defining and implementing voluntary GHGs emission reduction projects as part of the effort to join with international community in addressing the ever growing climate change concern. There is also a need for more accurate and evidence based scientific research on potential options for GHGs emission reduction in the country. It is essential to remember that the options for emission reduction have to be socially and politically acceptable and must not cause harm to the environment including the assurance their being cost-effective.

Excellencies, ladies and gentlemen!

The second day of the second National Forum on Climate Change will discuss and raise key recommendations pertaining to addressing climate change issues such as:

- Green Growth and perspectives related to climate change;
- Renewable energy market in the country;
- Development of national action plan for disaster risk reduction;
- Initiative on adaptation to climate change by Mekong River Commission;
- Regional and international experiences and lesson learned on effective adaption;
- Policy on carbon credit and coordination for aid effectiveness;
- Historical climate change impacts on biodiversity and response measures; and
- Climate change impacts and response from gender perspective.

I believe that excellencies, lok chumteav, ok nha, ladies and gentlemen from various ministries, agencies, and stakeholders in today sessions will actively participate in the discussion and make practical recommendations that can contribute to successful and fruitful inputs to addressing climate change.

In conclusion, I would like to wish all of you the four gems of Buddha's blessings and a successful day of the event.

Thank You!

WELCOME REMARKS – DAY III

by Mr. Rafael Dochao Moreno, Charge d'Affaires Delegation of the European Union to Cambodia

Excellencies,
National and International Guests,
Ladies and Gentlemen,

I am pleased to provide welcome remarks at the closing day of this Second National Forum on Climate Change on behalf of the Delegation of the European Union to Cambodia. During the last two days this National Forum on Climate Change has been an excellent opportunity for discussions and exchange of Information on adaptation and mitigation among climate Change practitioners and policy makers. Today the focus is on I policy and international climate change negotiations. As you know the European Union has since long been a driving force in the international climate change negotiations that led to an agreement on the two United Nations climate treaties, the UN Framework Convention on Climate Change (UNFCCC) in 1992 and the Kyoto Protocol in 1997.

The EU has been a world leader on climate action. We are on track to meet our Kyoto target. We have inscribed our 20% commitment into law. We are willing to increase our target to 30%, and this could be part of a second commitment period under Kyoto. We are committed to the long term target of -80 to -95% reductions of EU emissions by 2050. The EU is showing the way, encouraging others to join.

Some may wonder what drives the EU to do all these voluntary efforts without having a new global agreement yet. Well the answer is quite simple: action against climate change is in our own interest. The transition to a low-carbon economy is clearly identified as a major driver of green growth -e.g. in post-crisis stimulus packages. On top of avoiding the dangers of climate change, benefits for the EU include savings in energy consumption, energy security, new jobs, international competitiveness, air quality and health.

Excellencies, Ladies and Gentlemen,

Let me go back to the Forum discussion topic of today: international climate change negotiations. In December 2010, the Cancun Agreements were a success for the global fight against climate change. They put the multilateral climate process back on the rails, confirming that the whole international community wants to act. They set a common objective of keeping temperature increase to below 2°C compared to pre-industrial levels. New processes were established to contribute to this objective.

Now the next milestone, Durban, is just around the corner (28 November -9 December 2011). The European Union believes that Durban will be an important opportunity to progress our work in shaping multilateral action against climate change. Durban will, unfortunately, not be the end of the road but we trust it can take us one step further by operationalizing the decisions taken in Cancun and addressing those issues that were left unresolved in Cancun. This includes:

Firstly the legal form of the global future climate change regime will be a key question and action point for Durban because the current climate regime is insufficient. We all know that the Kyoto Protocol targets end in 2012, which is just behind the corner, and that it covers less than 30% of global emissions -US, China and India are not onboard. The EU's goal remains an ambitious, comprehensive, legally-binding framework *covering all Parties.* It would be the best guarantee for legal certainty and predictability, reciprocity between countries, and a strong political signal of willingness to act. This question was discussed in Cancun but was finally left open; it will be on the table again in Durban.

Secondly the future role of the Kyoto Protocol represents only part of this debate. The EU is attached to the multilateral, rules-based system that is the Kyoto Protocol, and we strongly insist on retaining and improving the essential elements of the Kyoto Protocol for the future regime -for example by extending and further evolving the Kyoto mechanisms, as well as by bringing the Kyoto reporting rules into our broader debates on MRV (Measurement, Reporting and Verification) following the Cancun Agreements. However, a second Kyoto with the EU (almost) alone in it would cover only around 11 % of global emissions. This will not constitute "success" in Durban -what happens to the remaining 89% of global emissions?

In this context the European Union has reiterated its position: the EU is willing to consider a second Kyoto period, but we should agree in Durban on a clear roadmap and timeline to achieve a comprehensive, robust and legally binding framework with the participation of all major emitters. This should also build on the Kyoto architecture, as further improved with a set of rules to be agreed in Durban.

Excellencies,

Ladies and Gentlemen,

We all know that Cambodia's contribution to greenhouse gas emissions is negligible -but increasing -still these international negotiations are extremely important, also for Cambodia, as they will determine the future international climate change regime, and at least partly future climate change financing. Of importance for Cambodia will be, for example, the operationalization of the new Green Climate Fund and how much of this Green Climate Fund would be supporting Cambodia -especially on the key themes of climate action: adaptation, REDD+ and mitigation.

In fact, the EU group already started to provide significant funding to Cambodia in order to address its climate change challenges through bundling its resources in the two largest climate change initiatives in Cambodia: the 'Cambodia Climate Change: Alliance' (Denmark, European Commission, and Sweden) and the 'Pilot Programme for Climate Resilience' (Denmark, Germany, Spain and UK). These two major initiatives have already been introduced during the first two days of this Forum so I won't repeat this.

However what I would like to highlight is -referring to a recent "Strategic Dialogue for Disaster Risk Reduction and Climate Change Adaptation" organized by the EU Delegation that a key challenge and opportunity for Cambodia lies in building a bridge between its current disaster risk management efforts and efforts to promote climate change adaptation. There is a need to better understand the extent to which current disaster management practices reflect future adaptation needs, and to assess what changes may be required if such practices are to address future risks. Let's therefore all take up our collective responsibility: young and old, rich and poor, to the best of our capabilities because we have -unfortunately -no choice what regards climate change:

Our mitigation action must be collective.

Our adaptation action must be now.

Thank you for your attention!

WELCOME REMARK – DAY III

by H.E. Ros Silva, Deputy Secretary General of the Ministry of Economy and Finance

Second National Forum on Climate Change
Phnom Penh, 03 October 2011

Excellency Senior Minister,
Excellencies, *Lok Chumteav,* ladies and gentlemen distinguished national and international guest;

It is my great pleasure and honor to participate in delivering a welcome remarks in the Second National Forum on Climate Change, on behalf of the Deputy Prime Minister, Minister of Economy and Finance. I would like to appreciate and value the effort by the Ministry of Environment (MoE) for organizing this important national event and also express my profound thanks to United Nations Development Programme, European Union, and other Development Partners for their financial and technical support in the area of environment, and particularly in addressing climate change and for organizing today Forum.

The Forum is crucial in the sense that it provides opportunity for practitioners in their on-going work, researchers, policy makers, and other relevant stakeholders in the sector to understand more of the concept, findings, and scientific information of the environmental impacts from review of the challenge of climate change we experienced in the country and in the region through presentations made by speakers and presenters. The Forum also enables us to explore new opportunities to draw on from participation in the implementation of environmental and climate change related programmes through various established mechanisms to assist countries to implement them, particularly developing countries like Cambodia.

Excellencies, ladies and gentlemen!

The Forum is organised timely when many countries in the world are experiencing natural disasters such as flood, storms, earth quakes, and in some other areas faced with drought, that have caused substantial damage to economy, and human and animal live. In fact, Cambodia is now suffering from a flood causing loss to many live. The evidence is consistent with argument made by scientific researchers who describe the severe impacts of natural hazards as the inherent consequence of climate change on economic, social and environmental sectors that are the foundation supporting national growth and sustainability.

Recognising the issues of climate change and the scope of environmental damage, Royal Government of Cambodia (RGC) expresses it strong political will and commitment to participate with national and international community to make its own contribution as a developing country but also a victim to respond to climate change. For instance, the government ratified the United Nations Framework Convention on Climate Change in 1995, acceded to the Kyoto protocol in 2002, and also signatory to many other instruments. The goal is to enhance collaboration with countries in the region and in the world to mobilize finance for human resources and institutional capacity development for effective implementation and ensuring equitable and sustainable development.

Moreover, RGC has been making its effort to development of policy and strategic plans with a focus to mainstreaming comprehensively climate change in relevant sectors and to implement priority projects, and the approval and implementation of the National Adaptation Programme of Action to Climate Change is one of priorities to contribute to high growth, poverty reduction and sustainable development. RGC gives priority on implementation of projects that promote climate resilient water resource management and agricultural practices in rural areas, programme for climate resilience, and programme on climate change and health, as well as mechanisms to

mitigate greenhouse gases and innovative market mechanisms. The RGC will also promote community adaptation through existing agricultural based communities such as Farmer Water User Community, Commercial Association, Community Fisheries and Community Forestry.

Excellencies, ladies and gentlemen!

The aforementioned issues are large in scale and cannot be successfully delivered without active participation by all relevant stakeholders including development partners and private sectors. Both financial and technical capacity is required for addressing climate change with funding and technology transfer to be made from developed countries to least developed countries to fill the gaps in development and poverty reduction.

I strongly believe that the Forum will raise these issues for discussion with a reflection of the strong political commitment and effort by the government in making progress thus far and discuss content in the presentations by our presenters in order to form new and practical recommendations that enable us develop our own economy with climate change and to ensure sustainable development.

In conclusion, I would like to reiterate my sincere thanks to the Ministry of Environment for inviting me to deliver a remarks in this important event and I would like to express to excellencies, *lok chumteav,* ladies and gentlemen, distinguished national and international guests the four gems of Buddha's blessings and with this I declare the opening of the sessions for the second national forum on Climate Change.

Thank You!

CLOSING REMARKS – DAY III

by H.E. Dr. Mok Mareth, Senior Minister, Minister of Environment, NCCC Chair

Excellencies, Lok Chumteav, Vice-Chairs and members of the National Climate Change Committee
Excellencies, Lok Chumteav, ladies and gentlemen, Government senior management and staff
Ambassadors, Representatives of Diplomatic Corps, DPs, Civil Society, NGOs, Private Sectors,
Dear national and international guests and participants to the Forum

First of all, on behalf of the National Climate Change Committee and the Ministry of Environment I would like to profoundly thank all Excellencies, lok chumteav, ladies, gentlemen and all the participants for spending their valuable time to participate in this Forum till the end.

Over the last two years, Cambodia has achieved impressive results in its efforts to address climate change. Climate change has become an important theme of the national development agenda and has been gradually integrated into sub-national and community levels. The report of the 3-day Forum proceedings indicates that this Forum has brought very satisfactory outputs thanks to the active participation of all the participants from Government, DPs, NGOs, and private sectors, particularly the meaningful contribution of the co-chairs, national and international experts-presenters, who have kindly accepted our invitation to share knowledge and experience, making this Forum lively and enriched. All these are new contribution to support Cambodia to address the urgent climate change priorities such as climate change policy and strategic plan development, technical and institutional strengthening, coordination, actual implementation of climate change response measures, resource mobilisation, education and awareness raising and climate change international negotiations, particularly preparation of the country's positions towards CoP-17 in Durban, South Africa end of this year. Of course, we shall not consider this or the subsequent Forums as the end result, but rather as a means for information sharing, consultation and promoting cooperation and coordination.

Excellencies, Lok Chumteav, Ladies and Gentlemen,

We now have better understanding that climate change is a hot topic of the world because of its dangerous effect on human development. The future of humanity is at stake if we continue to allow our ignorance to prevail over the wisdom that fossil-fuel based development is not sustainable and if we are about to think of the future of our children, we must switch our development path into a greener, low-carbon and more climate resilient mode.

As a least developed country, Cambodia has not been a cause of climate change. Our contribution to this problem is negligible both historically and in the future. We are indeed the victim of a problem of which we are not the cause. Nevertheless, we wish to be a part of the solution of this global problem, because of our political will and moral responsibility. More importantly, because we believe that addressing climate change makes sense, politically, economically, environmentally and technologically. We believe that we can turn the climate change crisis into a new opportunity for a more sustainable development.

During the opening ceremony, we listened to the meaningful welcome speech of His Excellency Yim Chhay Ly, high representative of Samdech Akka Moha Sena Padei Techo Hun Sen, Prime Minister of the Kingdom of Cambodia and Honorary Chair of the NCCC, in which he has provided valuable recommendations. These recommendations and the outputs of this 3-day Forum will constitute a solid foundation for our actions to respond to climate change in Cambodia. The vivid picture of the victims of the current flood is more than enough for all us to urgently and immediately act at policy, planning and implementation levels to mitigate the sufferings and to

strengthen their resilience and adaptive capacity to enable them sustainable develop under climate change conditions.

Within its legal mandate given by the Royal Government, the National Climate Change Committee with the Ministry of Environment acting as its Secretariat is ready to responsibly fulfill its mission, to enhance cooperation, coordination, and partnership in an equitable, transparent, efficient and credible manner. The NCCC is committed to creating and ensuring an enabling environment for all the climate change actors to have an equitable opportunity in participating in this climate change crusade.

In conclusion, on behalf of the NCCC and senior management and staff of the Ministry of Environment, I would like to express our gratitude to all the participants, co-chairs, presenters and resource persons for their valuable time to participate in this National Forum to share their knowledge, experience; actively contribute in the discussions; and provide valuable comments. I particularly thank the representatives of private sectors, national and international organizations; and NGOs for participating in the climate change fair. I profoundly thank all the NCCC members and staff of the Forum Secretariat for their hard work to successfully organize this forum. Finally, my special thanks go to our sponsors, namely the European Union, UNDP, Sida, Danida, Oxfam America and JCCI for their generous financial support to this Forum.

I wish Excellencies, Lok Chumteav, ladies, gentlemen, and all the participants the four Buddha's gems and allow me to declare this Forum closed.

Thank You!

Second National Forum on Climate Change
Cambodia
3-5 October 2011

Climate Change Science, Impacts and Opportunities

Mozaharul Alam
Regional Climate Change Coordinator

United Nations Environment Programme (UNEP)

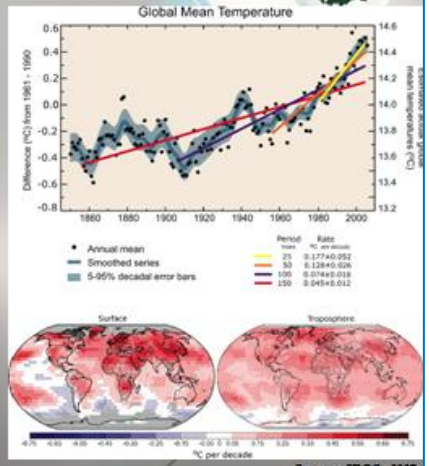
About Presentation

- Reading the signs of climate change – temperature rise, rainfall variation, sea level rise, extreme events and anomalies
- Impacts on sectors and South East Asia region
- Adaptation needs and challenges
- Delay in emission cuts and impacts
- Opportunities – integration and interlinking actions

UN*life* to combat CLIMATE CHANGE

Reading the signs - temperature

- Global mean temperature has increased 0.76°C during 1906-2005
- The average temperature in Southeast Asia has increased 0.1–0.3°C per decade over the last 50 years
- Increase in temperature varies by countries – highest change observed in Singapore



Source: IPCC, 2007

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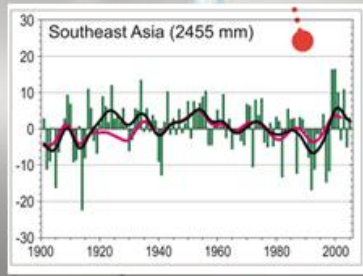
Reading the signs – precipitation

- Indonesia: decrease in annual rainfall during recent decades in some areas
- Philippines: increase in annual rainfall and in the number of rainy days
- Singapore decrease in annual rainfall in the past three decades
- Thailand decreasing annual rainfall for the last five decades
- Viet Nam: decrease in monthly rainfall in July-August and increase in September to November

Precipitation in Southeast Asia trended downward from 1960 to 2000.

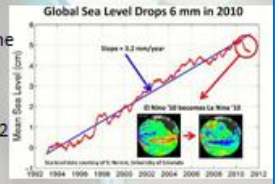


Source: IPCC, 2007

UN*life* to combat CLIMATE CHANGE

Reading the signs – sea level rise

- Sea level has risen at the rate 1.8 mm/year since 1961 and 3.1 mm/year since 1993.
- IPCC estimated sea levels may rise 18cm - 59cm in the coming century.
- One study now estimates sea level rise of between 0.8 and 1.5 meters, while another suggests a rise of 2 meters in the coming century from outflows of ice from Greenland alone.
- The Greenland ice sheet, which could raise sea levels by 6m if it melted away, is currently losing more than 100 cubic km a year-faster than can be explained by natural melting.
- In SEA, sea levels have risen 1–3 millimeters per year and projected to rise by 70 cm by 2100
- Cambodia: Sea level rise of 0.18-0.56 m by the 2090s



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Reading the signs – sea level rise

Sources of Sea Level Rise	Rate of sea level rise (mm per year)	
	1961-2003	1993-2003
Thermal Expansion	0.42 ± 0.12	1.6 ± 0.5
Glaciers and ice caps	0.50 ± 0.18	0.77 ± 0.22
Greenland and Ice Sheet	0.05 ± 0.12	0.21 ± 0.07
Antarctic Ice Sheet	0.14 ± 0.41	0.21 ± 0.35
Sum of individual climate contributions to sea level rise	1.1 ± 0.5	2.8 ± 0.7
Observed total sea level rise	1.8 ± 0.5	3.1 ± 0.7
Difference (observed minus sum of estimated climate contribution)	0.7 ± 0.7	0.3 ± 1.0

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Source: IPCC, 2007

Reading the signs – extreme events

Extreme Events	Key Trends
Heat waves	Increase in hot days and warm nights and decrease in cold days and nights between 1961 and 1998
Intense rains and floods	Increased occurrence of extreme rains causing flash floods in Viet Nam; landslides and floods in 1990 and 2004 in the Philippines, and floods in Cambodia in 2000
Droughts	Droughts normally associated with El Niño years in Indonesia, Lao PDR, Myanmar, Philippines, and Viet Nam; droughts in 1997 and 1998 causing massive crop failures and water shortages as well as forest fires in various parts of Indonesia, Lao PDR, and Philippines
Typhoons	On average, 20 cyclones cross the Philippine area of responsibility with about eight or nine making landfall each year; an average increase of 4.2 in the frequency of cyclones entering the Philippine area of responsibility during the period 1990—2003

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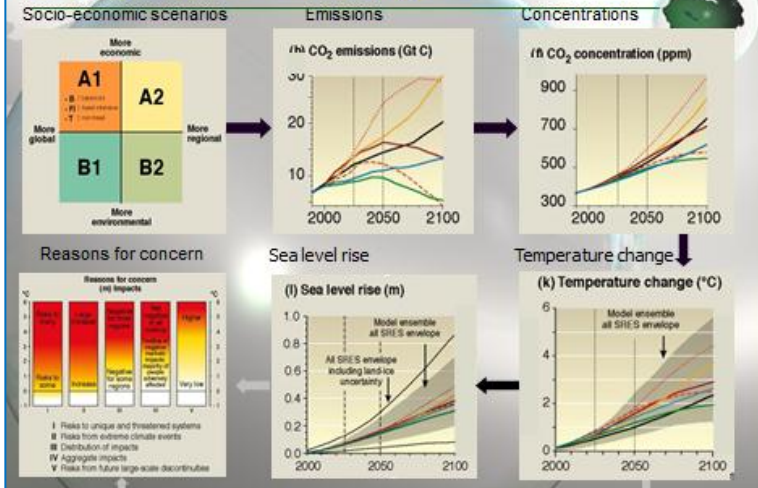
Source: IPCC, 2007

Reading the signs – future storyline



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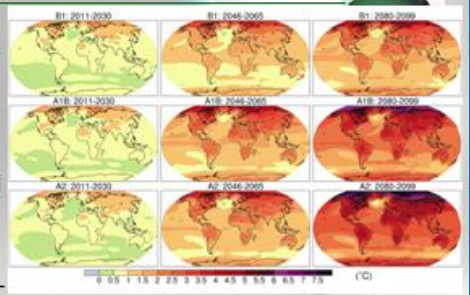
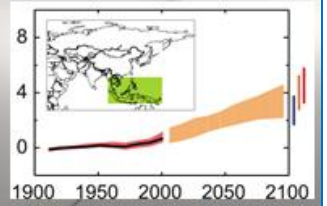
Source: IPCC, 2007

Reading the signs – projection of temperature

- Global mean temperature projected to be increased by 1.8 to 5.4°C by 2100
- The mean surface air temperature in SEA would increase between 0.75–0.87°C by 2039, 1.32–2.01°C by 2069, and 1.96–3.77°C by 2100 (IPCC, 2007)





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Source: IPCC, 2007

Reading the signs – projection of temperature

- Indonesia: increase 2.1ºC and 3.4ºC by 2100 under the B2 and A2 scenarios, respectively.
- Philippines: increase of 1.2–3.9ºC by 2080, using all the IPCC emission scenarios.
- Singapore: similar to the projected global mean temperature rise of 2.5ºC with a range of 1.7–4.4ºC.
- Thailand: increase 2–4ºC by the end of this century
- Viet Nam: increase in temperature of 2–4ºC by 2100
- Cambodia: increase in mean annual temperatures of 0.3-0.6 °C by 2025, 0.7-2.7 °C by the 2060s and of 1.4-4.3 °C by the 2090s

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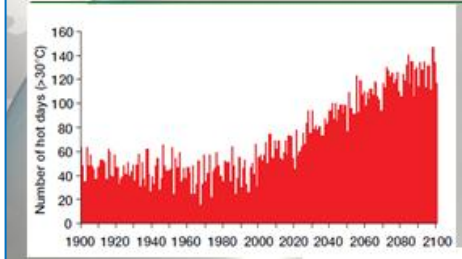
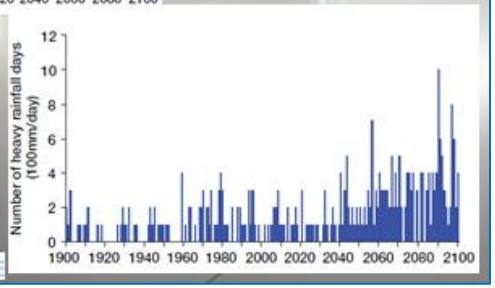
Reading the signs – projection of anomalies





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Reading the signs - global average surface warming and sea level rise

Thermal Expansion	Temperature Change (°C at 2090-2099 relative to 1980-1999)		Sea Level Rise (m at 2090-2099 relative to 1980-1999)
Case	Best estimate	Likely range	Model-based range excluding future rapid dynamical changes in ice flow
B1 Scenario	1.8	1.1 – 2.9	0.18 – 0.38
A1T Scenario	2.4	1.4 – 3.8	0.20 – 0.45
B2 Scenario	2.4	1.4 – 3.8	0.20 – 0.43
A1B Scenario	2.8	1.7 – 4.4	0.21 – 0.48
A2 Scenario	3.4	2.0 – 5.4	0.23 – 0.51
A1FI Scenario	4.0	2.4 – 6.4	0.26 – 0.59

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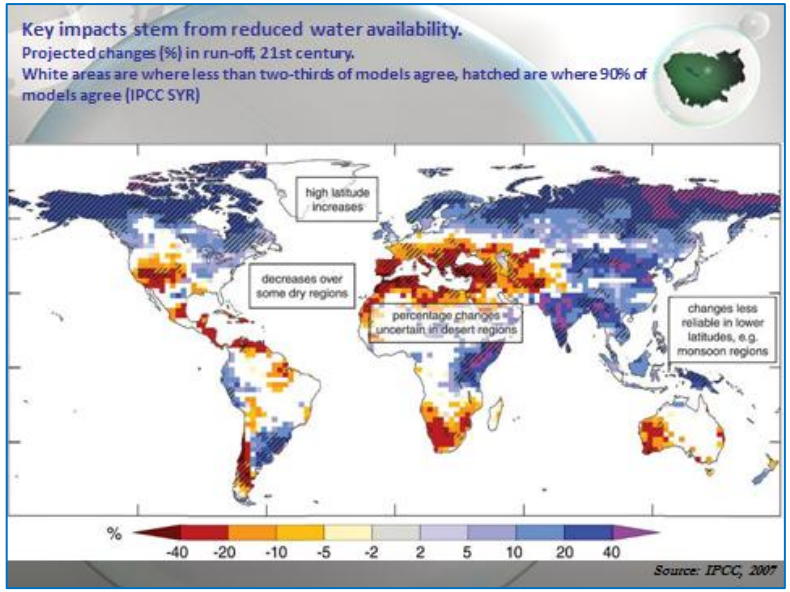
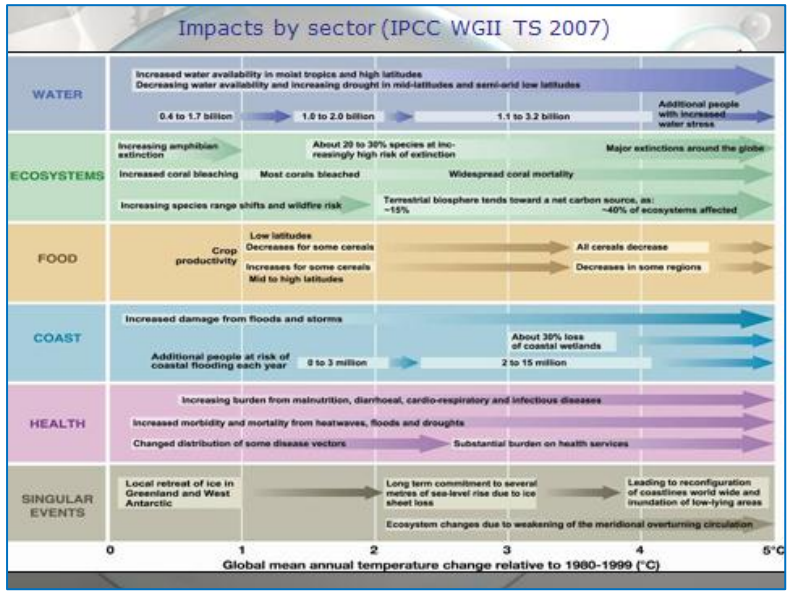
Source: IPCC, 2007





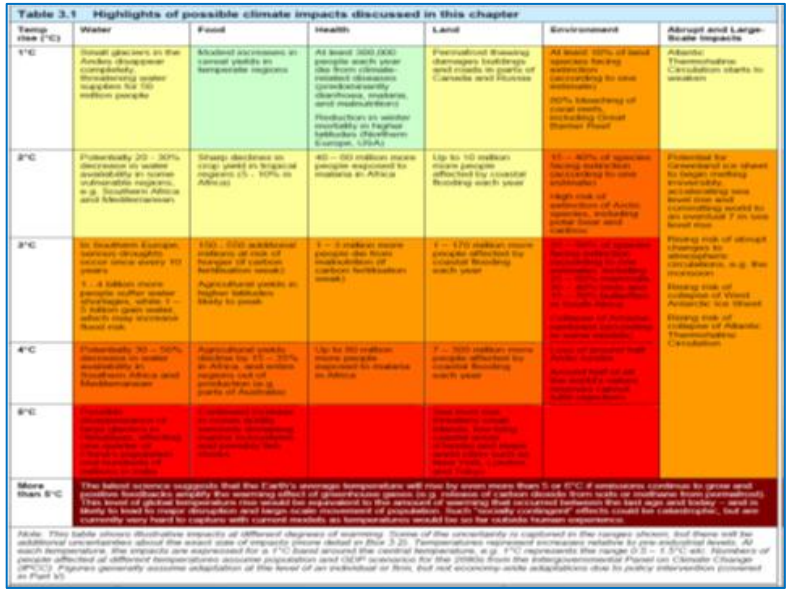


Table 3.1 Highlights of possible climate impacts discussed in this chapter

Temp rise (°C)	Water	Food	Health	Land	Environment	Abrupt and Large-Scale Impacts
1°C	Small glaciers in the Andes disappear completely, threatening water supplies for 100 million people	Modest increases in cereal yields in temperate regions	At least 300,000 people each year die from climate-related diseases (predominantly diarrhoea, malaria, and malnutrition)	Permafrost thawing damages buildings and roads in parts of Canada and Russia	At least 10% of land species facing extinction (according to one estimate)	Atlantic Thermohaline Circulation starts to weaken
2°C	Potentially 20 – 30% decrease in water availability in some vulnerable regions, e.g. Southern Africa and Mediterranean	Sharp declines in crop yield in tropical regions (5 – 10% in Africa)	40 – 60 million more people exposed to malaria in Africa	Up to 10 million more people affected by coastal flooding each year	15 – 40% of species facing extinction (according to one estimate) 30% bleaching of coral reefs, including Great Barrier Reef High risk of extinction of Arctic species, including polar bear and caribou	Potential for Greenland ice sheet to begin melting irreversibly, accelerating sea level rise and committing world to an eventual 7 m sea level rise
3°C	In Southern Europe, serious drought-related crop losing 50 years 1 – 4 billion more people suffer water shortages, while 1 – 5 billion gain water, which may increase flood risk	150 – 550 additional millions at risk of hunger (if carbon fertilisation weak) Agricultural yields in higher latitudes likely to peak	1 – 3 million more people die from malnutrition (if carbon fertilisation weak)	1 – 170 million more people affected by coastal flooding each year	20 – 50% of species facing extinction (according to one extinction scenario) 30 – 40% loss of Amazon rainforest (according to one scenario) Risk of extinction of Arctic species, including polar bear and caribou	Rising risk of abrupt changes to atmospheric circulation, e.g. the monsoon Rising risk of collapse of West Antarctic ice sheet Rising risk of collapse of Atlantic Thermohaline Circulation
4°C	Potentially 30 – 50% decrease in water availability in Southern Africa and Mediterranean	Agricultural yields decline by 15 – 35% in Africa, and entire regions cut of production (e.g. parts of Australia)	Up to 80 million more people exposed to malaria in Africa	1 – 300 million more people affected by coastal flooding each year	Around half of all the world's wetlands disappear (Ramsar Convention)	
5°C	Possible disappearance of large glaciers in Himalayas, affecting river systems of South, East and Southeast Asia, home to one-quarter of humanity	Continental-scale increases in cereal productivity in seasonally temperate regions (medium confidence)	Increased water-borne diseases, such as cholera	Sea level rise threatening major cities, such as London, New York, Tokyo and Shanghai		
More than 5°C	The latest science suggests that the Earth's average temperature will rise by more than 5 (or 6°C) if emissions continue to grow and positive feedbacks amplify the warming effect of greenhouse gases (e.g. release of carbon dioxide from soils or methane from permafrost). This level of global temperature rise would be equivalent to the amount of warming that occurred between the last ice age and today, and is likely to lead to major disruption and large-scale movement of populations. Such "socially contingent" effects could be catastrophic, but are currently very hard to capture with current models, as temperatures would be so far outside human experience.					

Note: This table shows illustrative impacts at different degrees of warming. Some of the uncertainty is captured in the ranges shown, but there will be additional uncertainties about the exact size of impacts (more detail in Box 3.2). Temperatures represent increases relative to pre-industrial levels. At each temperature, the impacts are expressed for a 1°C band around the central temperature, e.g. 1°C represents the range 0.5 – 1.5°C) etc. Numbers of people affected at different temperatures assume population and GDP scenarios for the 2080s from the Intergovernmental Panel on Climate Change (IPCC). Figures generally assume adaptation at the level of an individual or firm, but not economy-wide adaptations due to policy interventions (covered in Part IV).

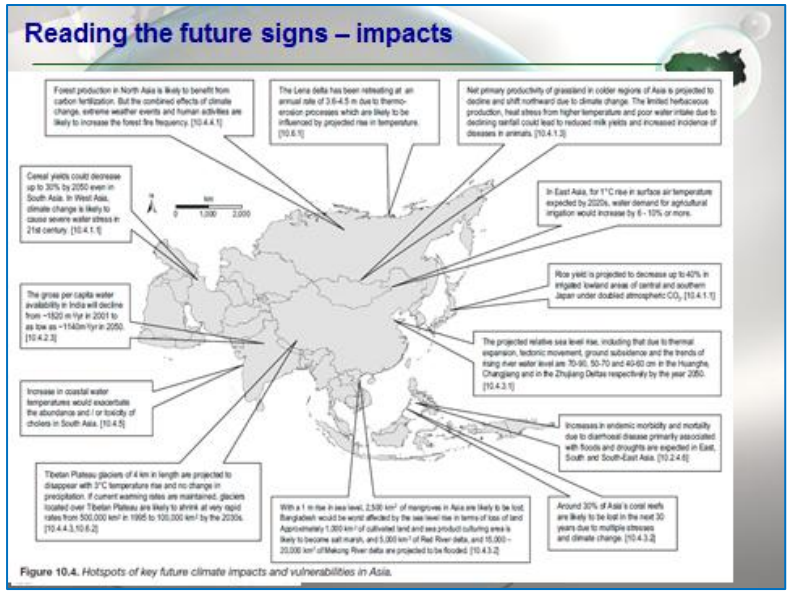


Figure 10.4. *Hotspots of key future climate impacts and vulnerabilities in Asia.*

Observed impacts – water resources

Climate Change	Observed Impact
Increasing temperature	– Increased evapotranspiration in rivers, dams, and other water reservoirs leading to decreased water availability for human consumption, agricultural irrigation, and hydropower generation
Variability in precipitation (including El Niño Southern Oscillation)	– Decreased river flows and water level in many dams and water reservoirs, particularly during El Niño years, leading to decreased water availability; increased populations under water stress – Increased stream flow particularly during La Niña years leading to increased water availability in some parts of the region – Increased runoff, soil erosion, and flooding, which affected the quality of surface water and groundwater
Sea level rise	– Advancing saltwater intrusion into aquifer and groundwater resources leading to decreased freshwater availability

Sources: Boer and Dewi (2008), Cuong (2008), Ho (2008), Jesdapipat (2008), Perez (2008).

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Observed impacts – agriculture

Climate change	Observed impacts
Increasing temperature	– Decreased crop yields due to heat stress – Increased livestock deaths due to heat stress – Increased outbreak of insect pests and diseases
Variability in precipitation (including El Niño Southern Oscillation)	– Increased frequency of drought, floods, and tropical cyclones (associated with strong winds), causing damage to crops – Change in precipitation pattern affected current cropping pattern; crop growing season and sowing period changed – Increased runoff and soil erosion caused decline in soil fertility and consequently crop yields
Sea level rise	– Loss of arable lands due to advancing sea level – Salinization of irrigation water affected crop growth and yield

Sources: Boer and Dewi (2008), Cuong (2008), Ho (2008), Jesdapipat (2008), Perez (2008).

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Observed impacts – health sector

Climate Change	Indonesia	Philippines	Singapore	Thailand	Viet Nam
Increasing temperature and variability in precipitation	Significant increase in dengue cases in La Niña years; illness and deaths due to heat stress	Increased dengue outbreak; illness and deaths due to heat stress	increasing cases of dengue; spreading to areas not previously found	Impacts of dengue fever significant and increasing	Increased number of dengue cases
Sea level rise	Spread of water-borne infectious diseases	Spread of water-borne infectious diseases		Spread of water-borne infectious diseases	Spread of water-borne infectious diseases

Sources: Boer and Dewi (2008), Cuong (2008), Ho (2008), Jesdapipat (2008) Perez (2008).

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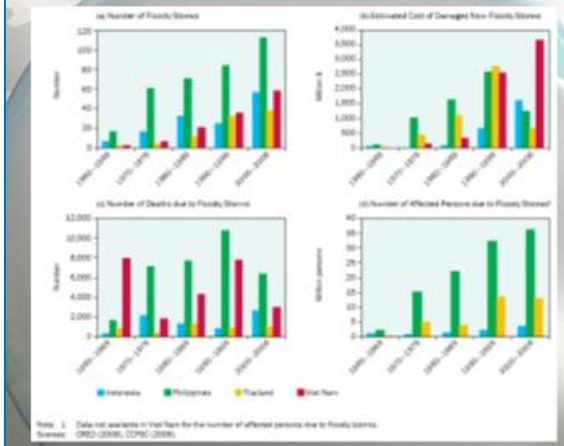
Impacts – cost of damage



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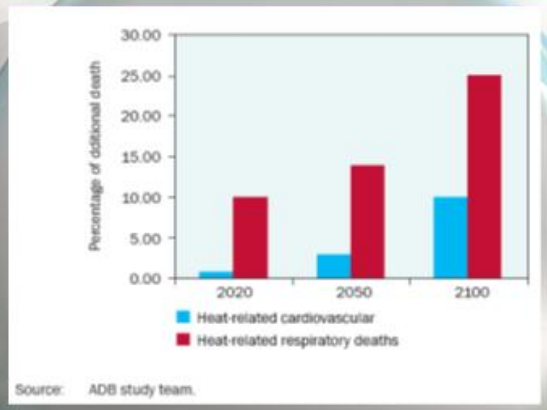
Future impacts – projection of death



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Adaptation options

- Water resources: scale up water conservation and management, integrated water management, flood early warning system, irrigation improvement, etc;
- Agriculture: better climate information, research and development on heat-resistant crop varieties, early warning systems, and efficient irrigation systems; and explore innovative risk-sharing instruments;
- Forestry: Enhance early warning systems and awareness-raising programs to prepare for more frequent forest fires;
- Coastal and marine resources: integrated coastal zone management plans, including mangrove conservation and planting;
- Health: early warning systems for disease outbreaks, health surveillance, awareness-raising campaigns, and infectious disease control programs;
- Infrastructure: introduce "climate proofing" in transport-related investments and infrastructure - starting with public buildings.

UN life to combat CLIMATE CHANGE

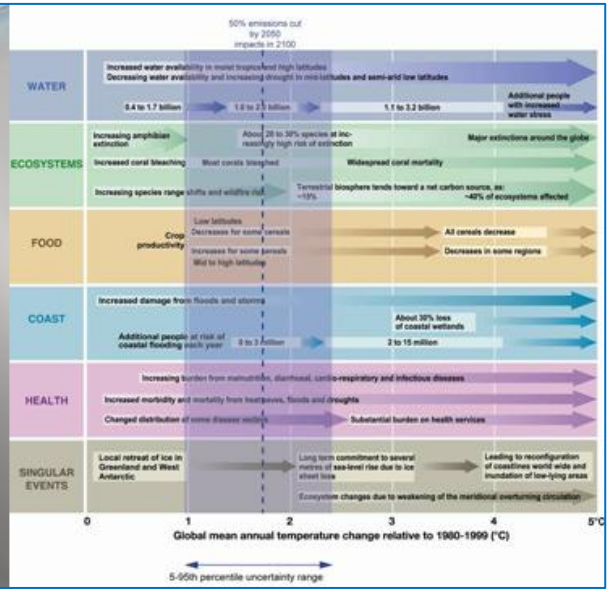
Challenges for adaptation

- Insufficient information and knowledge on the impacts of climate change and responses of natural systems to climate change;
- Limited studies on the interconnections between adaptation and mitigation options, costs and benefits of adaptation, and trade-offs between various courses of actions;
- The absence of information on adaptation costs and benefits makes it difficult to undertake the best adaptation option;
- The above limiting factors are most constraining in developing countries where systems for monitoring and research on climate and responses of natural and human systems to climate are usually lacking;
- More relevant information will be needed for action
  - crop yield benefits linked to changes in planting dates for various regions
  - cost of coastal protection investment in Vietnam and Cambodia

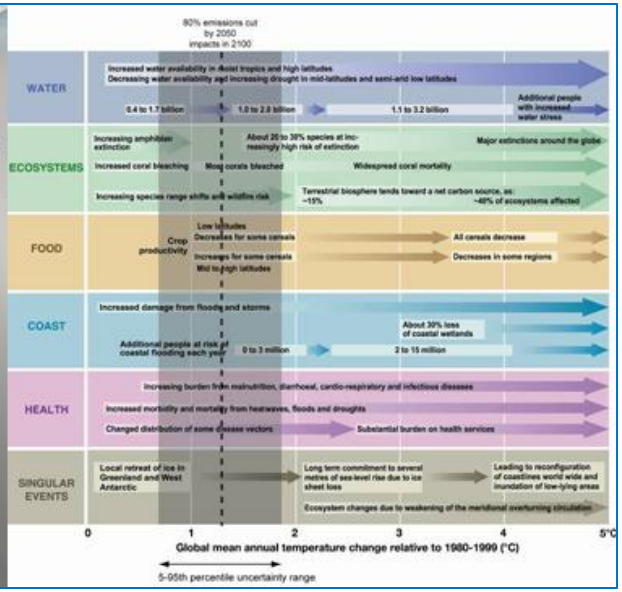
UN life to combat CLIMATE CHANGE

Impacts under 50% emissions cut by 2050 [3% per year]

[Parry et al., Nature Reports Climate Change, June 2008]

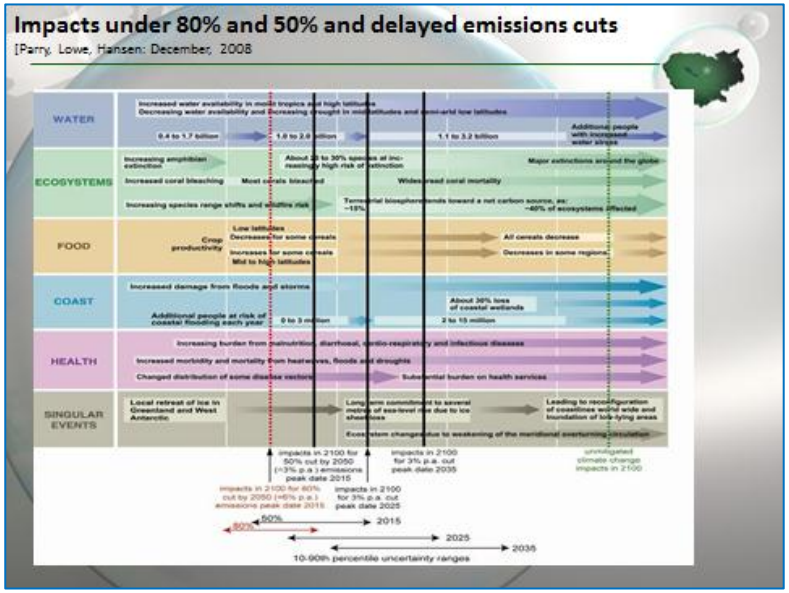


Impacts under 80% emissions cut by 2050 [6% per year] [Parry, et al.,2008



Impacts under 80% and 50% and delayed emissions cuts

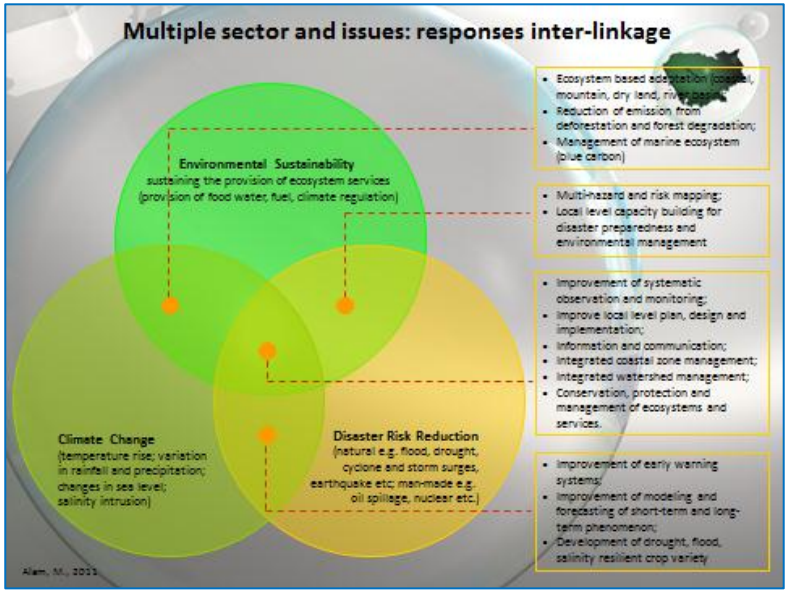
[Parry, Lowe, Hansen: December, 2008

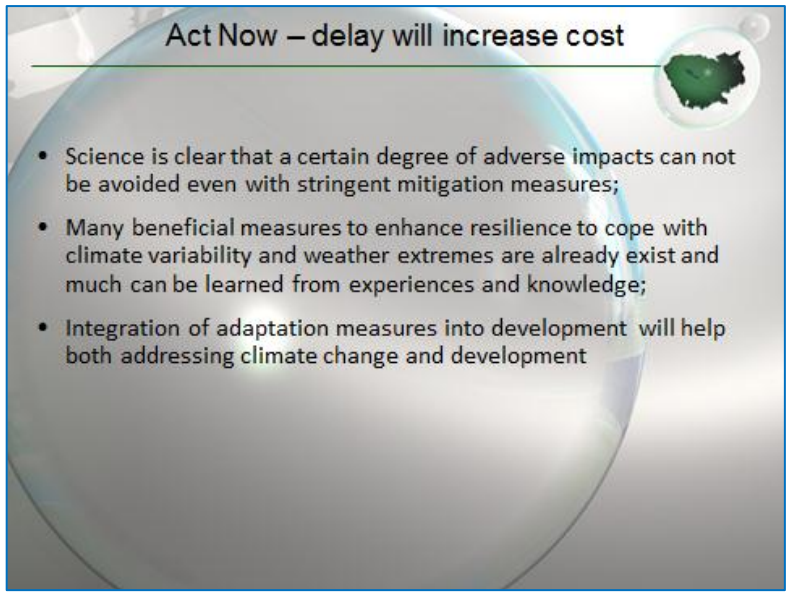


Opportunities

- Politically high in the agenda and recognition of implication on development – allow engagement of policy and decision makers;
- New institutional setup to coordinate climate change – mandate, policy and strategy are key
- Provisions for finance, technology, and capacity building – funding window under UNFCCC (existing and new), technology mechanism, capacity building
- Development is in progress and integrating climate change will support sustainable development – integration of multi-sector and multiple issues are opportunities

Multiple sector and issues: responses inter-linkage




Act Now – delay will increase cost
• Science is clear that a certain degree of adverse impacts can not be avoided even with stringent mitigation measures;
• Many beneficial measures to enhance resilience to cope with climate variability and weather extremes are already exist and much can be learned from experiences and knowledge;
• Integration of adaptation measures into development will help both addressing climate change and development

THANK YOU !
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Web: www.unep.org/climatechange

Contents

1. Cambodia Climate Change Alliance
2. Pilot Programme for Climate Change Resilience
3. Existing Climate Change Related Projects

1. Cambodia Climate Change Alliance (CCCA)

- **Donors:** EU, UNDP, SIDA and DANIDA
- **Budget:** 8.9 Million USD
- **Timeframe:** 2010-2012
- **Objective:** *Climate Change activities in Cambodia are nationally owned, led and aligned with Cambodia's development priorities, and are effectively coordinated and implemented.*

The CCCA has 3 Key Results, as follows:

- **Result 1:** Coordination of CC Policy formulation and mainstreaming
- **Result 2:** Platform for CC Knowledge Management and Outreach, CC Awareness, Education and Information
- **Result 3:** Trust Fund Management (including Project Grants)

2. Pilot Programme for Climate Change Resilience

- **Donors: WB, ADB, NDF, RGC**
- **Phase 1:** USD 1.5 million
- **Phase 2:** Grant USD 50 million and Loan 36 million
- **Timeframe:** 2010-20??

Objectives

Phase 1: Assessment and Strengthening of institutional readiness for the project focusing on 3 priority areas: water resources development, agriculture /natural resources, and rural infrastructure, and

Objective Phase 2: Implementation of the 'strategic programme' through investment projects with seven components (including policy reform, institutional capacity building and on-the-ground investments) in the 3 priority areas.

3. Existing Climate Change Related Projects (1)

3.1 USAID/Fintract Cambodia

- **Donors: USAID**
- **Partner/Implementer: Fintrac**
- **Estimated Budget: US$ 54 m**
- **Timeframe: Dec 2010-Dec 2015**

Main Activities: To improve food security through enhanced agricultural development and rational management of natural resources. Climate change related activities include enhancing the resilience of agriculture and sustain ecosystem functions.

Location: Battambong, Pursat, Kampong Thom, Siem Reap

3. Existing Climate Change Related Projects (2)

3.2 REDD+ Program

- **Donors: Danida, DFID, NZAID**
- **Partner/Implementer: FA/CFI/PACT Cambodia**
- **Estimated Budget: US$300,000**
- **Timeframe: 2008-2028**

Objective: to protect Cambodian forest resources, improved livelihoods for forest-dependent communities, and effective sequestering of forest carbon to reduce global warming through REDD program.

Location: Oddar Meanchey

3. Existing Climate Change Related Projects (3)

3.3 Oxfam America

- **Donors:** Individual donors….
- **Partner/Implementer:** Oxfam America
- **Budget:** n/a
- **Timeframe:** 2010-2022

Main Activities: Climate change adaptation in agriculture and climate change awareness raising and capacity building.

Location: Kampong Speu, Prey Veng, Svay Rieng, Takeo, and Pursat

3. Existing Climate Change Related Projects (4)

3.4 Joint Climate Change Initiative (JCCI)

- **Donors: SIDA**
- **Timeframe:** April 2010-Dec 2012 (phase 1&2)
- **Implementers:** Forum Syd, DCA/CA and CORD
- **Estimated Budgets: US$1.28 m**

Objective: to increase capacity of the local Cambodian NGOs and incorporate climate change interventions within their programmes; and increase capacity of INGOs (Cord, DCA/CA, and Forum Syd) to work on climate change issues and can identify suitable methods and facilitate program activities which effectively respond to climate change threats.

Location: Ratanakiri, Svay Rieng, Siem Reap, Banteay Meanchey, Kompong Chhnang and Kompong Speu.

3. Existing Climate Change Related Projects (5)

3.4 Joint Climate Change Initiative (JCCI)

Main activities: JCCI is working with three parallel processes: i) knowledge-attitude-process, ii) connecting to needs and iii) to respond both institutionally and on the ground. JCCI process includes training/capacity building, coaching & mentoring, monitoring, proposal development, pilot project implementation. Also, the advisors of the JCCI project gain knowledge and skills in a range of areas including climate change mitigation and adaptation through learning forum.
Total partners in both phases: 22 Cambodian NGOs

3. Existing Climate Change Related Projects (6)

3.5 DIPEHCO

- **Donors:** DIPEHCO
- **Partner/Implementer:** NGOs/INGOs
- **Budget:** €7.5 million
- **Timeframe:** 2004-Present

Main Activities: The establishment of flood and drought early warning systems, promotion of small scale mitigation measures such as dykes and ponds, the establishment and training of village disaster management committees, the development of local disaster management plans and their integration at commune and district levels.

Location: Communities

3. Existing Climate Change Related Projects (7)

3.6 Chinese Government

- **Donors: Chinese Government**
- **Partner/Implementer:** MoWRAM
- **Budget:** US$30m
- **Timeframe:** 2010-2012

Main Activities: implementing a flood protection project

Location: Kampong Trabek, Prey Veng

3. Existing Climate Change Related Projects (8)

3.7 Other Climate Change Related Projects

Action Title	DONOR(s)	IMPLEMENTING/MANAGING AGENCY	IMPLEMENTING PARTNERS	START DATE (mm/yy)	END DATE (mm/yy)	TOTAL BUDGET	TARGET LEVEL(s)	ADAPTATION, MITIGATION or BOTH
Promoting Climate Resilience in Agricultural Practices and Water Resource Management in the Rural Cambodia (NAPA Follow Up)	GEF/LDCF, UNDP	UNDP	MAFF	Sep-09	Jun-13	3.1 mil USD	Local Government and Community	Adaptation
North West Irrigation Sector Project		AFD	MoRAM	2004	2011	18.93 mil USD		Adaption
Improving the Food Security of farming families affected by volatile food prices	EU	FAO	MAFF/MOWRAM/MOWA	2010	Jun-11	USD 50,000 for component	Nation	Adaptation
CC Adaptive Initiative (CCAI)	AusAID, DANIDA, SIDA, Luxembure, Finnida	MRC	NMCs, MoE CSIRO, GTZ, SEI, UNDP, SEA START...	Aug-09	2025	US$15 mil for the first five years phase until 2015	Lower Mekong Basin	Adaptation planning in MRB

3. Existing Climate Change Related Projects (9)

3.7 Other Climate Change Related Projects

Action Title	DONOR(s)	IMPLEMENTING/MANAGING AGENCY	IMPLEMENTING PARTNERS	START DATE (mm/yy)	END DATE (mm/yy)	TOTAL BUDGET	TARGET LEVEL(s)	ADAPTATION, MITIGATION or BOTH
Sustainable Forest Management (SFM)	GEF, UNDP	UNDP	FA	2011	2015	4.8 mil USD	Community	Mitigation
REDD Readiness Plans (REDD)	UN-REDD, UNDP, FAO	UNDP, FAO, UNEP	FA	2011	2012	4.0 mil USD	Nation	Mitigation
The Project for Introduction of Clean Energy by Solar Electricity Generation System	Japan	JICA		2010		720 mil yen		Mitigation
The Forest Preservation Programme	Japan	Japan		2010		900 mil yen		Mitigation
Support Project for Agricultural Development of Cambodia		AFD	MAFF/CIRAD	2008	2013	2.5 mil Euro		Mitigation

3. Existing Climate Change Related Projects (10)

3.7 Other Climate Change Related Projects

Action Title	DONOR(s)	IMPLEMENTING/MANAGING AGENCY	IMPLEMENTING PARTNERS	START DATE (mm/yy)	END DATE (mm/yy)	TOTAL BUDGET	TARGET LEVEL(s)	ADAPTATION, MITIGATION or BOTH
The Programme for Improvement of Capabilities to Cope with Natural Disasters Caused by Climate Change	Japan	Japan		2010		1 billion yen		Adaptation
Green Growth Training	British Embassy		UNESCAP, MoE	Jan-11	Feb-11	USD 10,000		Mitigation
Coastal Adaptation and Resilience Planning in Coastal Areas (CCCA Grant)		UNEP	MoE	2010-2012		2.2 mil USD		Adaptation
Climate Change Initiation Plan (CC IP)	UNDP	UNDP	UNDP	2009	2010	0.7 mil USD	Nation	Both

3. Existing Climate Change Related Projects (11)

3.7 Other Climate Change Related Projects

Action Title	DONOR(s)	IMPLEMENTING/MANAGING AGENCY	IMPLEMENTING PARTNERS	START DATE (mm/yy)	END DATE (mm/yy)	TOTAL BUDGET	TARGET LEVEL(s)	ADAPTATION, MITIGATION or BOTH
Climate Change Adaptation Knowledge Platform for Asia		UNEP	UNEP	2009-2011		0.8 mil per year		Adaptation
Vulnerability Assessment and Adaptation Programme for Climate Change in the Coastal Zone of Cambodia considering livelihood improvement and ecosystems		UNEP	MoE	2010-2013		4.6 mil USD		Adaptation
Supports preparation of green growth roadmap		UNESCAP	MoE	2009				Mitigation
Capacity building and public awareness raising programme on unintentionally produced POPs from the open burning of waste at dumpsite		UNIDO	MoE			0.8 mil USD		Mitigation
Reducing Green House gas emission through improved energy efficiency in the industrail sector in Cambodia		UNIDO	MoE, MIME	2010-2014		2.5 mil USD		Mitigation
Resource Efficient and Cleaner Production Programme for Green Growth of Manufacturing and Trade in Kingdom of Cambodia		UNIDO	MIME	2009-2013		1.2 mil USD		Mitigation

3. Existing Climate Change Related Projects (12)

3.7 Other Climate Change Related Projects

Action Title	DONOR(s)	IMPLEMENTING/MANAGING AGENCY	IMPLEMENTING PARTNERS	START DATE (mm/yy)	END DATE (mm/yy)	TOTAL BUDGET	TARGET LEVEL(s)	ADAPTATION, MITIGATION or BOTH
Support to CARE IRDM in collaboration with the NCDM in natural disaster and risk mitigation.		AusAID	CARE-IRDM and NCDM	2006	2010	1.2 USD		Adaptation
Developing multi-scale climate change adaptation strategies for farming communities in Cambodia, Laos, Bangladesh and India		AusAID	CARDI, MAFF (Dept of Agricultural Extension), IDE	2009	2014			Adaptation
Support to the MoE to prepare Second National Communications to the UNFCCC (SNC)	GEF, UNDP	UNDP	MoE	2007	2010	1.3 mil USD	Nation	Both
Cambodian Human Development Report on climate change (CHDR)	UNDP	UNDP	UNDP	2009	2011	0.3 mil USD	Nation	Both
Knowledge, Attitude and Practices Study on Climate Change (KAP)	UNDP, Danida, Oxfam	MoE	BBC Trust	Mar-10	Oct-10	0.1 mil USD	Nation	Both

For more information:
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www.camclimate.gov.kh

1. Background Information

- Cambodia ratified the UFCCC on 18 Dec. 1995
- As party to the UNFCCC, it has a commitment to report to the Conference of the Parties on (Article 12 of the UNFCCC):
  - Emissions by sources and removals by sinks of all GHGs
  - National measures to mitigate and adapt to CC
- This report is officially called "National Communication"
- Decision 17/CP.8: non-Annex I Parties should take into account their development priorities, objectives and national circumstances
- As LDC, Cambodia is entitled to full-cost financing for preparing its National Communications (at its discretion)
- MoE is the Implementing Agency. Total budget: $405,000 (GEF)

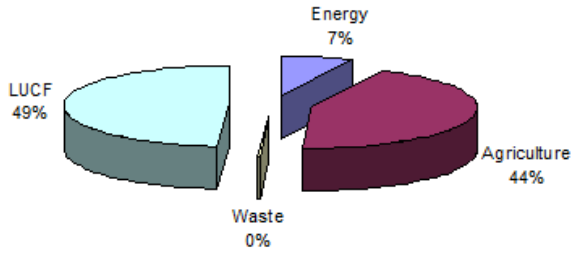
2. National Circumstances

- Political and decision-making structure
- Development priorities
- Geographical characteristics
- Climate
- Population statistics
- Economy, trade
- CC institutional arrangements

3. Nat. GHG Inventory for 2000 (1)

GHG Source and Sink Categories	CO_2 Emissions	CO_2 Removals	CH_4	N_2O	Total , Gg CO_2e.
Energy	2,047.66		55.38	0.75	3,443.14
Agriculture			875.52	8.79	21,110.82
Land Use Change & Forestry	22,858.73	-48,165.86	32.06	0.22	-24,565.67
Waste			10.18	0.05	229.24
Total	24,906.39	-48,165.86	973.14	9.81	217.57

3. Nat. GHG Inventory for 2000 (2)

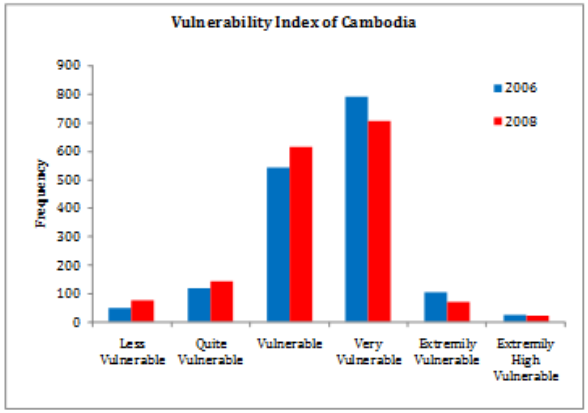


4. Vulnerability and Adaptation Assessment

Overview

- Cambodia is a developing country dependent on agriculture and highly vulnerable to the impact of climate change
- SNC covers an assessment of historical and future CC in Cambodia, CC vulnerability mapping, and of CC impact on key sectors (agriculture, water resources, forestry, the coastal zone and health) using a regional climate model (PRECIS) in combination with a number of GCM models

Number of Communes According to Vulnerability Category



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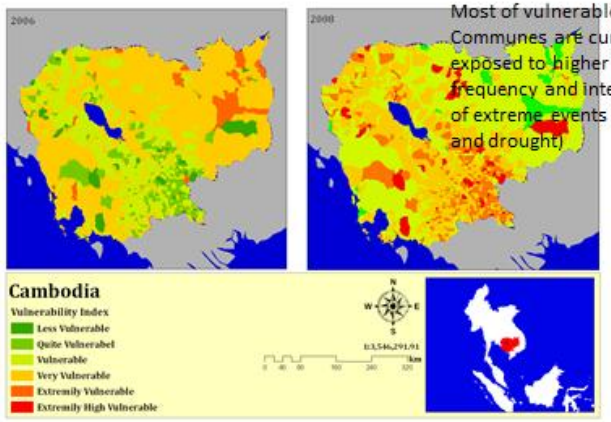
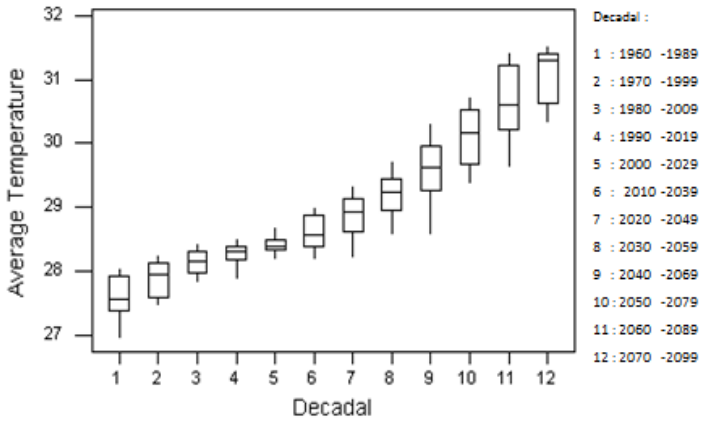
Distribution of Vulnerability Index by Commune



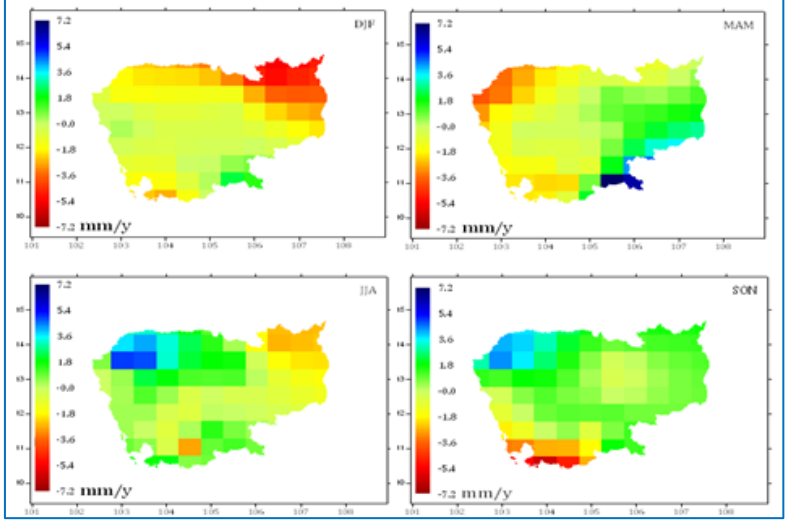
Most of vulnerable Communes are currently exposed to higher frequency and intensity of extreme events (floods and drought)

10

Historical and Future Mean Temperature Over Land Area of Cambodia (based on PRECIS)



Historical change (trend) of seasonal rainfall in Cambodia (1960-2000)



Key message

- Based on data 1960-2000, Cambodian climate (rainfall and temperature) has already change, and the future rainfall pattern will continue to change depending on emission scenarios
- Under high emission scenarios (SRESA2)
  - Dry season rainfalls will decrease with high probability and wet season rainfall may increase but with lower probability than the DS rainfall. This suggests that the onset of rainy season may delay in the future
  - Wet season rainfall will decrease until 2025 and then increase again in 2050 and 2080
- Under low emission scenarios (SRESB1)
  - Similar with SRESA2 dry season rainfall will decrease but with lower probability
  - Different with SRESA2, wet season rainfall will increase in 2025 and then decrease again in 2050 and 2080
- Change in rainfall pattern will affect many sectors. Adaptation studies and pilots projects at local levels must be developed and implemented
- Global community achievement in reducing GHG emission will have different implication on Cambodia

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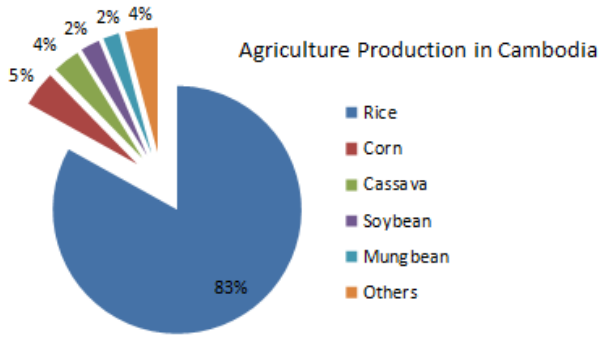
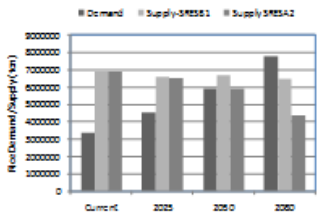
Agriculture



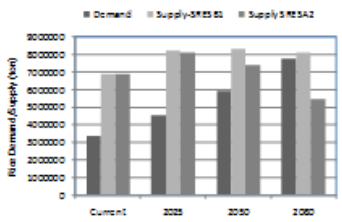
14

Rice demand and supply projection in Cambodia with increased productivity under two emission scenarios

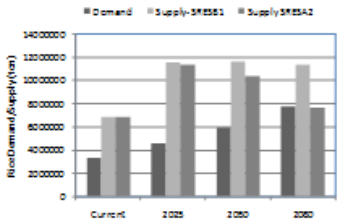
No increased in productivity from current level



Crop productivity increased by 25% from current level



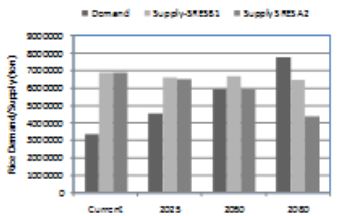
Crop productivity increased by 75% from current level



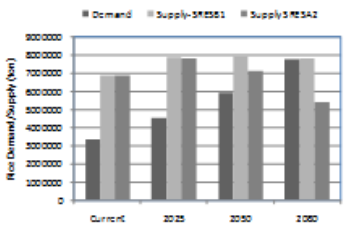
15

Rice demand and supply projection in Cambodia with increased planting index under two emission scenarios

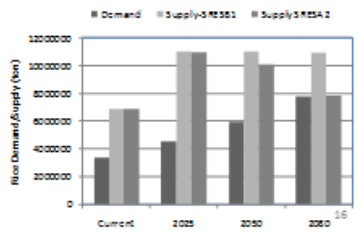
No increased in productivity from current level



Planting Index increased from 1.15 to 1.30



Planting Index increased from 1.15 to 1.65



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Some Proposed Adaptation Options

1. Increase capacity to use climate info
2. Water use efficiency technologies, SRI
3. Additional income from carbon credit (from biogas for cooking, biomass energy in rice mills, composting, etc.)
4. Institutionalizing the use of climate information in agriculture management and development
5. Prioritizing structural intervention programs (where and when a particular intervention should be in place to minimize the impact of increasing climate risk such as constructing dam, irrigation facilities)
6. Expanding agriculture areas to regions with lower climate risk
7. Creating climate insurance for vulnerable communities
8. Generating more varieties resistant to drought, flood and high salinity
9. Developing and implementing long term research on climate modeling, mitigation and adaptation technologies.

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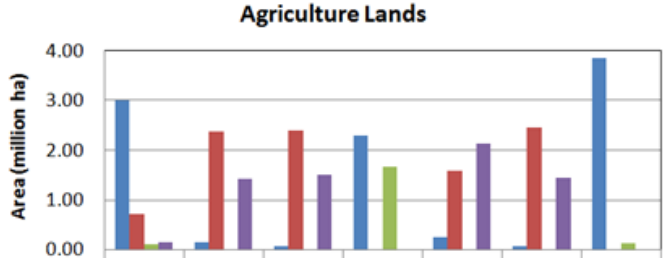
Water Resources

Length of Growing Period under Current and Future Climate in Agriculture Land



	Baseline	B1-2025	B1-2050	B1-2080	A2-2025	A2-2050	A2-2080
7 months	3.01	0.16	0.07	2.30	0.25	0.07	3.85
5 Months	0.72	2.39	2.41	0.00	1.59	2.45	0.00
3 Months	0.11	0.00	0.00	1.68	0.00	0.00	0.13
2 Months	0.14	1.43	1.50	0.00	2.14	1.45	0.00

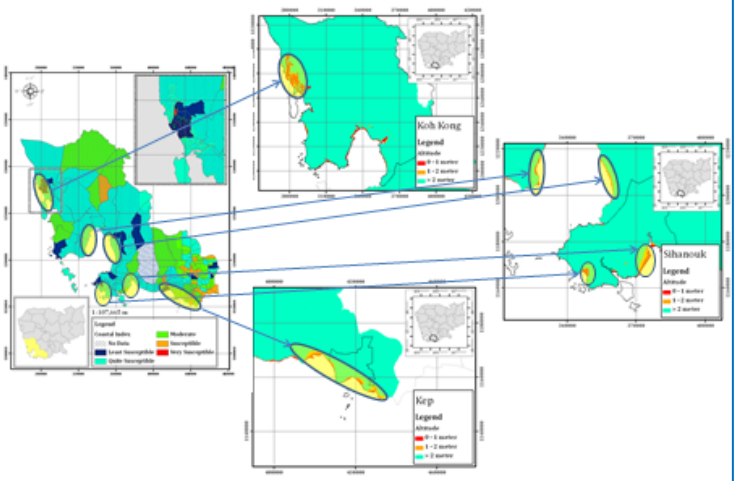
Forest

- Under the high and low emission scenarios, up to 2050 most lowland forest will be exposed to a longer dry period of between 6 and 8 months or more. However by 2080 soil water conditions will be similar to current conditions
- Adaptation measures include creation of protected forests in the most vulnerable areas in the northeast and southwest of Cambodia, creation of forest plantations, adoption of sustainable practices by forest concession holders, strengthening of legal and policy frameworks, protected area management plans and effective monitoring systems.

Coastal Zone

- Rising sea levels will potentially impact coastal systems in a number of ways including inundation, flood and storm damage, loss of wetlands, erosion, saltwater intrusion, and rising water tables
- Kampot and Kep were found to be more susceptible to climate change than other coastal provinces
- A total area of about 25,000 ha will be permanently inundated by a sea level rise of 1 m, increasing to 38,000 ha at a sea level rise of 2 m
- Adaptation measures include – factoring in climate change into the design of infrastructure, new building codes, wind breakers to protect against strong winds and sea level rise

Coastal Area Affected by Sea Level Rise



Health

- Malaria in Cambodia is found to be significantly correlated with rainfall and temperature, with rainfall explaining most of the variability of malaria cases
- Malaria risk may increase in the future until 2050 particularly in provinces located in the northeast such as Preah Vihear, Stung Treng, Ratanak Kiri and part of Mondul Kiri and Kratie
- Adaptation measures include those aimed at reducing the number of malaria cases – such as fogging and dissemination of mosquito nets, and measures aimed at reducing the number of deaths caused by malaria - such improving health treatment and access

5. GHG Mitigation

Energy and Transport (1)

- Under the baseline **total emissions** for the energy and transport sector increase from 2,632 $GgCO_2$ eq. in 2000 to 25,549 Gg CO_2 eq. in 2050
- However, **emissions per capita** remain low relative to neighbouring countries, increasing from 0.2 tCO_2 eq./per/y in 2000 to 1.3 tCO_2 eq./per/y in 2050
- Fuelwood demand is projected to fall from 49% in 2000 to 13% in 2050
- **Transport sector** is expected to have the largest increase and share of emissions in 2050 at 10.816 Gg. CO_2 eq., followed by the energy industries (electricity generation) with 8,888 Gg. CO_2 eq.

Energy and Transport (2)

- Potential mitigation options include: energy efficiency measures, hydro, solar power, gasification & cogeneration, electric vehicles, efficient cookstoves, biogas digesters, ceramic water filters, etc.
- The proposed mitigation options in the energy sector result in the highest reductions – 17% compared to the baseline, or a 3,877 Gg CO_2 eq. reduction by 2050
- Scenario analysis indicates a potential range in emission savings from 573 to 7,094 Gg. CO_2 eq. The lower bound estimate relates to short term options financially attractive to the private sector. The maximum emission reduction of 7,094 Gg. CO_2 eq., a 28% reduction relative the baseline, requires a mixture of private sector investment, donor financing and Government policy development.

AFOLU (2)

- The LUCF sector remains **a net sink**, however the sink capacity falls from -30,421 $GgCO_2e$ in 2000 to -4,836 $GgCO_2e$ in 2050
- From 2005 onwards the LUCF sector is unable to compensate for the emissions in agriculture and the AFOLU sector becomes a net emitter
- Example of mitigation options: manure management, biogas, fertilizer switch to sulfated fertilizer, drainage in rainy season, compost/bio-slurry, organic input, crop management, agro-forestry, reforestation, REDD+
- If all technically feasible mitigation options are implemented emission can be reduced by 32,521 $GgCO_2e$ in the agriculture sector and net sinks increased by -20,545 $GgCO_2e$ in the LUCF sector
- The largest abatement potential is in the livestock and LUCF sector. It is therefore intended to focus mitigation activities in these sectors
- For all sectors mitigation options are able to halt the trend of increasing emissions except in the agricultural soil sector.

Agriculture, Forestry and Land Use (AFOLU) (1)

- Overall, emissions are projected **to increase** from -8,822 $GgCO_2e$ in 2000 to 34,112 in 2050, and consequently the AFOLU sector becomes a net emitter
- **Emissions per capita remain low** relative to other countries increasing from -0.81 in 2000 to 1.36 tCO_2e/capita in 2050
- The GHG emissions from the **agricultural sector** is forecast to almost double, increasing from 21,559 $GgCO_2e$ in 2000 to 38,601 $GgCO_2e$ in 2050
- Within the agriculture sector, emissions from agricultural soils increase the most (2,362 to 6,362 $GgCO_2e$) followed by livestock (4,872 to 10,018 $GgCO_2e$) and rice cultivation (14,365 to 22,625 $GgCO_2e$).

6. Other Information

- The **integration** of CC into strategies, policies and plans is still **limited**, but the RGC recognizes CC as **a priority** (RS 2, NSDP Update) and a number of recent initiatives are supporting this (CCCA, PPCR)
- Cambodia supports **technology transfer** and adequate **financing** as a means of addressing adaptation and mitigation
- Some CC relevant **research** is carried out at sel4cted Gvt Ministries and Cambodia's higher education institutes, but capacity building and financial support are required to develop the research agenda
- There have been some initiatives to raise **CC awareness** however overall public awareness is low, and students, most Government staff and the media have a limited understanding on CC, especially of mitigation & adaptation opportunities
- Initiatives across all levels of education are apparent but limited in terms of their **depth and coverage**
- **Good progress** in and **promising outlook** for CC coodination, mainstreaming, financing, among Gvt agencies, DPs and NGOs

7. Constraints and Gaps, Financial, Technical and Capacity Needs

- The RGC is committed to addressing the CC challenges but faces many constraints: limited HR; limited awareness; a lack of data, research, analysis, technology, financial resources, policy & strategic plan
- However, the opportunities for implementing adaptation and mitigation measures are considered to be excellent: increasing CC financing (fast track, Green Climate Fund, GEF, AF, LDCF, Bilateral, private sector, etc.), RGC's commitment to green growth aligns with mitigation, CDM, REDD+

Way Forwards

- Complete all technical reports
- Fanalise SNC
- Submit SNC to PM for endorsement
- Submit SNC to CoP (hopefully, CoP-18)

THANK YOU !

Second National Forum on Climate Change
Cambodia
3-5 October 2011

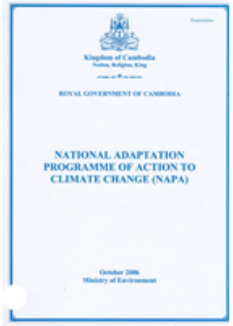
Status of NAPA Implementation in Cambodia

By Dr. HENG Chan Thoeun

Deputy Director of Climate Change Department
Ministry of Environment

National Adaptation Programme of Action to Climate Change (NAPA)

- Preparation of the Cambodian NAPA was funded by the GEF via UNDP following a CoP-7 Decision
- It was completed in March 2005 and endorsed by the Royal Government of Cambodia in October 2006
- NAPA is a country-driven program of action and priority activities addressing the urgent and immediate needs and concerns of the country for adaptation to climate change in key sectors: agriculture, water resources, coastal zone, human health



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Identified NAPA project

- The identification and prioritization of NAPA's projects for adaptation have been done through extensive stakeholder consultations;
- Selection of the most crucial and urgent projects for immediate funding in project implementation are limited to those that support Cambodia's sustainable development objectives;
- Projects have been prioritised based on a set of criteria which have been defined based on the existing RGC's development priorities such as the Rectangular Strategy, CMDG and other Cambodia's existing laws, regulations, policies, statements and commitments to international conventions.

3

Adaptation projects proposed under NAPA

NAPA project activities can be broadly divided into 3 categories: (1) Capacity building/training, (2) Awareness raising/education, (3) Infrastructure development.

By sector:

- Cross-sectoral: 5 projects
- Water resources/ agriculture: 20 projects
- Coastal zone: 8 projects
- Human health (Malaria): 6 projects

By climate hazard:

- Flood: 5 projects
- Drought: 9 projects
- Malaria: 6
- Coastal protection: 3 projects
- Multiple climate hazards:16 projects

Total 39 proposed projects with US$ 196,350,000
20 are high priority (US$128,850,000)

4

❖ Project/program related to NAPA:

- Cambodia Climate Change Alliance (CCCA) Trust Fund ***Call for Proposals focus on Agriculture, Forestry, Fisheries, Water resources, Meteorology, Health and Infrastructure;***
- **Coastal Adaptation and Resilience Planning;**
- **Promoting Climate-Resilient Water Management & Agricultural Practices in Rural Cambodia Project;**
- Pilot Program for Climate Resilience (PPCR);
- Climate Change Adaptation Initiative (CCAI).

5

Project 1: Coastal Adaptation and Resilience Planning

- NAPA has identified coastal areas as one of the immediate and urgent priority areas for action;
- **Project objective:** Increased resilience of coastal communities and ecosystems to climate change through *adaptation planning, demonstrated targeted local interventions and provision of practical learning experience.*
- **Duration of project Implementation: 2010-2013**
- *Project partner: MOE*
- **Total budget: 4,425,000 US$:**
  - *CCCA: 2,790,000 US$*
  - *GEF LDCF: 1,635,000 US$*
  - *UNEP in-kind contribution: 240,000 US$*
  - *RGC in-kind contribution: 195,000 US$*

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Project 2: Promoting Climate-Resilient Water Management & Agricultural Practices in Rural Cambodia

- **Objective:** To reduce the vulnerability of Cambodia's agricultural sector to climate–induced changes in water resources availability
- *Total budget:* **US$2,510,350**
  - UNDP: US$ 660,350
  - GEF: US$ 1,850,000
  - RGC: US$ 180,000
- *Duration:* July 2010- June 2013
- *Project partners: MAFF and MOWRAM*
- *Project target areas:*
  - Preah Vihear (Choam Khsan District)
  - Kratie (Chit Borei District)

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Second National Forum on Climate Change
Cambodia
3-5 October 2011

Promoting Climate Resilient Water Management and Agriculture Practice in Rural Cambodia (NAPA Follow-up)

Mr. HOK kimthourn
National Project Manager
Project Support Unit,
Ministry of Agriculture, Forestry and Fisheries

Presentation outline:

- Objective
- Key expected outcomes
- Project at a glance
- Outcomes key results
- Lessons learnt
- Contacts

Objective:

Reduce vulnerability of Cambodia's agriculture sector to climate-induced changes in water resources availability.

Key expected outcomes:

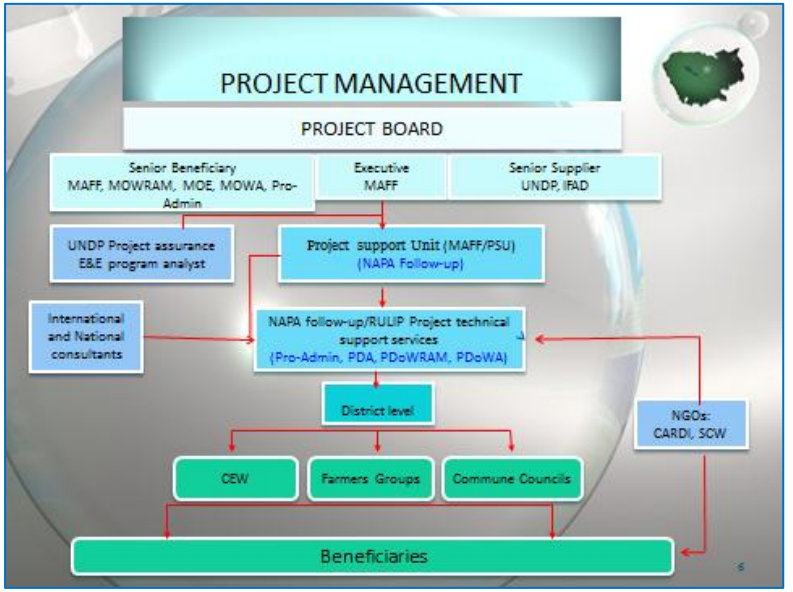
1)- Improved capacity within local institutions to manage agricultural water resources in a changing climate

2)- Locally appropriate adaptation options demonstrated to reduce exposure to climate -induced risks

3)- Lessons learned in project sites replicated in other vulnerable areas of Cambodia

Project at a glance

- Period: 4 years (2009-2013)
- Target areas: Preah Vihea & Kratie provinces
- Budget: US$ 3,090,350
- Donors: LDCF, UNDP & RGC



Outcome 1: Key results

1)- Commune councils and farmers are aware of the impact of CC on agricultural livelihoods.

2)- Climate change mainstreaming into Commune Investment Programs are in the districts target

Outcome 1: Key results

3)- Climate change adaptation issues have been mainstreamed into a 5-year provincial development plan (PDP). Project activities were mainstreamed into a 3-year provincial investment program (PIP, 2011-2014).

Outcome 1: Key results

4)- Participatory assessment of potential water user related conflicts was conducted and conflicts have been identified.

5)- FWUCs have been proposed as mediative mechanisms to manage conflicts related to water accessibility.

6)- Conflict resolution procedures will be specified in FWUC rules and regulations.

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Outcome 1: Key results

7)- Existing community-based Early information system (EWS) mechanism has been reviewed

- EWS guidelines were developed
- Provincial & district project teams were trained on early information system

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Outcome 2: Key results

1)- In addition to rainwater harvesting, the project is piloting other appropriate technologies to increase access of households to water, including community ponds, communal wells, wind power and solar energy to pump water for target farmer groups.

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Outcome 2: Key results

2)- The project has conducted rice variety trials for floods and for droughts

- 5 tested varieties, promoted by the government , have performed well under the tested conditions.

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Outcome 2: Key results

3)- Trainings on rice seed purification provided to farmer seed groups with objectives to produce and expand drought and submergent rice varieties.

Outcome 2: Key results

4)- Demonstrations on integrated farming system (IFS) such as mungbean and heat-tolerant tomato varieties, vegetable gardening, animal & fish raisings...etc

Outcome 2 : Key results

5)- Farmer Field School (FFS) and Farmer Field Day (FFD) on climate resilient agriculture were organized.

Outcome 2 : Key results

6)- Two pilot climate change irrigation schemes were selected, and designed.

Gender mainstreaming

- Gender Action Plan (GAP) was finalized and implemented after the conduct of Gender rapid assessments.
- Gender & CC training manual was consulted with MoWA gender CC team

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Outcome 3: Key results

- Document and compilation of best practices
- Share lessons learnt and best practices through learning networks. Eg: Adaptation Learning Mechanism (ALM) http://www.adaptationlearning.net
- Up-scaling lessons learnt into other projects. Eg: IFAD supported projects

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Lessons learnt:

1)- Climate Change has been recently introduced. Its nature of cross cutting issue requires and implies cross sector coordination.

2)- Solutions identified (agriculture, irrigation and gender) are more coping mechanisms rather than adaptation measures.

3)- Improve knowledge of the government, project staff and the farmers on Climate Change.

4)- Mainstreaming Climate Change in the decentralized and de-concentrated working procedures.

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THANK YOU !

For more information:
http://www.un.org.kh/undp/what-we-do/projects/climate-resilience-in-agriculture-and-water?app_id=17

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Presentation Outline

- This presentation will describe the objective, key activities, progress and next steps of the Cambodia Climate Change Alliance (CCCA).

- Purpose
- To provide an overview of the CCCA.

Introduction

- The CCCA is a multi-donor initiative with a comprehensive and innovative Trust Fund approach to address climate change adaptation & mitigation;
  - Originates from 2007 EU initiative of the Global CC Alliance supporting LDCs and SISs in CC Adaptation and Mitigation;
- UNDP administers CCCA TF for an interim period, with a gradual shift to full Government ownership/management;
  - **Duration:** 3 yrs, 2010 -2012;
  - **Budget:** US$ 8.9 million. Support from EU, Sida, DANIDA & UNDP;
  - **Implemented by:** Ministry of Environment's CC Department, on behalf of the National CC Committee;
  - The CCCA serves the NCCC to lead on CC policy and awareness;

CCCA Objective and CCCA Components

- To strengthen the capacity of the NCCC to fulfill its mandate to address climate change and to enable line ministries and CSOs to implement priority CC actions.

Components / Key Results:

- Result 1: CC Policy formulation, mainstreaming and monitoring. Development of a National CC Strategic Plan;
- Result 2: Improved access to updated CC information, knowledge and learning opportunities at all levels;
- Result 3: TF management (including project grants) and tasks with structure of future TF;
- Result 4: Coastal Adaptation and Resilience Planning;

Key activities

- With main aim of CCCA support for RGC CC capacity development and institutional strengthening:
  - Formulate Cambodia CCSP as framework for national CC policy development and sectors' CC mainstreaming ;
  - Develop mechanisms and materials to improve CC knowledge, awareness and information-sharing at all levels;
  - Provide TF grant support for CC capacity development projects at national and local government level,
  - Strengthen Cambodia's CC negotiation capacity and ability to comply with UNFCCC obligations ;
  - Enhance the resilience and livelihoods of coastal communities, and protection /rehabilitation of coastal ecosystems;

Progress

- Developed a roadmap for the Cambodia CCSP, and begun its implementation;
- CC Public Information strategy developed, started CC Education & Awareness Strategy & Action Plan;
- TF provided grant support for CC projects, with the current 8 pipeline projects ready for kick-off;
- Supported National participation at international CC negotiation meetings and the up-coming COP17;
- Second National CC Forum organized and hosted;
- Increased technical support to CC stakeholders;

Next steps

- Develop the Cambodia CCSP with ministries' CC-response assessments and hold consultations;
- TF next call for proposals aimed for end of 2011;
- Conduct CC capacity assessments of CCD and NCCC;
- Increase engagement in cross-cutting themes and work areas of gender equality, DRR and awareness;
- Develop CC Educ. & Awaren. Strat. & Action Plan;
- CCCSP development to strengthen mainstreaming of CC adaptation and mitigation into the broader fabric of RGC's sustainable development agenda;

Contents

I. Objectives PPCR/SPCR
II. Overview PPCR
III. Purpose of PPCR
IV. Progress PPCR/SPCR
V. Next Steps PPCR/SPCR
VI. Recommendations

2

Objectives PPCR/SPCR

Phase 1:

Assessment and strengthening of institutional readiness for the PPCR/SPCR

Facilitation cross-sectoral dialogue in 3 priority areas (water resources, agriculture and Natural Resources , rural infrastructure development)

Common vision for climate resilience in the medium and long-term 'strategic programme' SPCR

Phase 2:

Implementation of the 'strategic programme' SPCR

3 priority areas

Investment projects with seven components (including policy framwork, institutional capacity building, on-the-ground investments)

Collaboration between PPCR and CCCA and key stakeholders

3

Overview PPCR

Component 1: National level mainstreaming of climate resilience in key ministries (strengthening institutional readiness to mainstream climate risks)

Component 2: Sub-national mainstreaming of climate resilience

Component 3: Strengthening civil society and private sector engagement and gender considerations in climate change adaptation

Component 4: Science-based adaptation planning

Component 5: Outreach and preparation of Phase 2 of the PPCR (SPCR)

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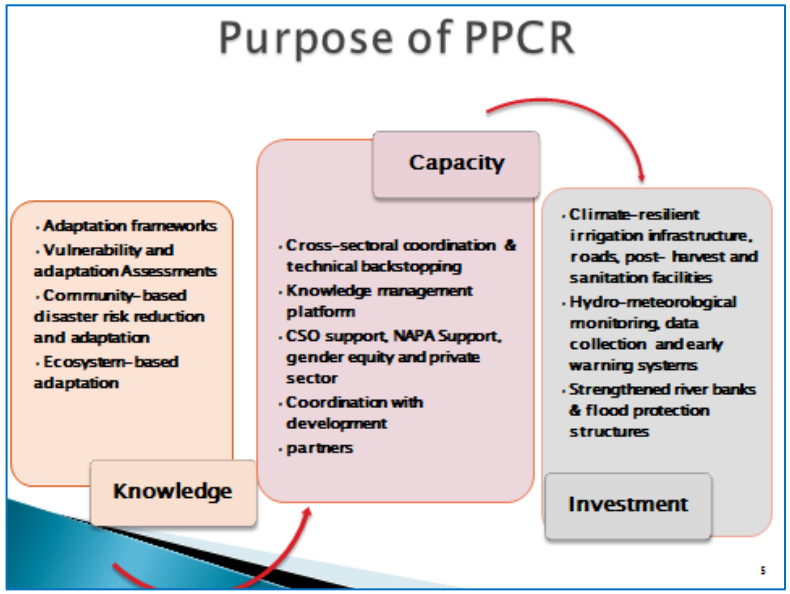
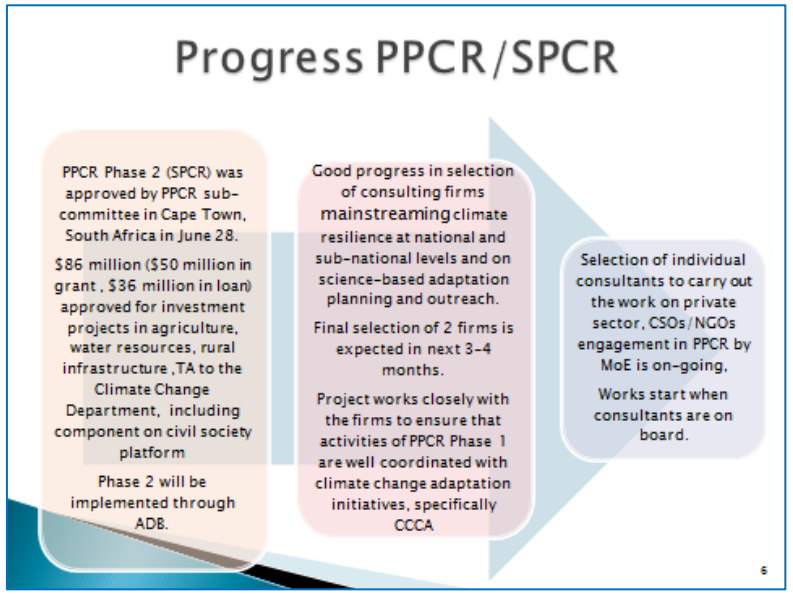
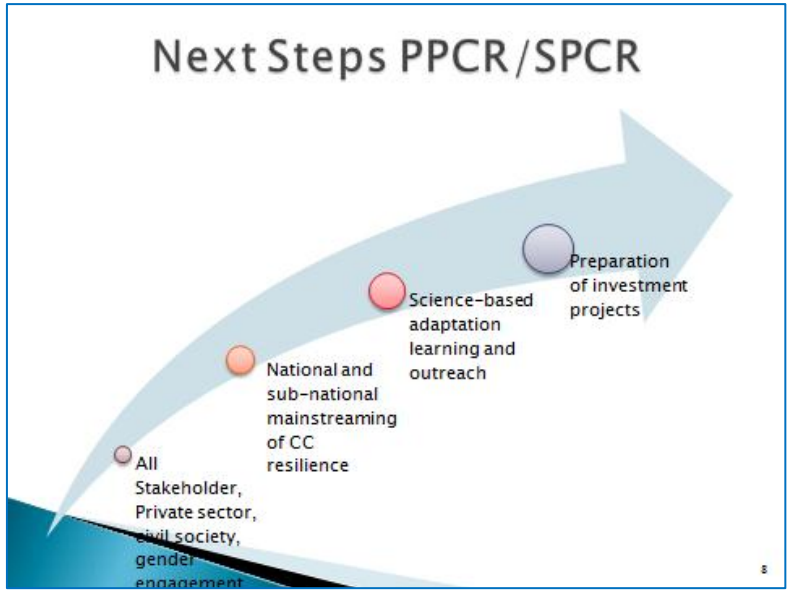




Continue

No.	Project name	Allocation				
		Loan (original)	Loan (revised)	Grant	Total (original)	Total (revised)
1	Water Resources Management Sector Development Program	12,000,000	7,000,000	7,000,000	19,000,000	14,000,000
2	GMS Flood and Drought Management and Mitigation Project	8,000,000	4,000,000	6,000,000	14,000,000	10,000,000
3	Biodiversity Conservation Corridors Project	0	0	8,000,000	8,000,000	8,000,000
4	Provincial Roads Improvement Project	10,000,000	10,000,000	7,000,000	17,000,000	17,000,000
5	GMS Corridor Towns Development	10,000,000	5,000,000	5,000,000	15,000,000	10,000,000
6	Sustainable Small Town Development in the Tonle Sap Basin	5,000,000	5,000,000	5,000,000	10,000,000	10,000,000
7	Agriculture Commercialization and Resource Conservation	10,000,000	5,000,000	5,000,000	15,000,000	10,000,000
8	Technical Assistance	0	0	7,000,000	7,000,000	7,000,000
	Total PPCR	55,000,000	36,000,000	50,000,000	105,000,000	86,000,000



Recommendations

- Efficient collaboration from line-Ministries, NGOs, Private Sector and Academia to participate in project implementation
- Effective knowledge management
- Long-term strategic orientation in wider context of RGC policies

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THANK YOU !

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Outline

- Overview of Vulnerability & Adaptation (V&A) Assessment from Climate Change (CC)
  - Goal
  - Objectives
  - Approach
  - Technical Scope
  - Major Findings
- Major Challenges and Quality Assessment
- Public Health Adaptation Response
- Adaptation Strategies for Specific Health Outcomes
- Future Challenges
- Ways Forward

Brief Overview of Assessment

Goal

- To build capacity and strengthen health systems in country and at the regional levels to protect human health from current and projected risks due to climate change.

Objectives

- Increase awareness of health consequences from climate change;
- Strengthen the capacity of health systems to provide protection from climate-related risks and substantially reduce the health system's due to greenhouse gas emissions;
- Ensure that health concerns are addressed in decision making to reduce risks from climate change and in other key sectors.

Brief Overview of Assessment

Approach

- The process has been led by the Department of Preventative Medicine, Ministry of Health, and facilitated by external WHO public health consultants.

Technical Scope

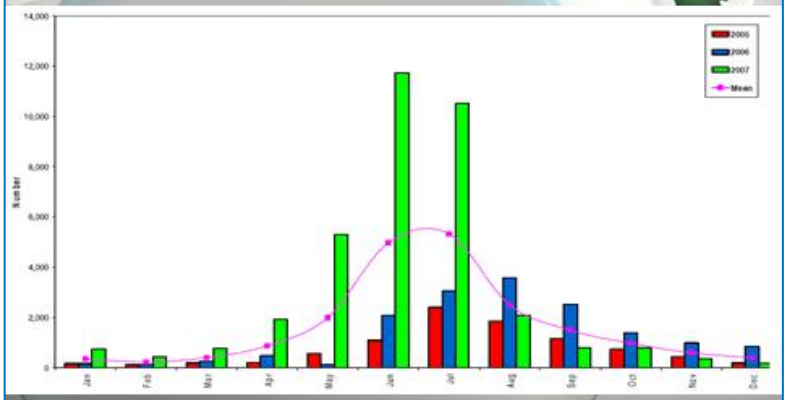
- Cambodians are highly Vulnerable to the Health Impacts from Climate Change.
- Most regions in Cambodia have limited adaptive capacity to respond positively to the impacts from climate change given high levels of poverty, low educational levels, technological and infrastructure limitations and issues of governance.

Brief overview of Assessment

Major Findings:

- Cambodia is highly vulnerable to the environmental impacts from climate change.
- Current burden of climate-sensitive diseases is high.
- Climate change is likely to alter burden of climate-sensitive diseases.
- Particular population will be at increased risk.
- The main impacts of climate change on health in Cambodia have been identified to be greatest in climate sensitive areas:
  1- Vector-Borne Diseases (e.g. malaria, dengue fever);
  2- Food Security;
  3- Water Stress: Water and Food Borne diseases; and
  4- Health Consequences of Extreme Weather Events.

Monthly Distribution of Dengue Cases, 2005 – 2007

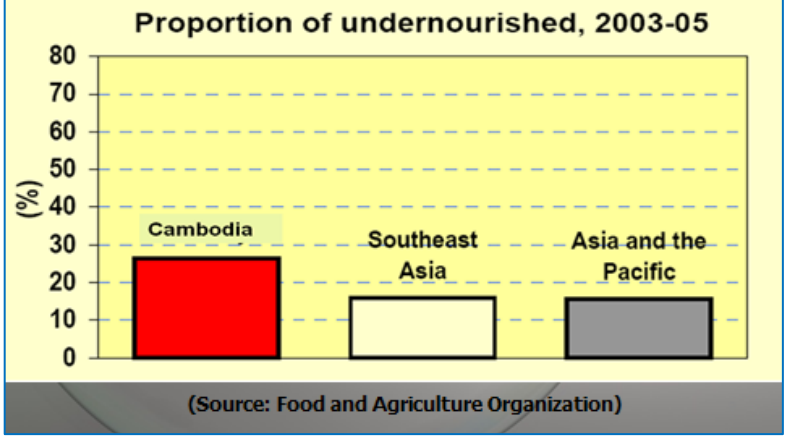


(Source: National Centre for Malaria)

Cambodian Millennium Development Goal Indicators and Targets

PARAMETER	BASELINE (YEAR)	2005		2010	2015	STATUS[3]
		TARGET	ACTUAL	TARGET	TARGET	
MALARIA CASE FATALITY RATE REPORTED BY PUBLIC HEALTH SECTOR (%)	0.4 (2000)	0.3	**0.36**	0.25	0.1	C
POPULATION AT HIGH RISK WHO SLEPT UNDER IMPREGNATED TREATED BED NETS DURING PREVIOUS NIGHT (%)	24 (2000)	80	**49**	95	98	C
PUBLIC HEALTH FACILITIES ABLE TO CONFIRM MALARIA DIAGNOSIS ACCORDING TO NATIONAL GUIDELINES WITH 95% ACCURACY (%)	60 (2002)	70	N/A	80	95	
NUMBER OF MALARIA CASES TREATED IN THE PUBLIC HEALTH SECTOR PER 1000 POPULATION	11.4 (2000)	9	**7.3**	7	4	A

Comparison of Undernourished Population Compared with Asia and the Pacific

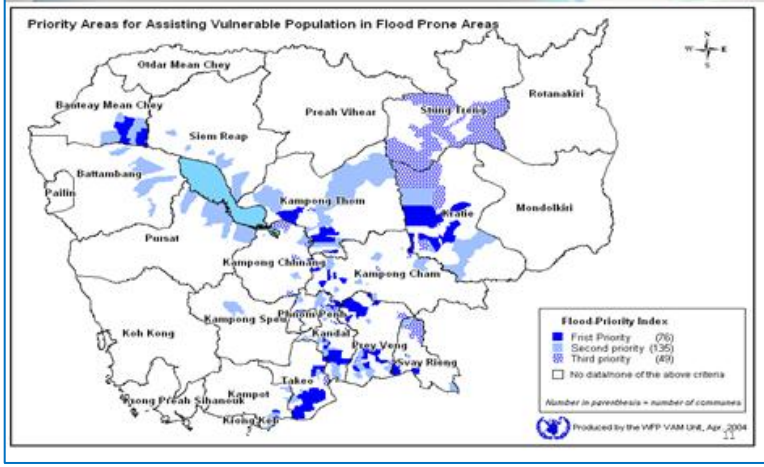


(Source: Food and Agriculture Organization)

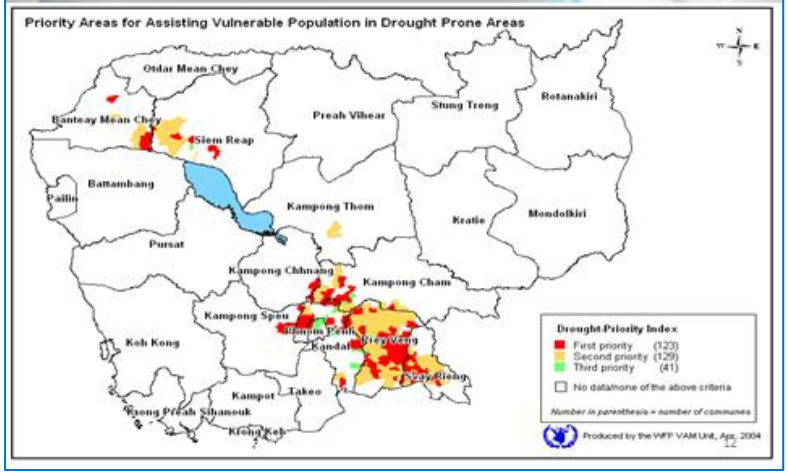
Cambodian Millennium Development Goal Eradicating Extreme Poverty and Hunger

Parameter	Baseline (Year of Estimate)	2005		2010	2015	Status[1]
		Target	Actual	Target	Target	
Population below food poverty line (%)	20 (1993)	16	19.7	13	10	C
Underweight children (<5yrs) %	45.2 (2000)	36	28	24	19	B[2]
Stunting (Children <5 yrs) %	44.6	35	44	35	25	C[3]
Wasting (Children < 5 yrs) %	15	13	8	7	6	A[4]
Households using iodised salt (%)	14 (2000)	80	73	81	90	C

Flood Prone Areas in Cambodia Based on Vulnerability to Flood



Drought Prone Areas in Cambodia Based on Vulnerability to Drought



Assessment Method

The method undertaken for this V&A assessment was adapted from recent WHO guidelines for conducting primarily qualitative assessment in resource poor settings.

The steps undertaken in this assessment were:

- Identification of relevant stakeholders;
- Description of current burden of climate-sensitive health outcomes, including the population and regions that are most vulnerable;
- Description of how current burden of climate-sensitive health outcomes are likely to change over coming decades irrespective of climate change;
- Description of the effectiveness of current programs and activities;
- Estimation of the possible additional burden of adverse health outcomes due to climate change;
- Identification and prioritization of public health and health care interventions to reduce likely future health burdens; and
- Identification of strategies to implement, monitor and evaluate the burden of climate-sensitive health outcomes and interventions to address these burdens, ensuring continued effectiveness in a changing climate.

Major Challenges & Quality of Assessment

- Insufficient capacity for assessment, research and communication on climate-sensitive health risks;
- Inadequate specific steps of literature;
- A focus on lowering background rates of disease and illness will ultimately ensure absolute future health impacts of climate change will also be constrained.

Major Challenges & Quality of Assessment

- Programs to reduce current burden of climate-sensitive disease are prioritised by Government and non-governmental organisations, but there are limitations and programmatic gaps;
- There are limited data and research capacity to facilitate study of the impact of climate change on health;
- There is a need for increased training within the health sector of the potential impacts of climate change on health;
- To date, the health sector's role and involvement in strategic planning to mitigate and adapt to climate change are limited.

Major Challenges & Quality of Assessment

- This V&A assessment marks an important first step for the health sector in Cambodia in meeting many challenges posed by climate change;
- The NAPA identified 39 adaptation projects, but contributing to this has been a perception that climate change related issues are primarily an environmental concern rather than a development or health issue;
- Further work on prioritisation of these projects and cost-benefit analyses will need to be undertaken prior to submission for funding.

Hierarchy of Public Health Adaptation Responses

Adaptation Response	Definition	Example	Enabling Agencies / Tools
Zero-order[1]	Mitigation of greenhouse gas emissions	• Mandating improved fuel efficiency of new cars • Reduce reliance on fossil fuel derived energy	• International agreements • Government Policy • Private industry
Primary	Reducing exposure of populations to climate change and its environmental impacts	• Redesign/modification of cities to lessen the urban heat island effect • Improving barriers against floods • Improving irrigation	• Government policy • Regional governments • Development partners
Secondary	Reducing the health impact of climate change exposures	• Strengthening surveillance and eradication programs for vector borne infections • Early warning and response systems for floods and storms • Improving education of villagers for prevention and management of common diseases • Improved services to urban poor	• Government ministries • Development partners • Academia • Community level health and education centres
Tertiary	Managing the adverse health outcomes of climate change	• Effective management and treatment programs for disease (ie malaria) • Rapid emergency response capability for natural disaster or disease outbreak	• Government ministries • Community level health facilities • Development partners

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Adaptation Strategies for Specific Health Outcomes

Vector-borne disease
- International cooperation (Secondary)
- Surveillance and Research (Secondary)
- Vector control (Secondary)
- Epidemic Preparedness (Secondary)
- Early Diagnosis and treatment (Secondary)

Food security
- International cooperation (Primary)
- Agricultural diversification and improved land use (Primary)
- Research and Modelling (Secondary)
- Access to markets (Secondary)
- Education (Secondary)
- Poverty Reduction (Secondary)
- Response to Malnutrition or Famine (Tertiary)

Adaptation Strategies for Specific Health Outcomes

Extreme Weather
- Improvements to Buildings and infrastructure (Primary)
- Coastal and River Defence (Primary)
- Modelling (Primary/ Secondary)
- Early warning Systems (Secondary)
- Disaster Preparedness (Secondary)
- Disaster Response (Tertiary)

Water- and food-borne infection
- Improving water supply and access (Primary)
- Improving Sanitation (Primary)
- Education (Secondary)
- Treatment (Tertiary)

Future Challenges

- Population health will be affected both by direct and indirect effects of climate change via extreme weather events, exacerbation of food and water insecurity, poverty and disruptions to civil and health infrastructures and programs;
- Health outcomes are considered in the future planning across all sectors;
- The responsibility for reducing the health impacts of climate change should therefore be shared by all government agencies;
- Health should be seen as a cross-cutting issue of sustainable development that is 'mainstreamed' into all public policy decision-making processes.

Ways Forward
• Establish an institutional framework to coordinate response;
• Health as a cross-cutting theme in policy decisions across all sectors;
• Establish a research agenda;
• Increase the role of and capacity within the ministry of health to meet challenges of climate change and health;
• Commence work on prioritisation and implementation of adaptation options.

THANK YOU !
For more information:
www.moh.gov.kh
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Oxfam
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Second National Forum on Climate Change
Cambodia
3-5 October 2011

Climate Change and Food Security: the Cambodian Context

HE Srun Darith, Secretary General

Council for Agricultural and Rural Development (CARD), Office of the Council of Ministers

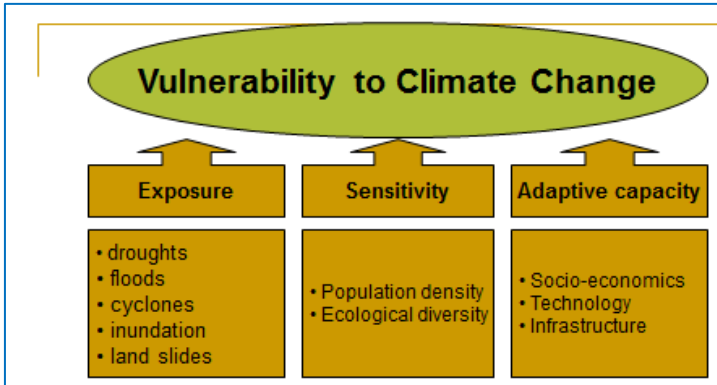
Content

1. **Cambodia's Vulnerability to Climate Change in the South East Asian Context**
2. **Impact of Climate Change in Cambodia on FSN**
3. **Adaptation strategies to reduce effects of climate change on FSN**

1. Snapshot on Cambodia's Vulnerability to Climate Change in the South East Asian Context

Source: International Development Research Centre, Economy and Environment Program for Southeast Asia (EEPSEA/IDRC)

3



Cambodia is **vulnerable to climate change** not because it is very much exposed to it but **because it is sensitive to CC and has limited adaptive capacities** (measured by socio-economic-, Infrastructure- and technology indicators).

4

How is Cambodian Climate likely to Change?

Climate Change may lead to **higher temperatures** and affect **rainfall pattern** in Cambodia:

- more frequent drought spells/ prolonged dry seasons
- delayed rainy seasons with intense rainfall and flash floods
- dry season river flow decreases, wet season flow increases

5

What makes Cambodia sensitive to climate change?

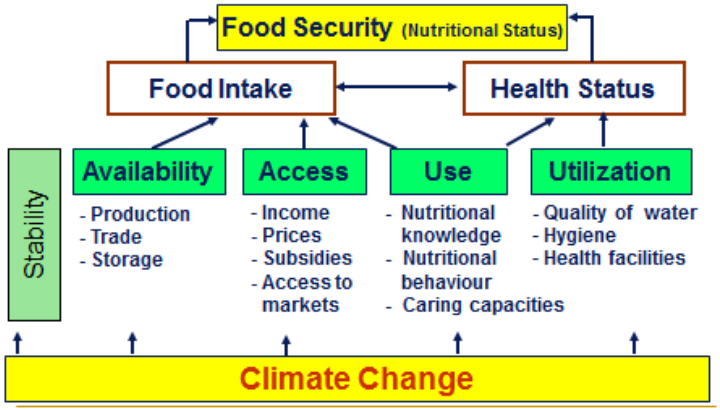
- Cambodia's **Economy is little diversified** and depends heavily on a few sectors
- Most of **Cambodians are living in rural areas** and (to a certain extent) from low productive agriculture systems
- Cambodia's agriculture **depends heavily on rice** production (80% of total agric. production) – little diversification
- Most of **rice fields are rain fed** and depend on wet season rainfall
- **Common property resources** (food/income from forestry, fisheries) are important for poor people but affected by unsustainable use.

6

2. Impact of Climate Change on FSN

7

FSN depends on various factors (many of which influenced by climate change)



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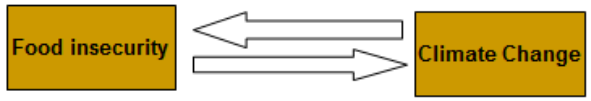
- FSN and climate change are both cross-cutting issues which need to be mainstreamed in overall development plans and sector strategies.
- Climate Change is a contributing factor to food insecurity and malnutrition in Cambodia. On the other side, high food insecurity and malnutrition make the country vulnerable to the effects of climate change.

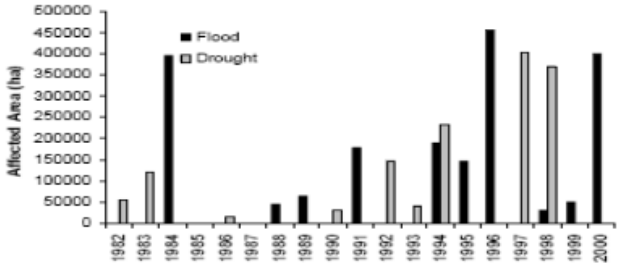


- *CARD has developed a national Strategic Framework for Food Security and Nutrition (**SFFSN 2008-2012**) in 2008.*
- *Many of the recommended actions in this reference document focus on increasing resilience of poor people's livelihoods and therefore relevant to climate change adaptation.*

→ *Review and update the framework and make it become a **strategy for food security and nutrition.***

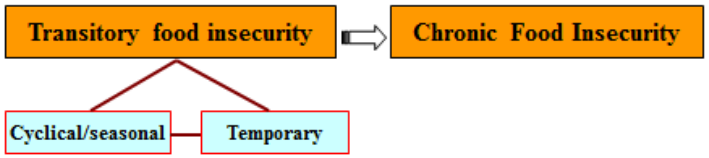
9

- Floods and droughts affected already in the past large rice cultivated areas:



- Frequency and intensity of droughts and floods seem to have increased and will specifically impact food insecure smallholders in Cambodia.
- Drought/flood-related crop failure lead to transitory food insecurity and often result in chronic food insecurity (Stability aspect of FSN).

10



➢ ***Transitory food insecurity*** is either cyclical/seasonal (e.g. rice gaps during "lean season") or temporary (e.g. **droughts, floods…**leading to loss of production and income)

➢ Transitory food insecurity may lead to ***chronic food insecurity***, where parts of the population (vulnerable groups) are permanently not in a position to ensure their food needs → Selling assets or borrowing to meet food needs

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Climate Change may:

- increase frequency of crop pests (+ new pest and diseases)

→ ***lead to long-term decline in agricultural productivity***

- affect fish catches (already smaller fishes and fewer species) (fish provides 40-50% of protein intake → effects on nutrition status)
- cause underground water salinisation and seawater intrusion increase in coastal regions
- contribute to increase of water borne diseases (malaria, dengue fever) as well as diarrhoeal diseases →impacts nutrition status

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3. Adaptation strategies to reduce effects of climate change on food security

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- Improve **water management**
  - irrigation (only 20% of cultivated area irrigated)
  - water harvesting and storage systems (specifically benefiting food-insecure farmers)
- Improve **access to seeds** (incl. drought/flood resistant varieties) for food-insecure farmers
- **Diversifying farming systems** (staples and cash crops) and adjust systems to changed climatic conditions through viable crop and animal husbandry techniques
- Introduce effective **land use planning**
- Improve **crop storage** techniques, increase national/region food reserves and promote village based "grain banks"

14

- **Promote sustainable** (community-based) **management of common property** resources (fisheries and forestry)
- **Strengthen disaster preparedness and mitigation** capacities (early warning, flood protection infrastructure)
- Improve access to **safe water and sanitation**;
- Strengthen **malaria and dengue fever** control efforts
- Diversify livelihoods – **create alternative (non-agricultural) income** opportunities in rural areas
- Intensify **research** on impacts of climate change on FSN and **disseminate information** on effective adaptation

15

Climate change increases vulnerability of poor, food insecure households

- **Provision of "social safety nets" (SSN)** is important to allow the poor to mitigate risks and "negative coping strategies" and to invest in human and economic capital

☞ *The Royal Government of Cambodia, through CARD, has developed and recently approved National Social Protection Strategy for the poor and vulnerable.*

- **Public Works Program (PWP):** provide income opportunities to the poor and create productive infrastructure (which can have a direct link to climate change like irrigation, flood infrastructure, reforestation etc.)
- **Cash transfer to the most vulnerable** to protect against distortion of human capital (child nutrition/education)
- **Insurance for farmers against weather hazards/crop failure** may cushion the impact of droughts and floods

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THANK YOU !
For more information:
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www.card.gov.kh
www.foodsecurity.gov.kh

Second National Forum on Climate Change
Cambodia
3-5 October 2011

CC Mitigation:
Status and prospect of the voluntary carbon market

Marion Verles
Nexus – Carbon for Development

Contents

- About Nexus
- Climate finance
- CDM vs Voluntary Carbon Markets (VCM)
- VCM: Key facts and figures
- VCM projects in Cambodia
- VCM and Cambodia: opportunities and threats
- The future of the VCM

2

About Nexus

Nexus will contribute to **reduction of poverty** and greenhouse gas emissions by creating pathways to **access ethical climate finance** for the implementation of **climate friendly**, **equitable** and **sustainable development projects**, in a fair, transparent, and responsible manner.

Nexus alliance

Nexus fund

Nexus-beyond offsetting

- **Non Profit cooperative** of field development practitioners (15 members incl GERES, Hydrologic and CEDAC in Kh)
- Provides affordable funding for the **mass dissemination of pro-poor low carbon technologies**
- Partnership platform for **responsible actors** (private companies, institutions or individuals)

3

Climate Finance

- Climate finance = transfer of resources from developed to developing countries to cover costs of dealing with CC impacts
- Sources of climate finance:

Emissions trading | CDM, JI | Voluntary carbon markets

Carbon Tax | Public investment | Private investments | …

CARBON FINANCE

4

CDM vs Voluntary Carbon Markets (VCM)

- CDM
  - Kyoto driven
  - Highly regulated (UNFCCC)
  - Typically long and complicated registration process
  - High costs
  - Prices are more predictable
- Voluntary
  - **NON KYOTO** (not necessarily voluntary per se)
  - Less regulated, flexibility in terms of innovations in project finance, methodologies etc.
  - Various standards
  - Shorter and less costly registration process

The Gold Standard
Premium quality carbon credits

nexus Carbon for Development

CCB Standards
The Climate, Community & Biodiversity Alliance

VCS VERIFIED CARBON STANDARD
A Global Benchmark for Carbon

VCM: Key facts and figures

nexus Carbon for Development

6

VCM: Key facts and figures

- 2010 = record year, **131MtCO2e** traded, +34% from 2009
- 97% of trades are done Over The Counter (OTC)
- Volume weighted average price of **$6/tCO2e**
- **46%** from land based credits
- **35%** from North Americas, **17%** from Asia
- Standards: VCS is n°1 with **34%** market share, followed by CCBS with **19%** market share.
- Flight for quality: **registries** are being created (CDC Climat, Markit, NYSE blue etc)
- Plans for domestic emissions trading in developing countries (Brazil, China, India, Kazakhstan, Mexico and South Korea)

nexus Carbon for Development

7

VCM projects in Cambodia

- GERES ICS project (VCS)
- NBP/SNV domestic biogas project (VGS)
- Oddar Meanchey REDD project (CCB and VCS)
- Hydrologic water filter project (VGS)

geres

NBP

Terra GLOBAL CAPITAL

hydrologic

8

VCM and Cambodia: opportunities and challenges

- Opportunities
  - In Cambodia, 49% of GHG emissions from land use change and forestry, and 44% from agriculture
  - High potential for agriculture and forestry activities
  - VCM as a catalyst of innovations
- Challenges
  - Attract private capital
  - Measure and value "pro poor" benefits
  - Lack of available methodologies for land use projects
  - Ensure transparency and fairness

A National Framework :

- **Set the rules (high quality projects)**
- **Risks and revenues sharing**
- **Foster innovative approaches**

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9

The future of the VCM

- VCM = non Kyoto….might have a bright future!
- 3 main trends:
  - Compliance market might be restricted to LDCs, VCM expected to surge in non LDCs developing countries
  - Implementation of domestic trading schemes will foster
  - Increased appetite from private companies non subject to caps to become « carbon neutral » or « climate friendly »
- 2 main risks:
  - Price uncertainty because demand is uncertain
  - Liquidity/fongibility issue reduces investors' appetite

nexus Carbon For Development

10

THANK YOU !

For more information:

www.nexus-c4d.org

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Second National Forum on Climate Change

Cambodia

3-5 October 2011

Compliance carbon market : from Kyoto Protocol to new market mechanisms

Akiko Fukui

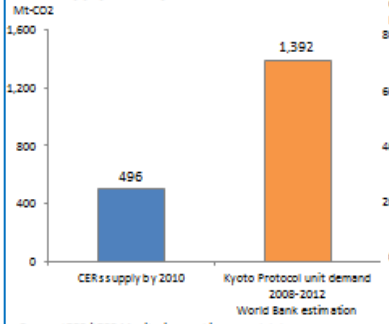
Institute for Global Environmental Strategies

Outline

- Performance of the clean development mechanism under the Kyoto Protocol
- Lessons learned for a next step
- Negotiation status of market mechanisms
- Components of new market mechanisms
- Current status and achievements

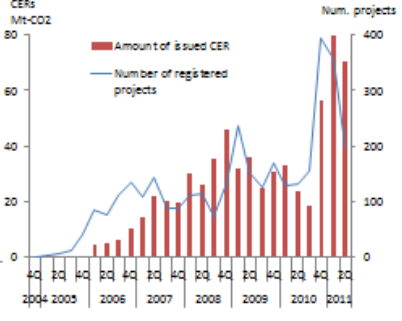
Performance of the clean develop mechanism under Kyoto Protocol (KP)

CERs supply and Kyoto Protocol unit demand



Source: IGES (IGES Monitoring and issuance database World Bank (State and trend of the carbon market 2011)

Project registration and CERs issuance

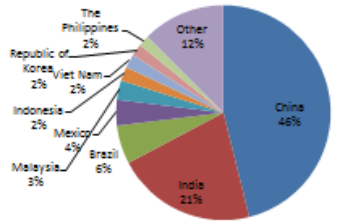


Source: IGES (project database / monitoring and issuance database)

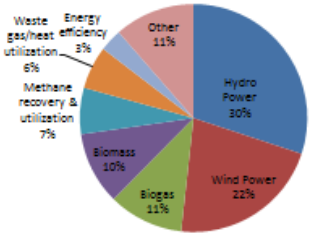
- Credit already available from CDM is closed to 1/3 of KP unit demand.
- CDM registration and issuance has rapidly increased from the end of 2010.

Lessons learned for a next step

CDM projects by country



CDM project type



Issues in the CDM

- Uneven distribution of project types and countries
- Activity is limited to project and program and it does not fully cover all the mitigation actions
- Long time for process and high hurdle to get registered and issued credit.

For post 2012

CDM reform → **New market mechanisms**

Market Mechanisms Discussion in Two Tracks

AWG-KP:
(Ad Hoc-Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol)

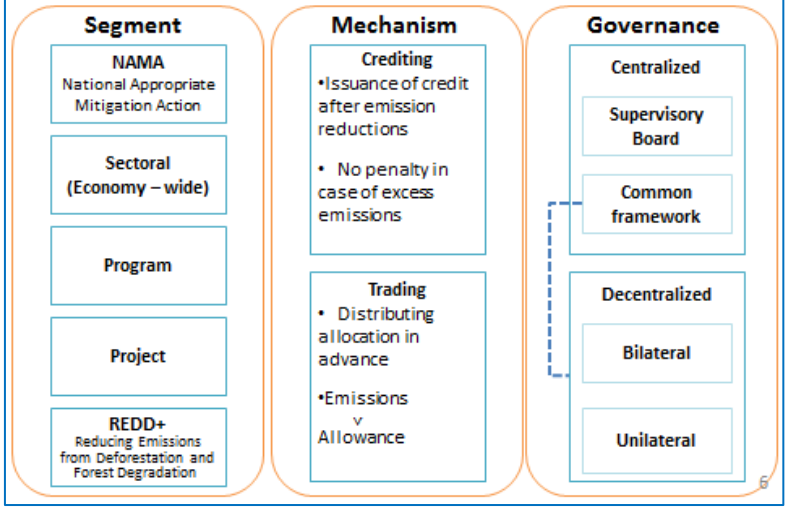
- Participation from Parties of Kyoto Protocol
- Rules under the second commitment period
- Market Mechanisms specifically for CDM, JI, and International Emission Trading (IET) have been discussed.

AWG-LCA:
(Ad Hoc-Working Group on Long-term Cooperative Action under the Convention)

- Participation from all the Parties incl. USA
- 5 themes:
  - Shared vision, Mitigation, Adaptation, Finance and Technology
- Market mechanism is discussed under mitigation section (Various approaches)

3

Components of new market mechanisms



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Status of Market Mechanisms

Mechanisms under Kyoto Protocol	New market mechanisms
COP 16/CMP6 -Dec 2010	
•Establishment of standardized baselines •Adaptation of the guideline of loan scheme for courtiers with fewer than 10 registered CDM projects.	Decision of considering establishment of one or more market-based mechanism
CDM Executive Board -Jul 2011	Invitation of Parties' view -Feb 2011
•"Guidelines for the establishment of sector specific standardized baseline" •"Guidelines on the consideration of suppressed demand in CDM methodologies"	22 Parties submitted views on new market mechanism
AWG-KP, AWG-LCA -Dec 2011	
Decision of supporting Kyoto Protocol regime?	Decision of establishment of one or more market-based mechanism ?

7

THANK YOU !

For more information:

http://www.iges.or.jp

Publication

"Possible Elements of market – based Mechanisms"

"CDM Reform 2011"

Database

"CDM project database"

"CDM monitoring and issuance database"

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Second National Forum on Climate Change

Current Status of CDM Implementation in Cambodia

By **Mr. Uy Kamal**
Head of GHG Inventory and Mitigation Office

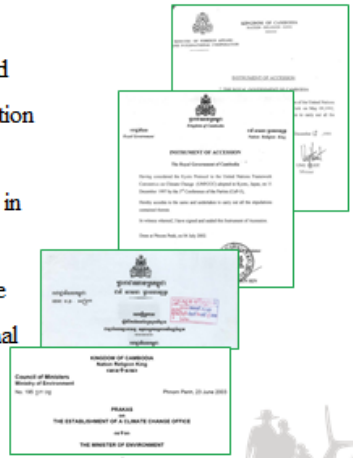
October 03-05, 2011
Inter-Continental Hotel, Phnom Penh, Cambodia

Content

1. Background
2. Current Status of CDM
3. Next Activities

Background (1)

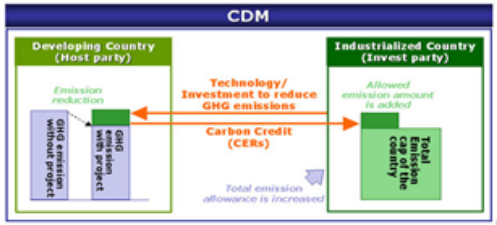
- Cambodia ratified the United Nations Framework Convention on Climate Change in 1995,
- Assessed to Kyoto Protocol in 2002, and
- Established Climate Change Office and Designed National Authority (DNA) in 2003.



Background (2)

Clean Development Mechanism - CDM

- Annex I countries invest in projects that can reduce GHG emissions in Non-Annex I countries
- The resulting certified emission reductions (CERs) are counted toward Annex I country's own target.



Source: http://www.cambioclimatico.gob.do/eng/en/BasicInformationonCDM/WhatisCDM/tabid/55/Default.aspx

Background (3)

Flexible mechanism under Kyoto Protocol

JI	CDM	ET
ERUs	**CERs**	**AAUs**
(Emission Reduction Units)	(Certified Emission Reduction)	(Assigned Amount Units)
Joint Implementation Annex 1+ Annex I	Clean Development Mechanism Annex 1+ Non-Annex I	Emission Trading Annex 1+ Annex I

Background (4)

CDM Principle

- Voluntary participation by parties involved,
- Real, measurable and long term benefits related to mitigation of climate change,
- Emission reductions are additional to any that would occur in the absent of CDM project, and
- Sustainable Development.

Background (5)

Cambodia Sustainable Selection Criteria for CDM

- Environmental protection and improvement,
- Enhancement of income and quality of life,
- Technology transfer, and
- Economic benefits.

Current Status of CDM (1)

There are 5 projects from Cambodia have been registered with Executive Board as of 15 September 2011.

Countries	Registered Project	KCER
Bangladesh	2	170
Bhutan	2	1+?
Cambodia	5	124+?
Ethiopia	1	29
Lao PDR	1	3
Nepal	4	94+?
Tanzania	1	202
Uganda	4	42+?
Zambia	1	130
Total	21	795+?

Source: http://cdm.unfccc.int/Statistics/Registration/NumOfRegisteredProjByHostPartiesPieChart.html

Current Status of CDM (2)

Basic Information (September 2011)

Project Status	Total
CDM projects approved by Cambodia's DNA	7
CDM projects registered at CDM EB	5
CDM Project issued CERs by CDM EB	1 (1 of 5 above)
CDM projects at or after validation stage	2

Approved CDM Projects (September 2011)

Type of project/Year	2006	2007	2008	2009	2010	Total
Biogas		2		1	1	4
Hydro power			1			1
Waste/heat gas utilization			1			1
Biomass	1					1
Total	1	2	2	1		**7**

Source: CCD, 2011

Current Status of CDM (3)

CDM Projects under development (September 2011)

Project Developer	Type of Project	Date	Remarks
The C.H.D	Hydro (Steung Atay)	26-04-10	Letter of no objection
Phnom Penh Sugar Co., Ltd.	Biomass (bagasse)	22-06-11	Letter of no objection
China Huandian Corp.	Hydro (Lower R. Chrum)	08-09-11	PDD
EJ Business Partners Co., Ltd.	Biomass (rice husk)	12-05-11	Initial

Source: CCD, 2011

- The number of contact for CDM development is noticeably increasing this year.
- In cooperation with the Institute of Global Environmental Strategy (IGES) to develop Standardized Baselines:
  - CDM Baseline Construction for the Phnom Penh Electricity Grid, and
  - Standardized Baseline of rice husk gasification applications.

Next Activities

- Keep working on public awareness raising on CDM and other mechanisms to government, project developers, industries, investors, international developers, etc.
- Exploring and identifying more potential projects and partners,
- Project design and feasibility studies,
- R&D on program of activities (PoA), and other new carbon market mechanisms
- Extend networking with other potential partners for finance/investment/co-ordination/implementation win-win mitigation options.

For more information:
Cambodia's DNA
Ministry of Environment, Department of Climate Change
48, Samdech Preah, Sihanouk Bld, Phnom Penh, Cambodia
Phone: (855-23)218-370 Fax: (855-23)218-370
E-mail: ETAP@online.com.kh, cceap@online.com.kh
www.camclimate.gov.kh

Second National Forum on Climate Change
Cambodia
3-5 October 2011

Angkor Bio Cogen Rice Husk Power Project

Adisorn Chieu

Angkor Bio Cogen Co., Ltd.

Project Details

2 MW. Power plant

Generate electricity using rice husk that produced from a rice mill and sell the power back to the mill.

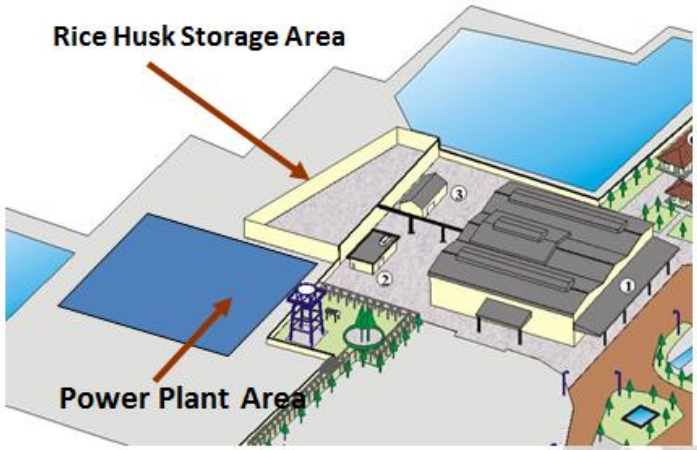
CDM activity (1)

The Project will avoid methane emissions that would be produced from rice husk left to decay in the absence of the Project.

CDM activity (2)

The Project also displace the use of diesel oil for power generation at the rice mill.

Location



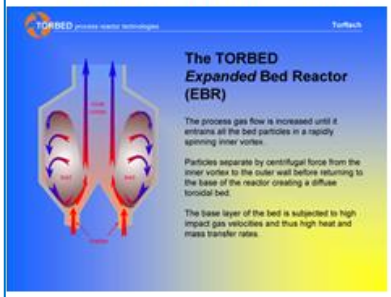
CDM details

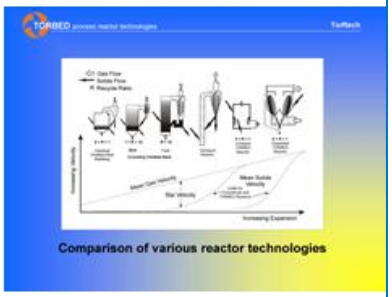
The annual amount of emission reductions		
Baseline emission	55,349	tCO2
Project Emission Emission Reduction	3,729	tCO2
Total	51,620	tCO2

Status and Challenges– Video clip of the construction from the start to now.

Main features of the project

The first time in the world using the TORBED technology to burn the rice husk. As a result, a complete burning of the husk will turn them into amorphous silica.

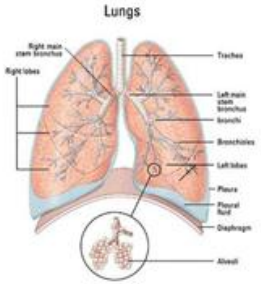




Comparison of various reactor technologies

Note:

crystallite ash is usually produced by other typical rice husk reactors used in the region. Crystallite ash could cause lung problem among the workers.

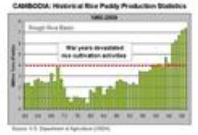


Amorphous silica ash is also an important ingredient to produce high strength concrete.

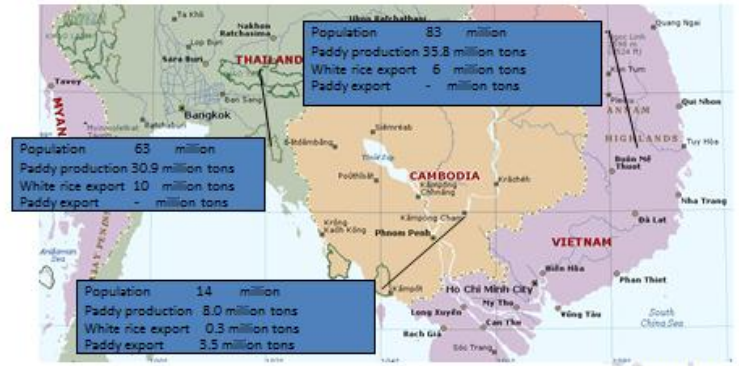
Merits

Technological breakthrough

Indirect benefits goes to the rice industry in Cambodia which at the moment has higher operating costs than other neighboring countries (e.g. Thailand, Vietnam)



Comparison among 3 countries



Estimated figures.

Recommendations on CDM rules

1. Flexibility of the verification

   ❑ since a plant might have some minor details different from its original PDD.

2. More flexibility on start of the crediting period (e.g. allowing to change the start of the crediting period more than one time)

   ❑ a project might face unforeseen difficulties from the delay of construction or commissioning.

THANK YOU !

CAMBODIA REDD+ ROADMAP

Dr. Omaliss KEO
FORESTRY ADMINISTRATION
MINISTRY OF AGRICULTURE FORESTRY AND FISHERIES

Second National Forum on Climate Change Cambodia
3-5 October 2011, Phnom Penh

What is redd

- An programme, which bring additional income from forestry sector through prevention of deforestation and forest degradation. Countries with high emission are potentially the buyers of carbon credit
- There are 5 activities under REDD+ :
  1- reducing emissions from deforestation
  2-reducing emissions from forest degradation
  3- conservation of forest carbon stocks
  4- sustainable management of forests
  5- enhancement of forest carbon stocks

2

- Why do we need REDD+
  - Deforestation and forest degradation contribute around 17% of global emission
  - REDD+ contribute to reduce emission and mitigate climate change
- Why do we need REDD+ inplementation in Cambodia
  - Consistent to national policy and goal of RGC
  - Decision made by UNFCCC
  - provide economic social and environmental support, esp. forest and wildlife conservation

3

Global REDD+ status

- REDD+ is under UNFCCC
- REDD+ had been approved at COP13 (2007), COP15(2009) and COP16(2010)
- Developed countries pledge and have provided millions for supporting developing countries through bilateral and multilateral mechanisms

4

Cambodia REDD+ Status

- REDD+ included in the National Strategic Development Plan (2009-13) and National Forestry Programme (2010-29)
- Member of FCPF (March 2009), UN-REDD (October 2009)
- Member of REDD+ Partnership, May 2010
- 3 pilot REDD projects: Oddar Meanchey, Keo Seima(Mondulkiri), Southern Cardamom
- Development of REDD+ Roadmap

5

What is REDD+ Roadmap

- A plan for preparation and management of REDD+ readiness process during 3-5 years
- First step towards establishment of National REDD+ Strategy in Cambodia
- A reference for fund raising

6

Taskforce

- Ministry of Agriculture Forestry and Fisheries and Ministry of Enviroment, Ministry of Land Management, Urban Planning and Construction.
- Observers: RECOFTC and Cliton Climate Initiative
- Consultants : FAO, UNDP and UNEP
- Stakeholder consultation and representatives of civil societies and indigenous people.

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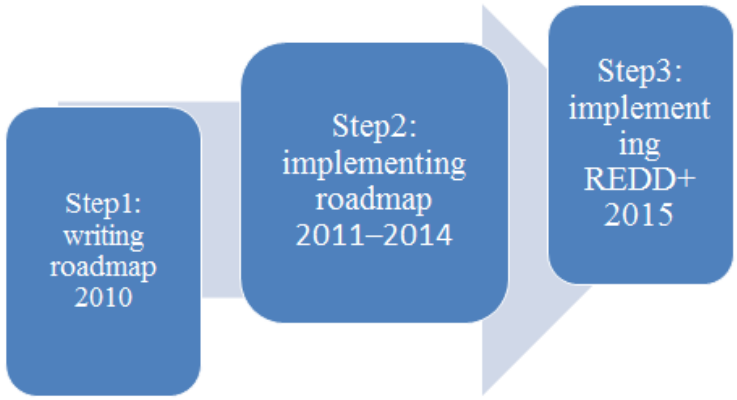
Processes



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- Section 1: Management of REDD+ Readiness
- Section 2: Stakeholder consultation and participation
- Section 3: Selection of REDD+ strategies
- Section 4: Implementation Framework
- Section 5: Development of Forest Reference Emissions Level
- Section 6: Development of the Monitoring System

9

Section 1: Management of REDD+ Readiness

1. National REDD+ Taskforce : Chair by Forestry Administration(FA), vice-chair General Department of Administration of Natural Conservation and Protection, members from other ministries
2. consultation group : representatives from civil societies, indigenous people, universities, NGOs, private sectors
3. Advisary group : national and international
4. Taskforce Secretariat : based at FA

10

Section 2: Stakeholder consultation and participation

- Step 1 : awareness raising on capacity building on REDD+
- Step2 : awareness raising, capacity building, consultation and implementation
- Step 3 : national consultation on natinonal REDD+ strategy

11

Section 3: Selection of REDD+ strategies

- Selection of strategy shall consistent to existing policies and legislation, esp :
  - National forestry programme for permanent forest estate
  - National strategic planning for management of natural protected areas
  - Strategic planning for fisheries
- Other strategies consistent to decision by COP of UNFCCC

12

Section 4: Implementation Framework

- National and sub-national scales
- Benefit sharing mechanism
- Environmental and social assessment
- Demonstration project

13

Section 5: Development of Forest Reference Emissions Level

- The reference level is used for comparision to a level when REDD+ is implementing
- At least 12 years historical data on forest
- Integrate development plan in the projection

14

Section 6: Development of the Monitoring System

- Development of national forest monitoring system
- Forest inventory
- Remote sensing
- Reporting through UNFCCC

15

GRANT status

- Japanese government, 10m
- JICA, 2m for 5 years
- UN-REDD, 3m for 2 years
- FCPF, 3.6m for 3 year

16

Next steps

- November 2011
  - Inception workshop of UN-REDD
- December 2011: revised R-PP and submit to FCPF
- Oct-Dec 2011: establishment of National REDD+ taskforce and secretariat
- Jan-Mar 2012: Form consultation and advisory groups

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THANK YOU !

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Second National Forum on Climate Change
Cambodia: 3-5 October 2011

Policy Options for Protected Areas and REDD+ in Cambodia

David Ashwell
On Behalf of the
Center for Clean Policy and the Eco Systems Initiative

CAMBODIA'S PROTECTED AREAS

Cambodia's Protected Area System

3

Representativeness

- Generally good
  - Major forest types are well represented
  - Species of international conservation significance are well represented
- Few Gaps:
  - Dry evergreen forests (good durable examples)
  - Limestone ecosystems
  - Floodplains of Stung Sen (Tonle Sap)
  - Island and marine ecosystems
- 15-18 % of land area would represent conservation targets ***provided they are***:
  - Allocated to core and conservation zones
  - Supported by complementary zoning of other lands (within and/or outside protected areas)
    - BPAMP Gap Analysis 2007

4

Management Zoning

- **Core Zone:** A zone of *high value for conservation* of rare, endangered, vulnerable and threatened animal and plant species and a delicate ecosystem.
- **Conservation Zone:** A zone *next to the core zone*, which is of conservation value for natural resources, ecosystem, slope, and natural landscape. Entry into this zone shall be by obtaining advance permission from the Natural Protection and Conservation Administration on site. *Use of forest by-products for livelihood by the local community and indigenous ethnic minorities*, which shall not cause harm to biodiversity, shall be under strict monitoring.
- **Sustainable Use Zone:** A zone of high value in national economic development that directly serves the purpose of management and conservation of the protected area and contributes to promoting the standards of living of the local community and indigenous ethnic minorities.
- **Local Community Zone:** A zone that *serves the economic and social development of the local community and indigenous ethnic minorities* who already have on-going activities, including housing, farming and vegetable gardening. Issuance of permit or land title or permission to use the land in this zone shall be certified by the Ministry of Environment.
- **2009 Protected Area Law**

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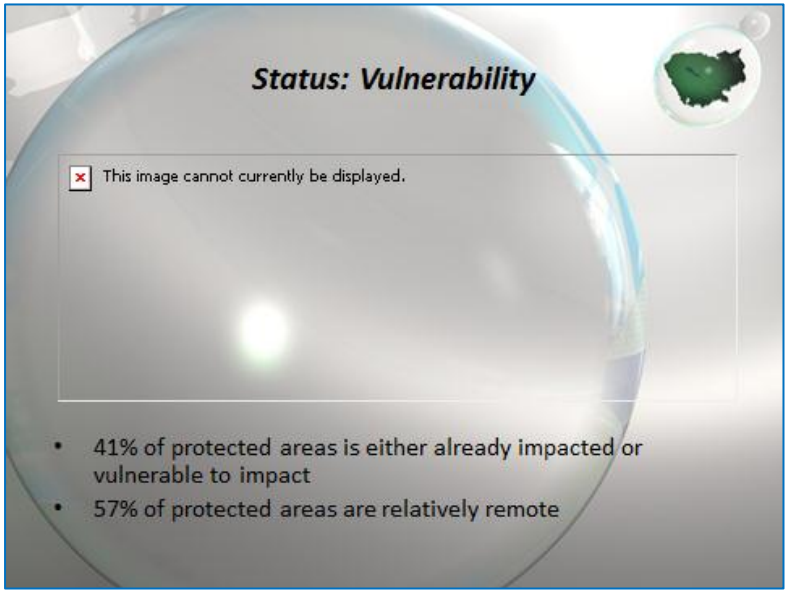
Status: Vulnerability



- 41% of protected areas is either already impacted or vulnerable to impact
- 57% of protected areas are relatively remote

POLICY BLUEPRINT

Policy Blueprint

- ❑ Intended as a policy OPTION as to how protected areas may be developed in support of a national REDD program.
- ❑ Consists of:
  - ❑ Principles
  - ❑ Policy elements
  - ❑ Barriers and challenges
  - ❑ Guidance for implementation

8

Lesson Learned from Case Study on Opportunity Costs Analysis

- The total average cost of protecting the carbon stock ($5 to $12.5 /ton carbon) is above most prices currently available on the voluntary market
- A compliance market price is likely to yield substantial finances for the country
- Additional leverage may be gained through the enhancement of stocks through forest rehabilitation

9

Principles for Policy Formulation

The following principles outline the core requirements of a policy blueprint for protected areas:

- A REDD Plus program should preserve and enhance carbon and biodiversity values in protected areas and protection forests.
- REDD should prioritize natural forests in protected areas, including both mature and degraded forests which act as carbon sinks and mitigate climate change.
- Emphasis should be placed on:
  - Eliminating leakage
  - Enhancing carbon stocks through rehabilitation of degraded forests and the protection of vulnerable forest areas
- Synergies between REDD and the CBD should be harnessed to enhance PA management at national, sub-national and local scales.
- REDD should embrace the ecosystems approach that aims to ensure viable landscapes with adequate connectivity between natural areas.

10

Policy Elements

- National Protected Area System Plan (NPASMP)
- Rehabilitation of degraded forests
- Zoning
- Decentralization
- Fund-based structures

11

National Protected Areas System Plan

- Prioritize protection needs
- Identify existing and likely future threats for each protected area, and the integrity of the overall system.
- Identify threats within individual protected areas.
- Use zoning as a tool for integrating effective cluster, regional and national level planning and implementation
- Synergies with regional planning and cluster level implementation
  - Enhance institutional arrangements for implementing activities.
  - Prioritize areas, with corresponding allocation of resources and training, and institutional responsibility.

12

Rehabilitation of Forests

Substantial areas of degraded and secondary forest suitable for:

- Rehabilitation and regeneration of natural forest areas
- Semi-natural managed systems: Agro-forestry based on hybrid systems
  - Under-planting degraded forests with high value crops such as coffee
  - Enrichment planting for natural species (Crasna, Tepiru)
- Intensively managed systems: Agro-forestry, woodlots with silviculture

13

Matching Zoning System with REDD Plus Objectives:

- **Use zoning as a tool** for integrating effective cluster, regional and national level planning and implementation to protect and enhance carbon stocks
- **Sustainable Use Zone:** The Sustainable Use Zone includes the following sites:
  - National cultural and heritage
  - Ecotourism
  - Wildlife conservation and recreational services
  - Biological rehabilitation
  - Community protected area
  - Botanic garden
  - Infrastructure development, including irrigation, reservoir, hydro-electricity, electric networks
    - Mining
    - Environment-friendly resin exploitation in the protected area and surroundings.
- Enhanced carbon stocks can provide economic justification for land uses in the ***Sustainable Use Zone*** which support conservation values and other co-benefits

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Prioritization for Investment in Rehabilitation

- Zoning scheme provides an opportunity for enhancing carbon stocks under the REDD framework;
  - Enhancement of carbon stocks in non degraded forests allocated to the Core Zone, Conservation Zones
  - Forest rehabilitation and regeneration of degraded natural forests may be focused in the Core Zone, Conservation Zone and Sustainable Use zone
  - Managed systems are to be limited to the SUZ and Local Community Zones.
- Areas which are heavily degraded and not amenable to rehabilitation should be considered for excision from PAS

15

Decentralization

- REDD Plus is not an EIA process. A long-term active presence at forest sites is required:
  - Sustained engagement over long inter-generational time frames required to adapt plans and measures effectively
  - Sustained and effective communications
  - Develop responses to field realities in real time - fire, land grabs, poaching etc
- Long term requirements for a presence can only be met by investment in institutional, organizational and human capacity building at the sub-national level – village, commune and district.
- Failures will occur without frequent tangible and visible returns to all stakeholders
- Benefit sharing requires that;
  - Gains associated with forest conservation are equitably and transparently distributed to those who do the work
  - A dual income model is required to sustain livelihoods and the investment of a community's time and resources in sustainable use activities
  - Regular receipts of carbon credits is therefore essential for all stakeholders

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Fund-based Structures

- Combined conservation and REDD Plus funding
  - Ensure consistency in protected area management
  - May be implemented on basis of clusters or individual areas; but not be zone based.
- Conservation funding balances REDD funding, through local government, to ensure protected area objectives are retained as primary goals
- A national REDD strategy that incorporates various objectives (e.g., biodiversity, local development, indigenous peoples) will be more:
  - Appealing to international funders, and so more likely to obtain funding.

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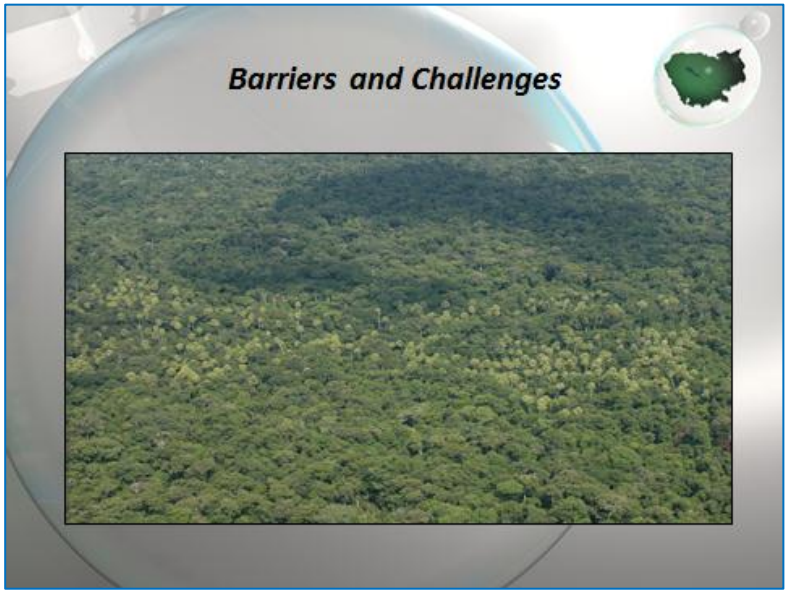

Macro Level

- Management of threats
  - Cross-sector and interagency coordination of implementation activities is limited
    - Land use objectives are not harmonized
  - *Ad hoc* and inconsistent and selective implementation of existing land use plans – E.g. prioritizing ELCs over local planning processes
  - Ongoing disregard for IP land rights under law
- National and Regional land use planning
  - Lack of coordinated land use decision making
    - Horizontal and Vertical
  - Ongoing disregard for IP land rights under law
  - Conflict of interest in being both a land use planner and a land manager
    - Inter- and intra-ministerial competition
- Boundaries
  - Inadequate delineation of boundaries
  - Lack of boundary demarcation
- Insufficient Law Enforcement

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Micro Level

- Resource management at commune level is subject to a variety of shocks, which make long-term planning and implementation rather problematic.
  - Short planning horizon at local level
  - Rapid rise and fall of investment projects
  - Illegal land and resource use activities by outsiders
- Low response capability for addressing problems
  - Limited awareness raising of REDD Plus objectives and procedures
  - Inadequate incentives for concerted engagement
  - Unresolved conflicts – individuals, communities, business and authorities
- Lack of 3rd party monitor (without its own programmatic interests)
  - NCDD now piloting with NGOs

20

Policy Implementation Guidance

- Decentralized structures for implementation
  - Commune and district as basis for REDD Plus implementation
  - Can build on existing capacities - NCDD, CLUP, CPAs, CFAs, etc.
  - Use established administrative systems to ensure:
    - Inter-active engagement at the local level to address problems rapidly
    - Regular visible quarterly payments
- Third party monitoring – independent of implementation
- Cluster-based approach to planning and implementation of PAs based on bio-regions

22

Regional Frameworks

23

Technical Guidance

- Develop an ecological framework for a forest typology based on a dynamic concept of plant communities as a basis for identifying;
  - Floristic, physiognomic and environmental patterns
  - Conservation priorities
  - Improve measurement of forest degradation
  - Rehabilitation priorities and pathways
- Improve GIS capacity
  - Use of remote sensing data for measurement of forest carbon stocks and flows
  - Inventory of plant communities – needs plant ecologists
- Rationalize boundaries of protected areas and management zones
  - Recognizable and enforceable
- Develop zoning system for protected forests on a regional basis rather than on individual protected area basis

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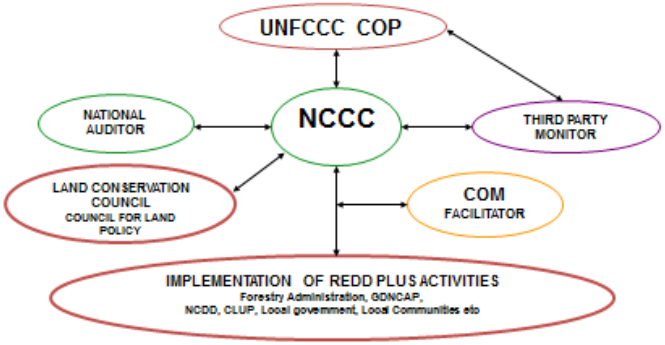
Functions: Pathways to Protection



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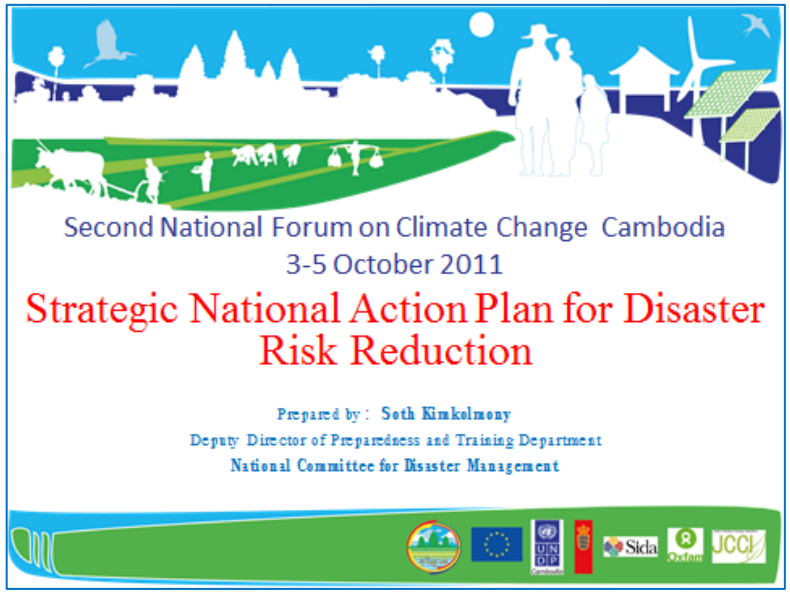


Second National Forum on Climate Change Cambodia
3-5 October 2011

Strategic National Action Plan for Disaster Risk Reduction

Prepared by : Soth Kimkolmony
Deputy Director of Preparedness and Training Department
National Committee for Disaster Management

1. Impact of Disaster

- To the efforts in achieving the millennium development goal
- To public finance (imbalance of income-expense and trading deficiency)
- To additional expense of Government (donated to disaster impact for rehabilitation)
- To direct impact to communities and livelihoods (poverty)

2

Disaster Risks in Cambodia

Hazards Profile:

- Floods-Drought- Disease outbreaks and Epidemics-Storms-Storms-Lightening-Forest and Land Fires-Traffic Accident-Technological Disasters (Mines, Explosive weapons...etc.)

3

Impact of Disaster on Development Progress

- The resources for development has been applied for the needs of vulnerable people in the response and rehabilitation phases after the disaster had occurred.
- The achievements from development program have been seriously destroyed.
- Development program is getting stuck and forcing to delay or cancel.
- Unsustainable development must be restarted repeatedly and it is vesting of power, resources and time.
- The efficiency of development program is being lost the value.

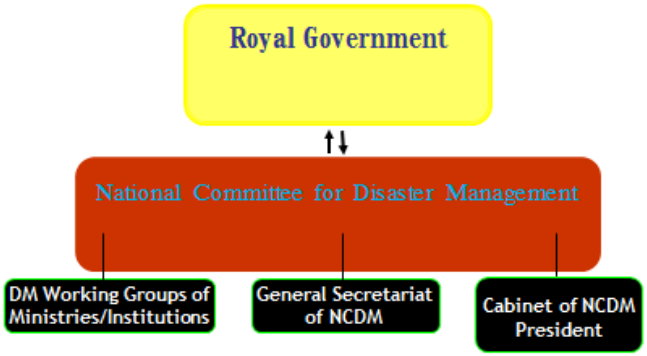
4

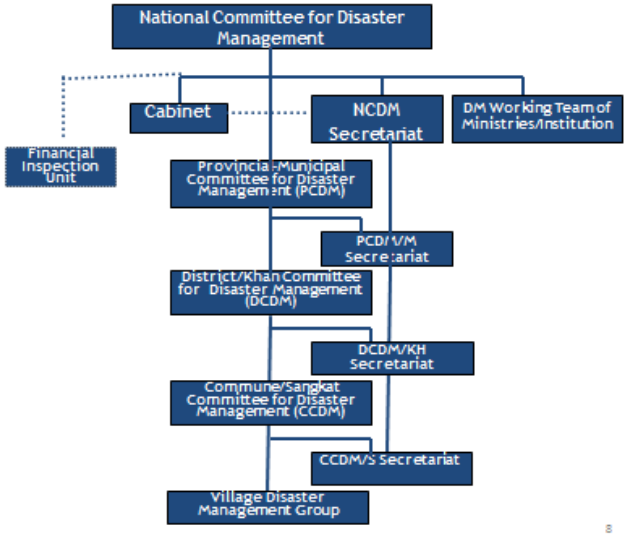
Mekong Flood in 2000 and 2001

Flash Flood situation in North-Eastern provinces (Ratanakiri and Preah Vihear)

2. Organizational Structure of Disaster Management in Cambodia

A. Central Structure





Mission of National Committee for disaster Management

To lead the Disaster

Management in Kingdom of Cambodia

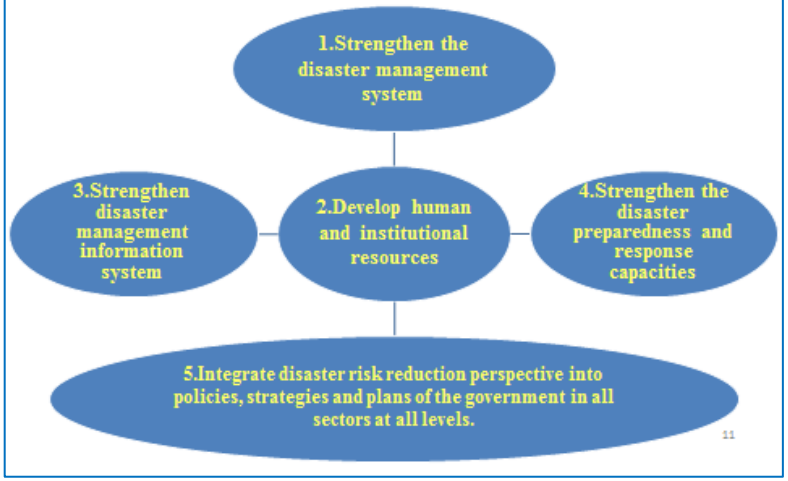
9

Vision

To Build a resilient community to natural disaster in accordance with Hyogo Framework for Action

10

Strategic Objectives



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Status of DRR as Prioritized Identification in Cambodia

1. Ensure that DRR is a national and local priority with a strong institutional basis for implementation.	2. Strengthen Sub-national and community-based disaster risk management	3. Indentify, Assess and Monitor Hazard Risks and Enhance Early Warning	4. Use knowledge, innovation and education to build a culture of safety and resilience at all levels	5.Mainstreaming DRR into Policies and Programs of Relevant Government Ministries	6. Strengthen Disaster Preparedness for Effective Response at all levels

12

Disaster Risk Management Framework

Adopted with Hyogo Framework for Action (HFA) as overall framework towards strengthening the capacity of local and community levels.

1. Ensure that disaster risk reduction is a national and a local priority

1.1. Formulate policies and legislation in support of DRR
1.2. Creation and strengthening of a national DRR coordination mechanism or ***"National DRR Platform"***
1.3. Integration of DRR into national development policies and planning
1.4. Allocate appropriate resources for DRR at national level

13

2. Strengthen sub-national and community-based disaster risk management

2.1. Decentralize responsibilities and resources for DRR
2.2. Promote implementation of community-based DRR programs

3. Identify, assess and monitor hazard risks and enhance early warning

3.1. Conduct national and local risk assessment
3.2. Establish a disaster management information system
3.3. Develop multi-hazard early warning systems
3.4. Collaborate with international and regional DRR initiatives.

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4.Use knowledge innovation and education to build a culture of safety and resilience

4.1. Establish mechanisms for information exchange and networking
4.2. Promote DRR education and training
4.3. Promote gender and cultural sensitivity training as integral component of DRR
4.4. Undertake disaster risk reduction management technical and scientific research
4.5. Promote public awareness.

15

5. Mainstreaming DRR into policies and programs of relevant government ministries

5.1. Incorporate DRR in sustainable environmental and natural resource management
5.2. Integration of DRR to climate adaptation program
5.3. Promote food security to enhance community resilience
5.4. Integrate DRR planning into the health sector
5.5. Promote appropriate structural and non-structural mitigation measures
5.6. Incorporate DRR into land use planning and other technical measures
5.7. Develop innovative financial instruments for addressing disaster risks.

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6. Strengthen disaster preparedness for effective response at all levels

6.1. Strengthen national and sub-national capacity for preparedness and response
6.2. Develop coordinated regional operational mechanism for emergencies exceeding national coping capacities
6.3. Prepare and periodically update disaster preparedness and contingency planning
6.4. Establishment of emergency funds.

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Disaster Management and Development is merely the merging task but the development integrated with disaster management concept is the sustainable development

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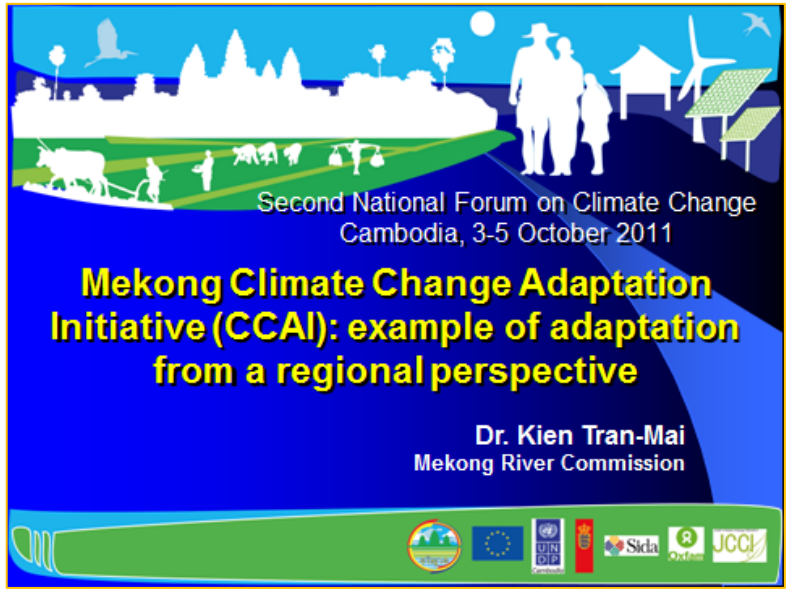
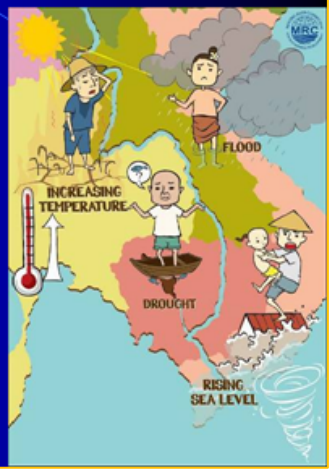


Outline

- Climate Change (CC) & Development challenges from regional Mekong-Basin perspective
- Introduction of the MRC CCAI: Linking regional basin-wide view with national and local activities
- Some initial activities: CC impacts to Mekong Flow, Basin-wide Pilot and Local Demonstrations
- Way forwards: Collaboration and Partnerships

Climate Change & Development challenges in the Lower Mekong

- CC and variability will exacerbate/ overlay the current development challenges to the Mekong region, its unique environment & 60 mill. people living in the basin
- No one country alone can tackle CC effectively enough: **Need for a regional strategy and support** to adaptation planning & actions at national and local levels
- **MRC CCAI** role & challenges: How to consolidate approaches/ tools & bring regional concerns to the national policies/strategies, sub-national projects and specific community actions?



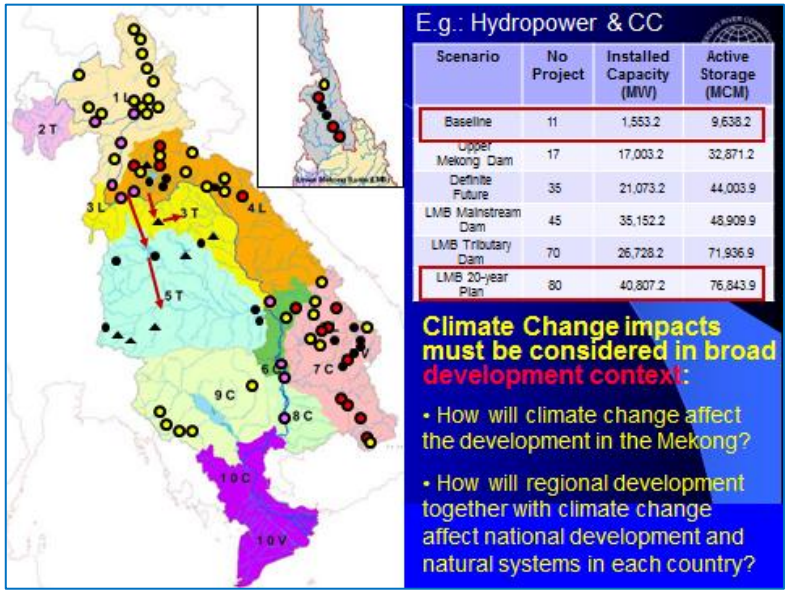
CC and Development Impacts on LMB

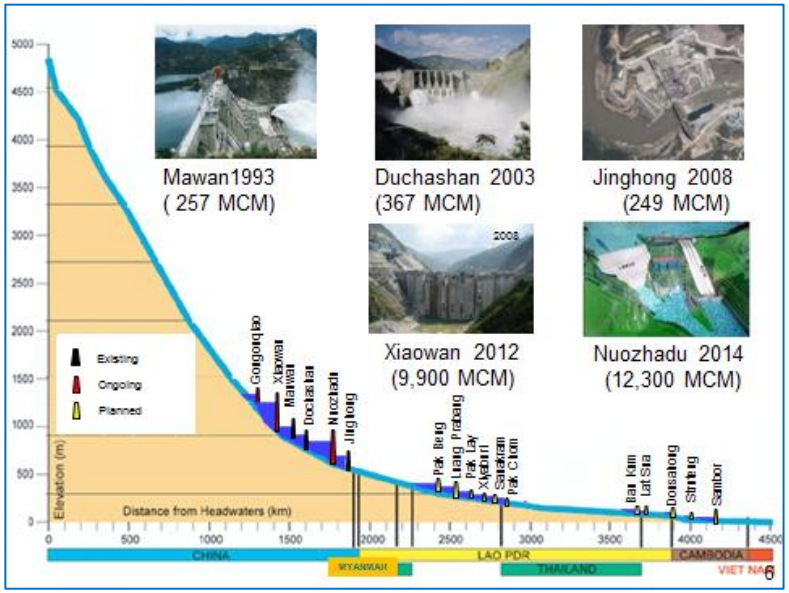
Previous study by CSIRO (Eastham et al., 2008):

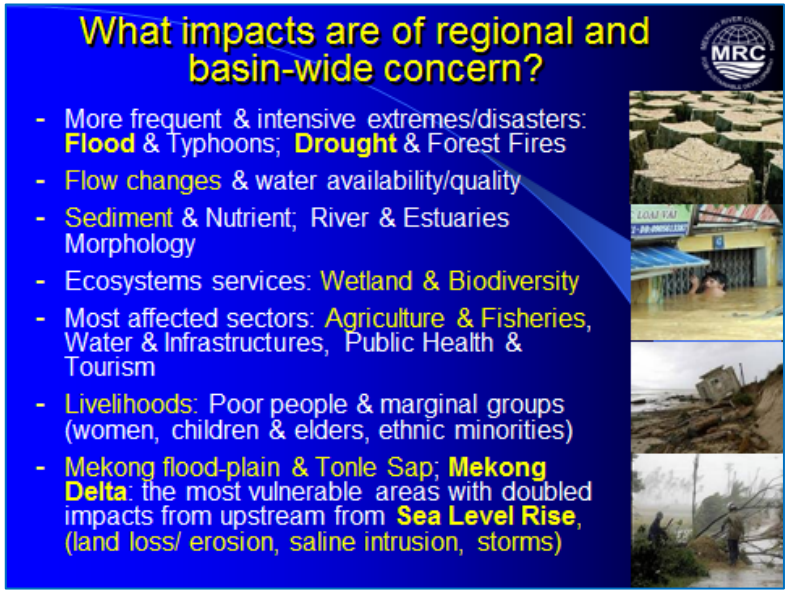
- Dry season precipitation: increase in the North & decrease in the South of the basin; strong water stress in some areas (e.g. North-Eastern Thailand & Tonle Sap)
- Increase in flooding in all parts of the basin, especially downstream
- Uncertainties: extreme events, impacts on ecosystems, livelihood and food security, modeling methods

MRC-CSIRO 2010: Projection and impacts on river flow

- Temperature increases about 0.9 C by 2050, more in the northern part;
- Sea Level Rise & serious saline intrusion in Mekong Delta
- Under CC, annual river flow increases 6-16% (in average 2-11% and 18-40% in wet and dry season, respectively)
- Development may increase river flow in dry season by 30-60% but reduce wet season flow 8-17%


E.g.: Hydropower & CC
Scenario | No Project | Installed Capacity (MW) | Active Storage (MCM)
Baseline | 11 | 1,553.2 | 9,638.2
Upper Mekong Dam | 17 | 17,003.2 | 32,871.2
Definite Future | 35 | 21,073.2 | 44,003.9
LMB Mainstream Dam | 45 | 35,152.2 | 48,909.9
LMB Tributary Dam | 70 | 26,728.2 | 71,936.9
LMB 20-year Plan | 80 | 40,807.2 | 76,843.9
Climate Change impacts must be considered in broad development context:
• How will climate change affect the development in the Mekong?
• How will regional development together with climate change affect national development and natural systems in each country?


Mawan1993
(257 MCM)
Duchashan 2003
(367 MCM)
Jinghong 2008
(249 MCM)
Xiaowan 2012
(9,900 MCM)
Nuozhadu 2014
(12,300 MCM)
Existing
Ongoing
Planned
Elevation (m)
Distance from Headwaters (km)
CHINA
LAO PDR
CAMBODIA
THAILAND


What impacts are of regional and basin-wide concern?
- More frequent & intensive extremes/disasters: Flood & Typhoons; Drought & Forest Fires
- Flow changes & water availability/quality
- Sediment & Nutrient; River & Estuaries Morphology
- Ecosystems services: Wetland & Biodiversity
- Most affected sectors: Agriculture & Fisheries, Water & Infrastructures, Public Health & Tourism
- Livelihoods: Poor people & marginal groups (women, children & elders, ethnic minorities)
- Mekong flood-plain & Tonle Sap; Mekong Delta: the most vulnerable areas with doubled impacts from upstream from Sea Level Rise, (land loss/ erosion, saline intrusion, storms)

E.g.Typhoon Ketsana: October 2009
Typhoon Ketsana (Ondoy)
Death toll in:
• Lao: 16
• Vietnam: 163
• Cambodia: 17 (Source AFP)
People missing | 19
People injured | 199
Now, October 2011:
Typhoon Nesat!
??
Can we be more prepared and adaptive to those challenges?

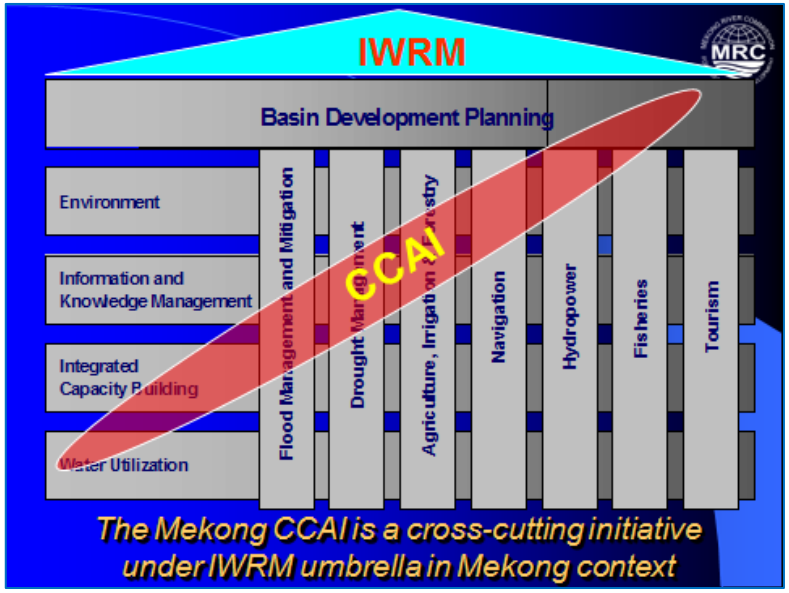
What is CCAI?

A collaborative regional initiative of Lower Mekong Basin countries aiming to support the countries in adapting to the impacts and new challenges of climate change through improved planning, implementation and learning

- **Where:**
  - Lower Mekong Basin – 4 Member Countries
  - Involve the Upper Mekong partners: China and Myanmar
- **CCAI Phasing:**
  - Long-term initiative (with three 5-years phases, up to 2025)
  - Linked into the cycle MRC's Strategic Planning process & National planning cycles

CCAI Outcomes and Outputs

Climate Change Adaptation Planning and Implementation	• Methods and tools for assessment and adaptation planning and Climate Change Database for the Mekong Basin • Demonstration site/project for each member country for implementation of adaptation activities at local level • Basin-wide demonstration activities for adaptation in key sectors or transboundary issues • Lesson learned of demonstration activities for replication and upscaling in local, sector and national development planning
Improved Capacity to Manage and Adapt to Climate Change	• Institutional capacity strengthened in policy making and planning for climate change adaptation in LMB countries • Enhancement of capacity in using methods and tools for adaptation planning and implementation • Enhancement of capacity in monitoring/reporting the climate change and adaptation in the region and The Mekong Panel of Climate Change (MPCC) is established
Strategies and Plans for Climate Change Adaptation	• Regional and National policy frameworks to facilitate and guide adaptation and implementation • System of monitoring and reporting on the status of climate change and adaptation • CCAI communication plan for raising awareness, sharing information and knowledge on climate change and adaptation
Regional Exchange, Collaboration and Learning	• Agreements and productive collaboration with CCAI core implementing partners on climate change adaptation related issues • Institutional arrangement and implementation of CCAI • Regular monitoring and evaluation and reporting to MRC Joint Committee and Council, Donor and Core Implementing partners of CCAI progress with revision and improvement • Fund raising for the periods of 2011-2015 and 2016-2025



Adaptation planning steps
- Baseline assessment
- Projecting climate and hydrological change
- Socio-economic projections
- Impact assessment
- Vulnerability assessment
- Developing adaptation options
- Integrating with development plans

Development planning levels
- Basin wide
- Sub-basin/transboundary
- National
- Sub-national – eg river basins
- Province
- Cities/towns
- Local government
- Community

Development sectors
- Water supply
- Water sanitation
- Energy
- Transport
- Agriculture
- Fisheries
- Forestry
- Public health
- Tourism

Gender Mainstreaming and Gender Responsiveness

- Gender analysis to understand climate change impacts on women and men, their different roles in coping with climate risks;
- Involvement and empowerment of women at different steps and levels in adaptation planning and decision-making;
- Ensuring that the initiative benefits men and women equally, in accordance with their different needs, and with the input and equal participation of men and women at all levels

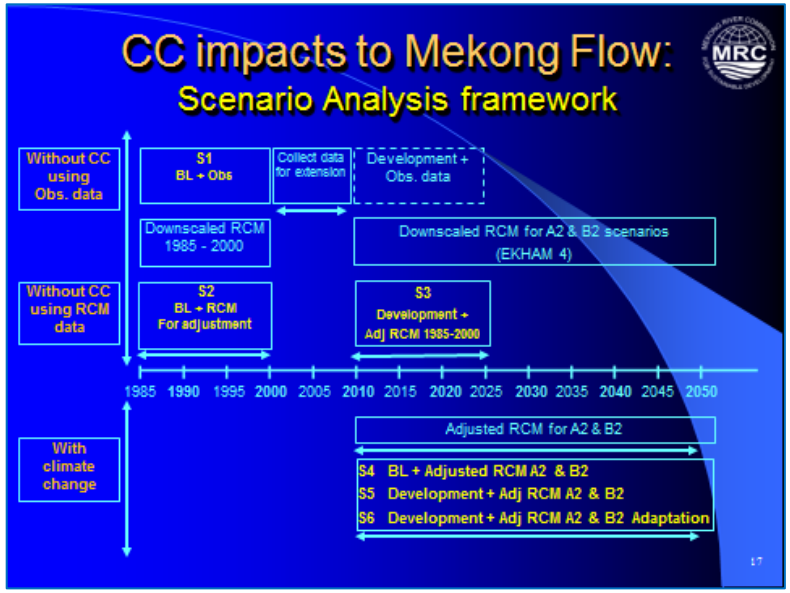
Active Stakeholder Engagement and Capacity Building

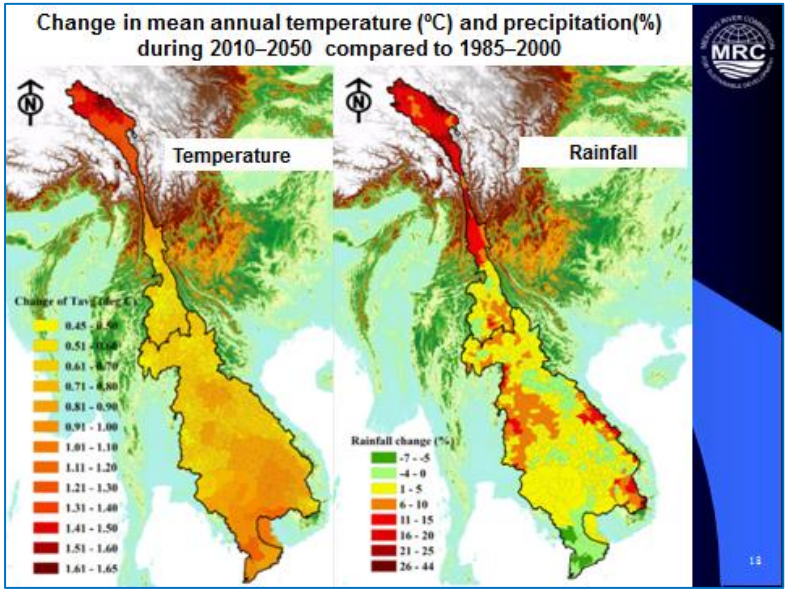
- National & Regional **Consultations**;
- Engage Riparian and National Experts to work with International Specialists in one team
- Regional & National **capacity need assessment** leading to integrated training programmes;
- Partnership & collaboration other MRC Programmes and with regional partners
- Informal consultation with dialogue partners China and Myanmar

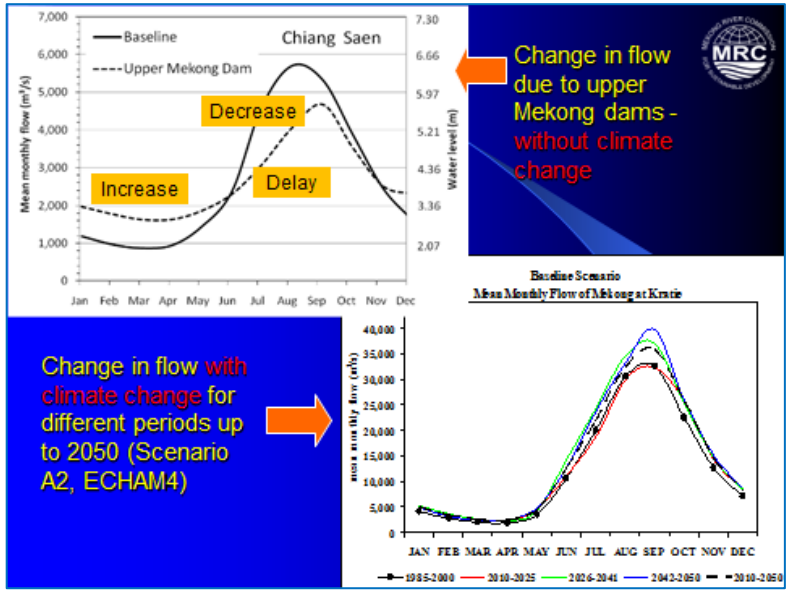
Awareness raising activities

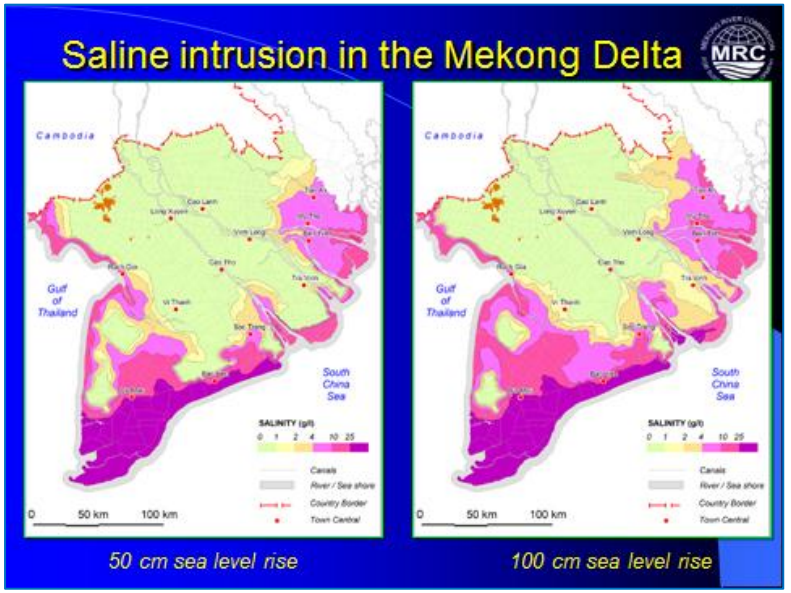
Some initial activities:

- CC & Development impacts to Mekong flow regime and some sectors;
- Basin-wide Pilot: CC impacts to Wetland & Biodiversity
- Local Demonstration Projects

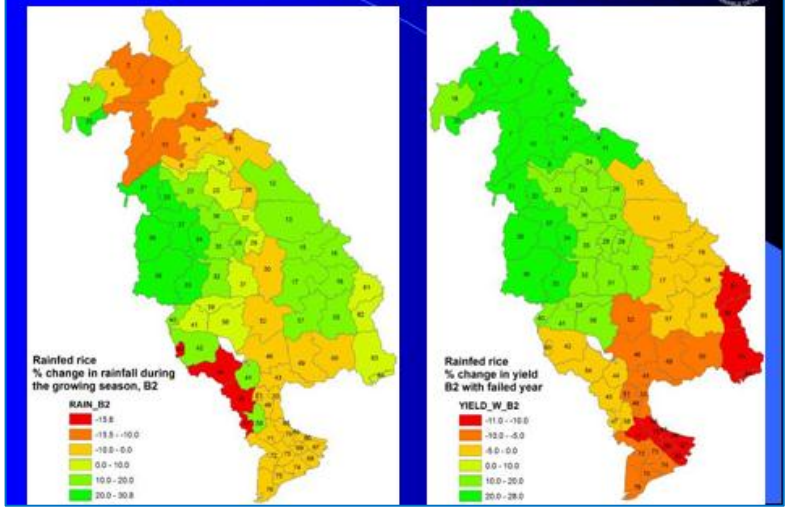

CC impacts to Mekong Flow:
Scenario Analysis framework
Without CC using Obs. data
S1
BL + Obs
Collect data for extension
Development + Obs. data
Downscaled RCM 1985 - 2000
Downscaled RCM for A2 & B2 scenarios (EKHAM 4)
Without CC using RCM data
S2
BL + RCM For adjustment
S3
Development + Adj RCM 1985-2000
1985 1990 1995 2000 2005 2010 2015 2020 2025 2030 2035 2040 2045 2050
Adjusted RCM for A2 & B2
With climate change
S4 BL + Adjusted RCM A2 & B2
S5 Development + Adj RCM A2 & B2
S6 Development + Adj RCM A2 & B2 Adaptation


Change in mean annual temperature (°C) and precipitation(%)
during 2010–2050 compared to 1985–2000
Temperature
Rainfall
Rainfall change (%)


Baseline
Upper Mekong Dam
Chiang Saen
Decrease
Increase
Delay
Mean monthly flow (m³/s)
Water level (m)
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Change in flow due to upper Mekong dams - without climate change
Change in flow with climate change for different periods up to 2050 (Scenario A2, ECHAM4)
Baseline Scenario
Mean Monthly Flow of Mekong at Kratie
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
1985-2000
2010-2025
2026-2041
2042-2050
2010-2050


Saline intrusion in the Mekong Delta
Cambodia
Gulf of Thailand
South China Sea
SALINITY (g/l)
0 50 km 100 km
50 cm sea level rise
100 cm sea level rise

Food security: changes in rainfall and yield in LMB (B2), crop modeling results

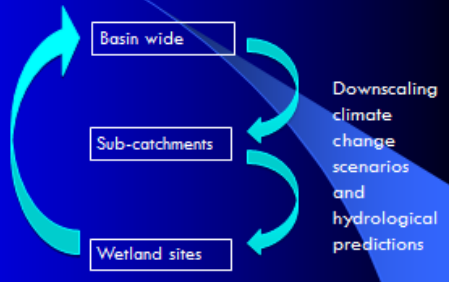


CC Impact & Vulnerability Assessment for Wetlands & Biodiversity in the LMB

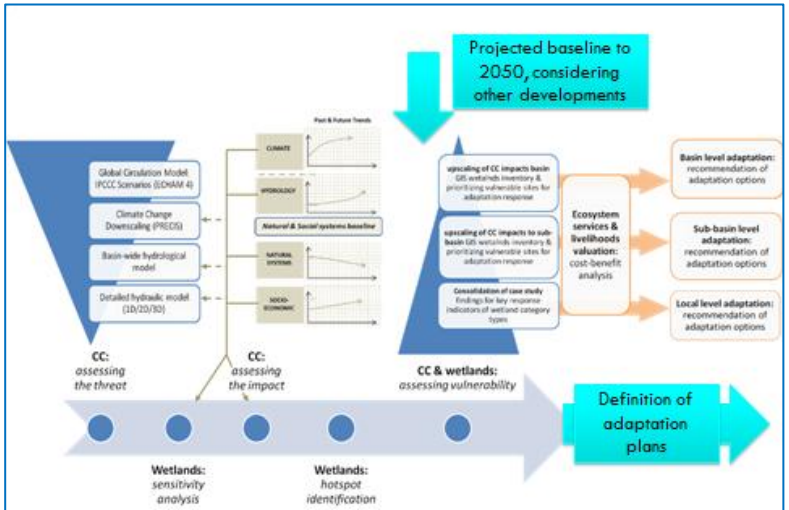
Objectives:

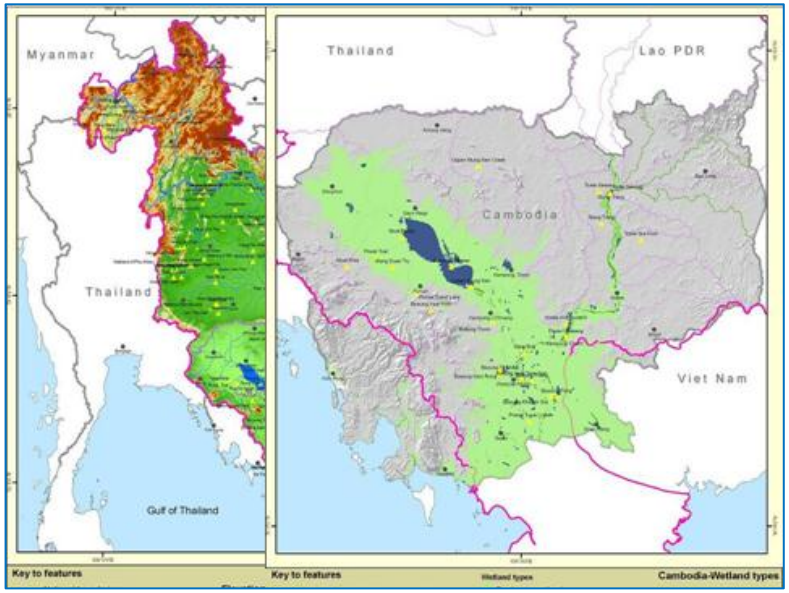
- To undertake a climate change impact and vulnerability assessment for the Mekong wetlands considering their functions and biodiversity
- To provide recommendations for adaptation options aiming at securing wetland values
  - Provide detailed understanding of CC **implications to the health and function of wetlands** in the Mekong basin
  - Formulate specific **adaptation and management recommendations**
  - Develop an **evidence base** from case study sites & **capacity building**
  - Develop a **methodological framework for assessing CC vulnerability of wetlands**

Three Phases to the approach



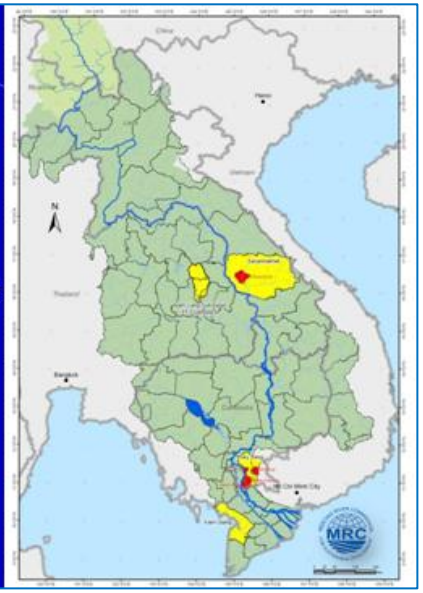
1. **down-scaling** from basin wide to sub-basin and local
2. **case studies** of wetlands at local level
3. **up-scaling** back to basin level





CCAI Local Demo-Sites

- **Cambodia**
  - Prey Veng province
- **Lao PDR**
  - Savannakhet (Champhone District)
- **Thailand**
  - Nam Yang Basin (Tributary to Chi River)
- **Vietnam**
  - Kien Giang province



Cambodia Demonstration Site

Problems & issues:

- Increasing risk of flood, drought & extreme climate events
- Key vulnerable sectors: Agricultural and Fisheries
- Key vulnerable groups: farmers and fishermen, children, elderly people, ethnic groups and women
- Significant decline in water table. (In some places, wells cannot be used for more than a year)

Key activities:

- Assess the risks and impact of extreme climate events on socio-economic condition & people livelihood;
- Conduct community-based vulnerability & adaptation assessment at district level to develop local action plan
- Support in local planning and decision making, methods and tools; Capacity building & awareness raising on CC

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Local demonstration project: Problems and Challenges

- Different geographical setting and scale, climate risk/vulnerability and corresponding climate adaptation options;
- Different capacity of national teams and political systems;
- Lack of common understanding on adaptation planning process and tools;
- Coordination and information sharing among national line agencies;
- Communication and information exchange among demo sites due to language barrier;

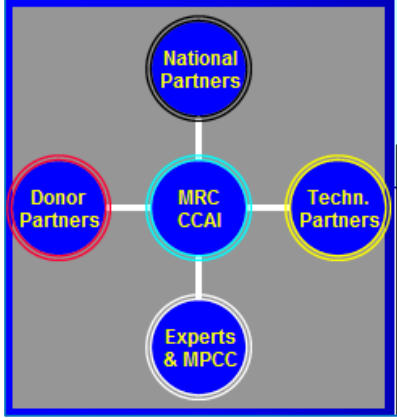
28

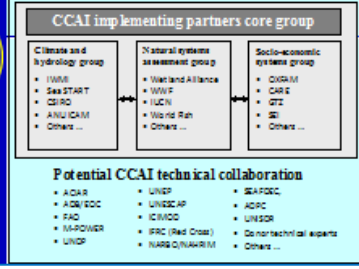
Ways forwards through regional collaboration & partnership

- Establish a regional network of collaborative local demonstrations with national & regional partners
- Other Basin-wide and trans-boundary pilots
- Working through other MRC Programmes
- **The Mekong Adaptation Strategy** and Action Plan supporting national frameworks and guidelines for Adaptation at national and sub-national level
- **The Mekong Panel on Climate Change (MPCC)**: "regional analogue" of IPCC in the Mekong region

CCAI network of regional partners

Technical & financial support from CCAI partners





Future Network of collaborative "CCAI & Co." Demonstration Projects

Second National Forum on Climate Change
Cambodia
3-5 October 2011

Barriers to Effective Adaptation – Global and Regional Experiences

Alex Heikens

UNDP

Barriers and Opportunities for Effective Adaptation

Introduction

Key-message: CCA needs to become part of local development

1. Capacitate local institutions
2. Start using country systems to implement CCA projects
3. Mainstream CCA in local development

International finance for adaptation: external barriers

Conclusions

2

Introduction: Adaptation lessons from Asia

- Upscaling CCA will be a major challenge
- Has to be part of local development
- It is a cross-sectoral issue

What about decentralization & deconcentration processes?

3

Message 1: capacitate local institutions

- Local capacity often limited
- Roles & responsibilities
- Coordination with national level

4

Example 1: Indonesia

Integrate climate change in key-institutions at provincial and district level

SCCF/GEF project "Strategic Planning and Action to strengthen climate Resilience of rural Communities "
under preparation

5

Message 2: Start using country systems to implement CCA projects

- Reconsider traditional project implementation
- Address weaknesses in country systems
  - public financial management
  - governance reform

6

Example 2: Bhutan

Channel climate adaptation financing directly to local governments using existing national systems

UNCDF project "Local Climate Adaptive Living (LoCAL) in Bhutan"
ongoing

7

Message 3: Mainstream CCA in local development

- Local planning, budgeting, regulation
- Delivering goods and services
- Local fiscal revenues

8

Example 3: Lao PDR

integrate climate resilience in local planning, budgeting and execution

LDCF/GEF funded UNDP project "Effective Governance for Small Scale Rural Infrastructure and Disaster Preparedness in a Changing Climate" under preparation

9

International finance for adaptation: external barriers

- Access
- Defining climate finance / new & additional
- Tracking climate finance
- Coordination
- Earmarking

10

Conclusions:

- Innovative approaches are needed
- Strengthen and use local institutions and country systems
- Address CCA in decentralization and deconcentration processes
- Mutual transparency and accountability

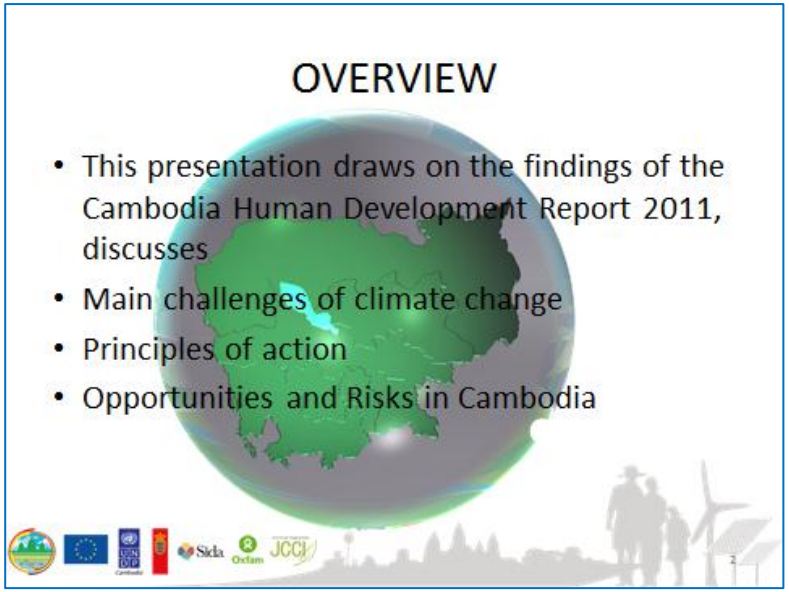
11

For more information:

www.undp.org

12

Second National Forum on Climate Change
Cambodia
3-5 October 2011
Barriers to effective adaptation – insights from the Cambodian Human Development Report 2011
Dr Richard Friend
Institute for Social & Environmental Transition (ISET)


OVERVIEW
This presentation draws on the findings of the Cambodia Human Development Report 2011, discusses
Main challenges of climate change
Principles of action
Opportunities and Risks in Cambodia

Uncertainty and Risk
Climate change requires a new way of looking at the future
Climate change is largely a product of development in the past (industrialisation, land use changes)
Forces us to rethink meaning and direction of 'development'
But cannot simply 'predict and act'
Need to deal with high degree of uncertainty and risk
Need new ways of doing development

Principles of resilience
Informed strategic, participatory planning and decision-making
Rights-based approaches
Putting ecological considerations at the heart of development
Integrated, area based approaches
Promoting adaptive, flexible and learning-oriented institutions
No regrets options – 'safe to fail'

Address current vulnerabilities

Cambodia's vulnerability related to
- Weak assets and entitlements of rural people
- Limited adaptive capacity – technical, financial & human capacity, institutional constraints, weak governance & decision-making

Reducing current vulnerabilities
- Forging a climate resilient, long-term, low carbon development pathway
- Both:
- Technologies, techniques and practices
- More strategic approaches to integrated mana ment – water and land

Strengthen people's assets & entitlements

- Strengthen social protection – health, education, cash transfers (public works)
- Strengthen Disaster Risk Reduction
- Strengthen access to productive assets – land, water, forests, fisheries - and the means to turns assets into livelihood benefits (markets, credit, technology)

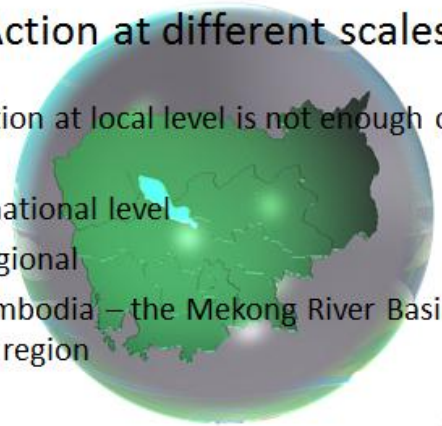
Water and Land

- Much of climate change will be felt through water
- Not only look for infrastructure solutions
- But implement IWRM – move from policy (already in place) to practice
- This also requires looking at landscapes – river basins
- And critically managing watersheds, forests, floodplains – and LAND

Need for local action

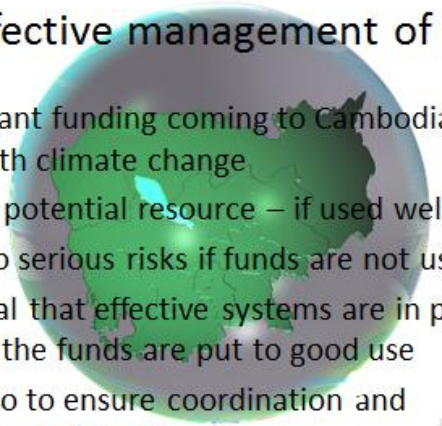
- Climate change will be felt at local level
- Most of effort so far has been targeted at national or regional
- Current D&D reforms provide an opportunity to have more locally relevant, representative, transparent and accountable actions
- And to move from sectoral to integrated approaches
- Need to incorporate climate chang considerations into functional re-assignm nts

Action at different scales



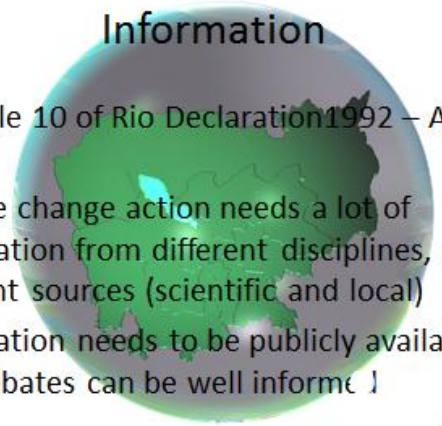
- But action at local level is not enough on its own
- Need national level
- And regional
- For Cambodia – the Mekong River Basin is a critical region

Effective management of $



- Significant funding coming to Cambodia to deal with climate change
- A huge potential resource – if used well
- But also serious risks if funds are not used well
- Essential that effective systems are in place to ensure the funds are put to good use
- And also to ensure coordination and consistency from the donors

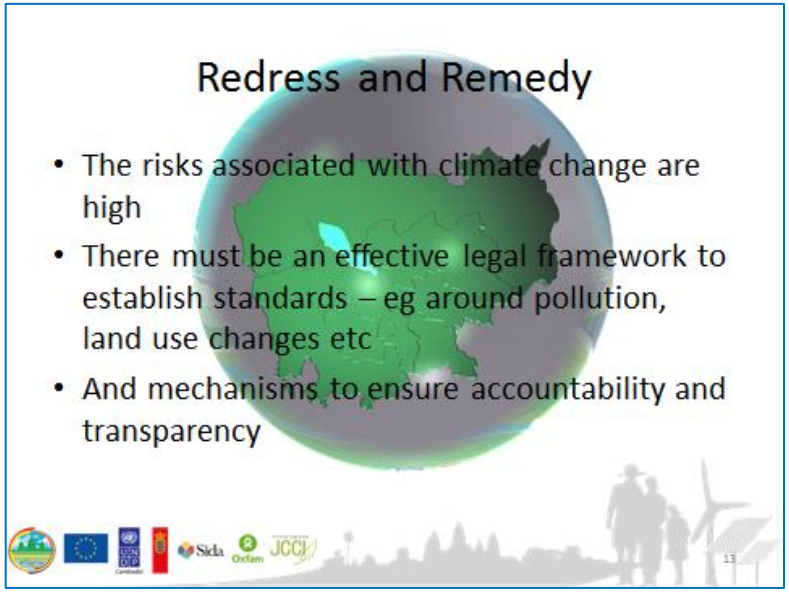
Information



- Principle 10 of Rio Declaration1992 – ACCESS Rights
- Climate change action needs a lot of information from different disciplines, and different sources (scientific and local)
- Information needs to be publicly available so that debates can be well informe d

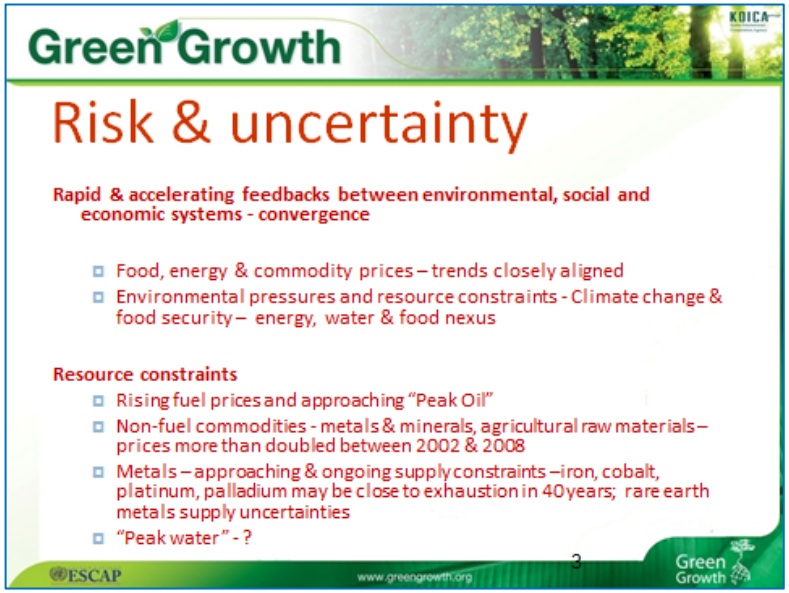
Public Participation

- Climate change has long term risks and uncertainties
- Need to ensure all affected parties are involved in decision-making – to ensure fair and equitable outcomes
- And to encourage innovation
- This hinges on public participatio n


Redress and Remedy
• The risks associated with climate change are high
• There must be an effective legal framework to establish standards – eg around pollution, land use changes etc
• And mechanisms to ensure accountability and transparency
Sida
Oxfam
JCCI

Second National Forum on Climate Change
Cambodia
3-5 October 2011
Green Growth, Low Carbon Development
Aneta Nikolova, D. Eng.
ESCAP

Green Growth
Asia-Pacific – a Region on the Move
Rapid economic growth = Significant gains in poverty and hunger reduction
Associated costs:
Overstretched carrying capacity of the natural endowment;
Uneven distribution of benefits;
Insufficient access to and quality of social protection
Jobless growth
Economic uncertainty
Vulnerability to external shocks:
High and volatile prices of fossil fuel and natural resources;
Food prices;
Natural disasters
Climate change
ESCAP
www.greengrowth.org
2


Green Growth
Risk & uncertainty
Rapid & accelerating feedbacks between environmental, social and economic systems - convergence
Food, energy & commodity prices – trends closely aligned
Environmental pressures and resource constraints - Climate change & food security – energy, water & food nexus
Resource constraints
Rising fuel prices and approaching "Peak Oil"
Non-fuel commodities - metals & minerals, agricultural raw materials – prices more than doubled between 2002 & 2008
Metals – approaching & ongoing supply constraints – iron, cobalt, platinum, palladium may be close to exhaustion in 40years; rare earth metals supply uncertainties
"Peak water" - ?
ESCAP
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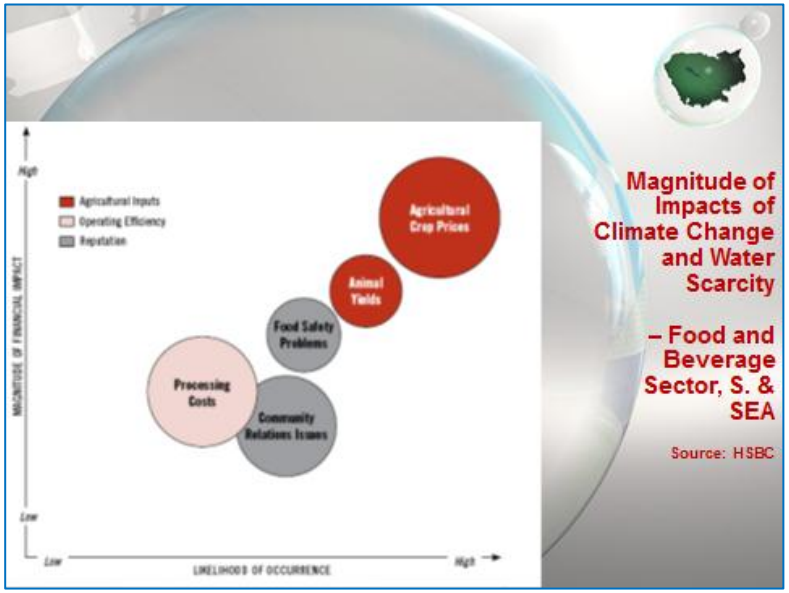
3


Agricultural Inputs
Operating Efficiency
Reputation
Agricultural Crop Prices
Animal Yields
Food Safety Problems
Processing Costs
Community Relations Issues
High
Low
LIKELIHOOD OF OCCURRENCE
Magnitude of Impacts of Climate Change and Water Scarcity
– Food and Beverage Sector, S. & SEA
Source: HSBC

Green Growth

A new economic reality

Is the return to rapid growth based on intensive resource-use really sustainable ?

- Growth constrained by resources, climate change and natural disaster
- Unemployment, agitation for change
- Basis for competitiveness >> going green

>>>> Economic growth strategies based on an unlimited supply of undervalued natural resources, resource-intensive lifestyles, and carbon-intensive fuels are not economically, socially or environmentally sustainable

Green Growth

Based on :

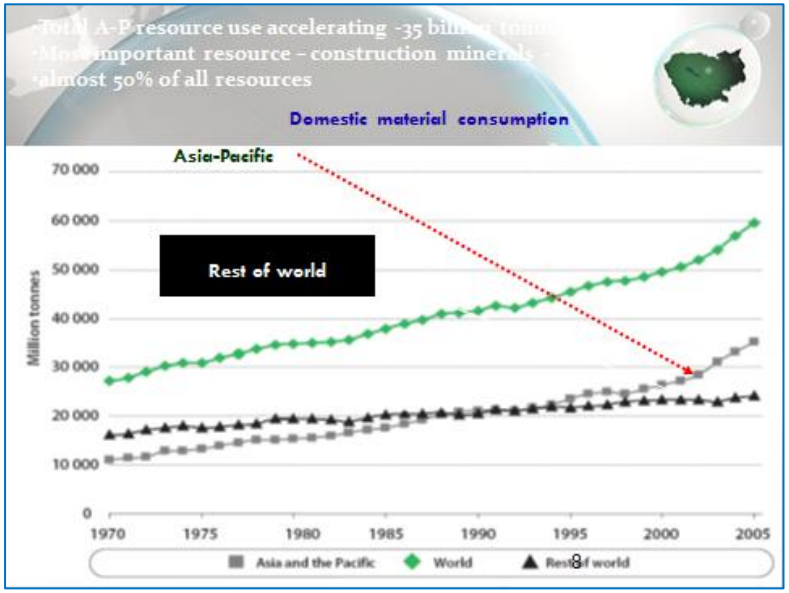
- ESCAP, ADB, UNEP publication: *Green Growth, Resources and Resilience: Environmental sustainability in Asia and the Pacific*
- UNEP *Resource Efficiency: Economics and Outlook for Asia and the Pacific* report & associated Asia Pacific Material Flows database (CSIRO and UNEP)

ESCAP ADB UNEP

Green Growth

Resource use trends

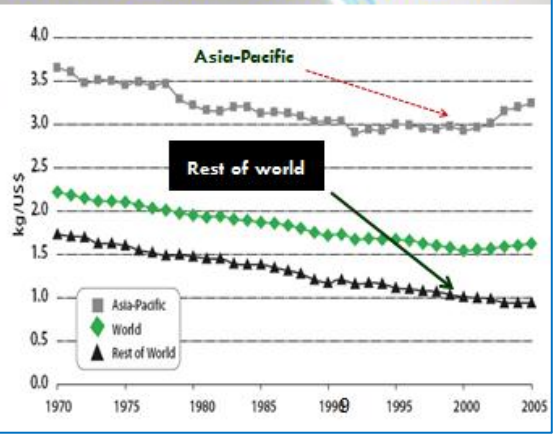
- Regional resource efficiency decreasing, resource use accelerating
- Resource intensity 3x rest of world
- Regional countries reducing resource intensity (resources used per $GDP) – but not fast enough
- Asia-Pacific carbon intensity (GHG emissions per $ GDP) significantly higher than global



Resource intensity

Domestic material consumption intensity

- A-P uses > 3 x resources to produce $1 of GDP, compared to the rest of the world
- Resource intensity increasing >> productivity/
- efficiency declining after 2000



9

Green Growth

A/P resources use patterns increase risks

LIMITED CARRYING CAPACITY

- Population density 1 ½ times the global average
- Freshwater available: 3,920m3/cap/yr vs. South America 38,300m3.cap/yr.
- Productive area available per capita: 60 % of the global average
- Arable land per capita: 80 % of the global average

BUT

- Production of non-food crops growing faster than food crops, even where hunger persists
- Low water productivity in water-stressed countries
- High hunger rates even where scarce water is mainly used for agriculture
- Health & productivity of ecosystems in decline even though the majority of the workforce depends on this

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Green Growth

What does this mean for policymakers ? – policy tensions

Increasing throughputs of energy and resources >>>
increased labour productivity
high economic growth rates

BUT TRADEOFFS GROWING

- unsustainable resource use patterns
- Vulnerability to resource risks
- increased costs to the economy and people
- reduced rates of employment creation over time jobless growth

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Green Growth

A better quality of growth

- Economic Quality high labour productivity but low unemployment, resilience to financial/oil crisis, high resource productivity, high competitiveness
- Ecological Quality eco-efficient, less vulnerable to climate change, healthy & productive eco-systems
- Social Quality inclusiveness, adaptability/resilience, high quality of life, well-being*

* Indicators?

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Green Growth

GG: System Change

- Economies to be recalibrated to better fit to a new economic reality
  - Tradeoffs >>>>> synergies.
  - Ecological crisis >>>>> economic opportunity
- By re-designing invisible & visible economic infrastructure – focus on eco-efficiency (EE)
- To arrive at Green Economy where investment in renewable energies and other improvements in eco-efficiency can generate profit, employment, growth

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Green Growth

Visible & Invisible economic "Infrastructure"

- Invisible economic infrastructure: the way we produce & consume: market price, regulations, cultural and social values and preferences, lifestyles
- Visible economic infrastructure: the way we design built environment, city, building, transport, energy and water systems and promote investments in natural capital

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Green Growth

Jump-starting GG: political leadership

- GG: not automatic – recent price increases will not do it - 2 gaps
  - Time gap: short-term cost > long–term benefit
  - Price Gap: ecological price > market price
- Government has to lead system change
  - Private sector: to grasp opportunity rather than resisting as burden
  - People: to be engaged for political support and participation & to embrace lifestyle changes

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Green Growth

Green growth applicable to developing countries?

- AP DCs most vulnerable, must take action to reduce risk
- GG: not only a matter of money & technology
  but also *political commitment, vision & policy options that promote systemic, rather than incremental change*
- Easier to initiate at the early stages of development

>>> *the sooner, the better*: Singapore example

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Green Growth

Recalibrating the economy

- Create a virtuous cycle – policy framework that acts as a green growth engine - shift investments to resource-savings and job creation
- Secure a double dividend – green tax and budget reform key
  - Increase taxes/prices/costs on the "bads" – pollution and wasteful resource use
  - Reduce taxes on the "goods" – employment, capital gains
  - Subsidize the "goods" not the "bads"
  - Recycle revenues to deal with regressive impacts or towards environmentally or socially sustainable investments
  - Green growth policy framework needed to maintain momentum

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Green Growth

Green Growth

Transformation of Economy Structure

Pricing System Reform

Sustainable Technology, Industry, Low Carbon Economics

18

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Green Growth

ETR

- Closing the price gap
- Shifting tax bases from 'goods' to 'bads'
- Revenue neutrality

EFR

- Closing the time gap
- Short-term investment and long-term benefits

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Green Growth

Why environmental taxes? (1)

For environmental taxation

- Market failure leading to excessive pollution and environmental destruction

For energy taxation

- Energy demand increases with income (income elasticity +0.5)
- Energy demand decreases with price (industry elasticity -0.6)
- Market failures for some energy efficiency technologies

For carbon taxation

- Rich countries must achieve a minimum of 80% decarbonisation by 2050
- Only carbon pricing (taxing or trading) will stimulate the uptake and development of existing low-carbon and efficiency technologies, and reduction in the demand for carbon-based fuels

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Green Growth

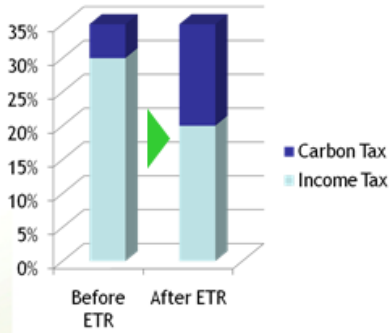
Why environmental taxes? (2)

Conclusions from the literature

- Without environmental taxation, the (macro-economic) cost of environmental improvement will be higher than it needs to be
- Without significant increases in energy prices, energy consumption will go on rising
- Where the energy is carbon-based this will lead to increased carbon emissions and a failure to stabilise the climate

Green Growth

Revenue Neutrality

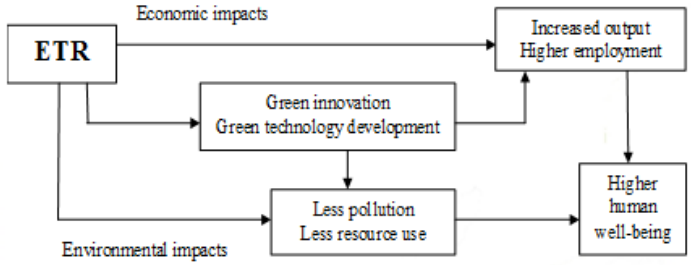


- Keeping overall tax revenues the same
- Tax Reform, Not "More Taxes"
- Political feasibility & public approval could increase

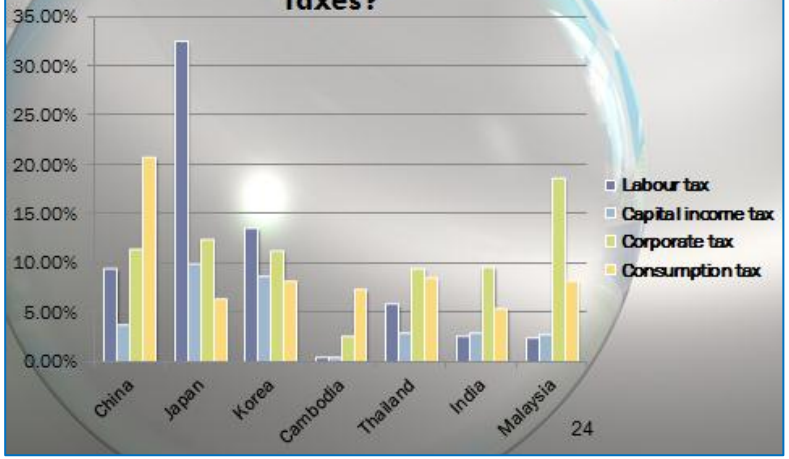
Green Growth

The potential of ETR/GFR:

ETR/GFR is the shifting of taxation from 'goods' (like income, profits) to 'bads' (like resource use and pollution)



A Tax Shift in DCs: Corporate or Consumption Taxes instead of Income Taxes?



Green Growth

ESCAP Overview

- Biggest arm of the UN system in A-P – cover 53 member countries, deals with social development, trade and investment, transport, macro-economic policy and development, environment and development, statistics

Regional cooperation for inclusive and sustainable economic and social development

- *Effective and inclusive and sustainable development policies*
- *Global processes shaped by a stronger coordinated regional voice and support to countries*
- *Regional cooperation mechanisms and institutional frameworks and integration and inclusive development*

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Green Growth

Role of ESCAP

- Promotes Green Growth from 2005
- Supports implementation of Seoul Initiative on Green Growth since 2005
- Supports Implementation of Astana Green Bridge Initiative endorsed in 2010
- Provides Regional Green Growth Capacity Development since 2008
- Developing LC GG Roadmap & Compiling Policy Options for DCs since 2010

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Green Growth

After the Asia-Pacific MCED-5 in 2005

- UNEP: Green Economy 2008
- OECD: Green Growth Strategy 2009

27

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Green Growth

MCED6: Astana Green Bridge 2010 linking Europe & AP with GG

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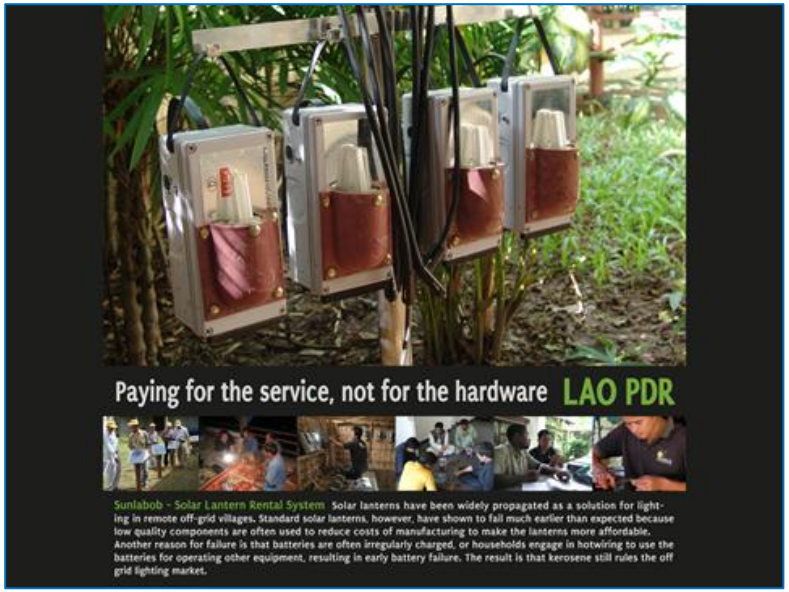
Green Growth
KOICA
Low Carbon Green Growth Roadmap
Increasing demands - some important government initiatives (Rep. of Korea, China, Cambodia, Indonesia, Malaysia etc.) but no clear road map
ESCAP-led project - policy options and framework for system change
From quality to quantity of growth
ETR/Ecological Tax Reform
Sustainable Infrastructure
Green Business
Low Carbon Economics
ESCAP
www.greengrowth.org
Green Growth

Green Growth Success Stories
KHUDA BASTI

"Trash is Cash" BANGLADESH SRI LANKA VIET NAM
Pro-poor and sustainable solid waste management for secondary cities and small towns
The growth of urban populations and economies in Asia has resulted in a corresponding growth of solid wastes that municipal governments are finding difficult to dispose off. Existing dumpsites are filling up and finding land for new dumpsites is becoming increasingly difficult. The solution lies in reducing the amount of waste that reaches dumpsites. This project aims to reduce, reuse and recycle solid waste in Asia's teaming cities and change perceptions about waste. It wants policy makers to look at waste as a resource rather than refuse.


Paying for the service, not for the hardware LAO PDR
Sunlabob - Solar Lantern Rental System Solar lanterns have been widely propagated as a solution for lighting in remote off-grid villages. Standard solar lanterns, however, have shown to fail much earlier than expected because low quality components are often used to reduce costs of manufacturing to make the lanterns more affordable. Another reason for failure is that batteries are often irregularly charged, or households engage in hotwiring to use the batteries for operating other equipment, resulting in early battery failure. The result is that kerosene still rules the off grid lighting market.

Green Growth

Green Subsidy Reform Indonesia

- In 2008 the oil price reached $120 per barrel
- The Indonesian budget for fuel subsidies was Rp135,1 billion
- The high oil price increased subsidy budget by Rp200 billion
- Took money from other programs e.g. education, healthcare, small business credit facilities, infrastructure development
- Forced to undertake subsidy reform and raised the fuel price
- Simultaneously introduced programs to reduce burden on low income families, e.g. direct cash assistance, food sustainability program – low price rice

ESCAP www.greengrowth.org Green Growth

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Sustainable Transport Malaysia

ESCAP www.greengrowth.org Green Growth

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Solar Tuk-Tuk Thailand

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Micro-hydro Power Generation

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Solar Power Company Thailand

ESCAP www.greengrowth.org Green Growth

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Parabolic Solar Power Australia

ESCAP www.greengrowth.org Green Growth

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Green Buildings Malaysia

- Low energy Ministry building: Malaysia
  - Key data
    - Gross floor area: 20 000 m^2
    - Energy performance index: 114 kWh/m^2/year
    - Addition cost to construct: 5%
    - Annual energy savings: RM 600 000
  - **Energy efficiency features**
    - Orientation & building envelope insulation
    - Energy efficient lighting, ventilation & office appliances
    - Energy management system

Ministry of Energy, Green Technology and Water, Putrajaya

ESCAP www.greengrowth.org Green Growth

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Retrofitting Prefabricated Buildings Mongolia

- Approximately 250,000 people (20% of the urban population) live in prefabricated buildings in Ulaanbaatar.
- Pilot project of one apartment building to determine potential energy savings.
- It was found that up to 40 % of the heating energy can be saved. A potential 60% or more is also possible with consumption-oriented heating tariffs.

ESCAP www.greengrowth.org Green Growth

Green Growth

Green Roof and Living Wall Singapore

ESCAP www.greengrowth.org Green Growth

Green Growth

Beijing - Central Business District (CBD) Sustainability Plan

The amount of trees that will be planted in the CBD is estimated to remove 215,000 tons of CO2 every year, the equivalent of planting **14 million** forest trees!

http://www.designstores.gr/tag/master-plan

ESCAP www.greengrowth.org Green Growth

Green Growth

Beijing

Super-capacitators are finally being integrated in public transport. China's buses at the 2010 Shianghai World Expo were using this system, as well as a new company in Germany.

The bus charges rapidly when it stops at a bus station and has enough power to go to the next station, where it quickly charges again and so on, along the whole route.

http://www.[illegible].com.au/2010/05/the-expos-solar-powered-fleet-of-electric-vehicles/

ESCAP Green Growth

Green Growth

Sustainable Consumption and Production (SCP) Eco-Industrial Parks

ESCAP www.greengrowth.org Green Growth

Green Growth

The BYD Electric Bus - BYD eBUS-12

when fully charged can supposedly travel up to 300 kilometers(186.4 miles) under optimal conditions. BYD e6 taxis have been servicing Shenzhen, China for more than a year. To date, the fleet of

50 electric taxis have accumulated more than three million kilometers (1.86

million miles).

ESCAP www.greengrowth.org Green Growth

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Eco-Industrial Park Guangxi, China

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Eco-Industrial Parks in the World

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Green Growth

Electric vehicles are appearing throughout major automakers' line-ups. Combined with renewable energy sources and production techniques, they are a real viable solution.

The Tesla Roadster sport has the ability to accelerate from 0-100 km/h in 3.7 seconds and has a range of 400 kms. There goes the myth that EV's are slow and inefficient.

ESCAP www.EVA.com www.greengrowth.org Growth

Green Growth

The express bus system is a cost effective solutions to a growing city population.

The bus will travel just above the height of a car, but just under an overpass and be able to carry up to 1200 people at a time. The designers project traffic jam reduction of 30%, enough to save hours of commute in Beijing.

http://www.engadget.com/2010/08/02/china-to-build-gi'normous-buses-that-cars-can-drive-under-video/

ESCAP

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PACIFIC PILOT

FAITH-BASED GREEN GROWTH BUSINESS MODEL ON RENEWABLE ENERGY FOR POOR RURAL COMMUNITIES

ESCAP www.greengrowth.org Green Growth

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Pacific Pilot – YWAM, Samoa

Utilizing waste
(human and animal)
to produce the methane gas.

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Green Growth

Pacific Pilot – YWAM, Samoa

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Pacific Pilot – YWAM, Samoa

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Pacific Pilot – YWAM, Samoa

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CAMBODIA PILOT

PRO-POOR GREEN BUSINESS MODEL ON RENEWABLE ENERGY (SOLAR)

ESCAP www.greengrowth.org Green Growth

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Two floating villages *Kompong Prohot* and *Anlong Ta Ur* in Battambong Province,

http://www.greengrowth.org/capacity_building/capacity.asp

ESCAP www.greengrowth.org Green Growth

Green Growth

- Replacing home made kerosene lamps with solar charged lanterns

- Community based business cooperative – fees for services

ESCAP www.greengrowth.org Green Growth

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On-line e-Learning Facility

Online version

CD Rom version

ESCAP www.greengrowth.org Green Growth

THANK YOU !

For more information:

www.greengrowth.org and

www.unescap.org/edd

Second National Forum on Climate Change Cambodia 3-5 October 2011

RE Market in Cambodia: Solar PV & Wind Technologies

Ms. Margaret Jane Ryan

Khmer Solar

Content

1. Basic Assumptions
2. Focus: Barriers to the Expansion of Solar Market In 1997
3. Good News! Strong Leadership of H.E. Dr. Sat Samy Secretary of State of MIME and Activities Sponsored By Donors, Barriers Begin to Drop
4. Public Awareness and Confidence in the Reliability of Solar Energy Has Risen: How Did this Come About?
5. Assessment of Barriers to Growth of Solar in Three Different Markets: Telecommunications, NGOs and Solar Home Systems
6. Assessment of Barriers to Expansion of Solar Use in the NGO Sector
7. Assessment of Barriers to Expansion of the Solar Home Systems Market
8. The Battambang Office Experience

1. BASIC ASSUMPTIONS

- Solar Energy reduces use of fossil fuels and helps mitigate climate change. It has the potential to improve the living standard of the rural population.
- Cambodia has abundance of sunlight and solar systems work very well year round.
- In situations where they have strong motivation, Cambodians show extraordinary ability to master technology and make solar work.
- With the exception of solar hot water, there is no market for solar where government power is available.
- There is insufficient wind in the majority of locations in Cambodia to make windmills a viable choice, in most locations in Cambodia. Solar is by and large the better choice.

2. Focus: Barriers to the Expansion of Solar Market In 1997

In 1997, the barriers were:

- 35% import duty, plus 10%VAT
- Lack of public awareness of solar energy and how it would work in Cambodia
- No solid data showing whether of not Cambodians would be interested in solar even if they knew what it was and believed that it worked
- Concern about the difficulties of making repairs and doing maintenance on solar systems located in rural areas when solar companies were located in Phnom Penh
- Uncertainty as to whether Cambodians could afford the comparatively initial investment in solar systems

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4

4. Public Awareness and Confidence in the Reliability of Solar Energy Has Risen: How Did this Come About?

- Did a strong market encourage the growth of the private sector or did an eager private sector with the encouragement of MIME and Donors create the market?
- A look at the 1998 Yellow page shows three solar companies, the 2011 Yellow pages has thirteen listing
- Khmer Solar's original intention was to supply the NGO market
- MIME, under the very energetic leadership of H.E.Dr.Sat Samy, working with the World Bank and Donors over a period of several years, conducted a number of workshops and study tours to introduce the private sector to solar home systems and the ways that the market had been developed in other countries.

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5. Assessment of Barriers to Growth of Solar in Three Different Markets: Telecommunications, NGOs and Solar Home Systems

- Off grid telecommunication towers run by hybrid solar/ generator systems: conservative estimate of number of systems in use in Cambodia, 2000
- Systems have proven very reliable and the major companies are expanding their solar infrastructures
- There is strong economic incentive at work here

7

6. Assessment of Barriers to Expansion of Solar Use in the NGO Sector

- NGOs comprise a large sector of the solar market and were the original core clients of most of the solar companies in Cambodia
- Barrier to the expansion is lack of funds
- NGOs use solar where there is no access to public utility
- Management of solar systems at rural sites can be a challenge in the same way that management of petty cash is sometimes a challenge
- Experience shows that NGOs with good management can take excellent care of their systems
- Twp examples of NGOs which have done this are the Rural Schools Project run by Bernie Krisher of the Cambodia Daily and World Vision
- The management of the solar systems has been excellent with the NGO running the systems with occasional consultation with Khmer Solar

8

9

7. Assessment of Barriers to Expansion of the Solar Home Systems Market

- With World Bank Funding and expert advice from the Solar Development Group, Khmer Solar conducted a survey in Battambang to see if there would be a market for solar home systems
- The survey revealed the following:
  - Families who had achieved a certain level of prosperity as identified by a tile roof on their wooden house would be target customers
  - Despite the fact that most had never heard of it before, would be interested in an 80W solar system that would cost approximately $ 600 if it would deliver 5 t9 hours of color television a day
  - Availability of credit would be a plus if low interest , but a short payment period was preferred, 6 to 12 months, rather than a period of years
  - Gearing final payment to harvest time was ideal
  - Khmer Solar decided to go for it! What happened next?

10

11

8. The Battambang Office Experience

- Office opened in 2004
- Survey proved very accurate
- Customers motivated by a strong desire for color television
- To date, $ 393,911.68 Loaned out , less than $ 10,000 or 2.5% in bad debts
- Current loan terms: 50% down, repayment in six months, no interest charged if payment on time
- No collateral, sometimes a cosigner
- As indicated by attached table, the average size of the solar home system purchased has increased. In 2010, approximately 40% of the customers bought systems of 85W to 100W and 55% bought systems of 130W to 135W
- It remains to be seen if the Battambang model will work elsewhere

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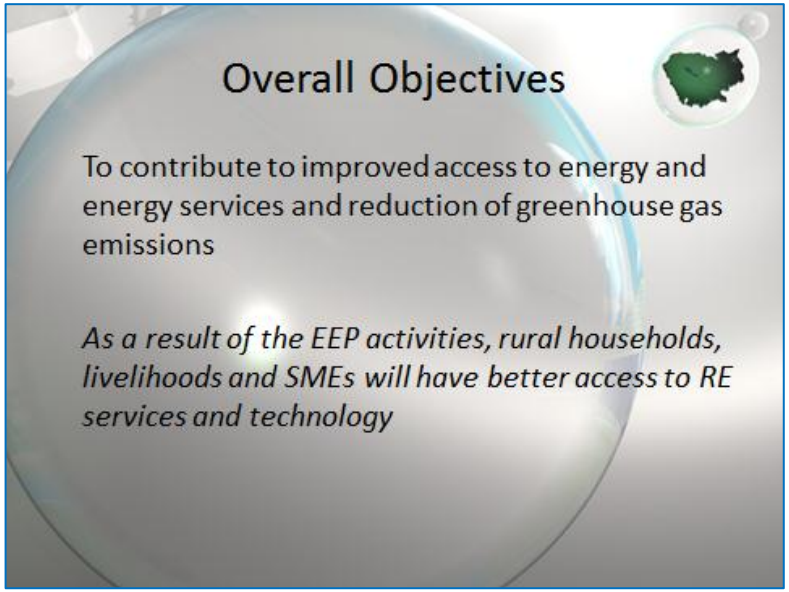
KHMER SOLAR
13

THANK YOU !
For more information:
www.khmersolar

Second National Forum on Climate Change
Cambodia
3-5 October 2011
EEP Mekong: example of mitigation from a regional perspective
Kati Veijonen
Counsellor
Embassy of Finland, Bangkok
Sida
JCCI

Energy and Environment Partnership (EEP) worldwide
• EEP Central America since 2002
• Mekong Region (Cambodia, Lao PDR, Thailand, Vietnam)
• Southern and East Africa (Botswana, Kenya, Mozambique, Namibia, South Africa, Swaziland, Tanzania and Zambia)
• Indonesia (2 provinces –Central Kalimantan and Riau);
• Andean Region (Colombia, Peru, Ecuador, Bolivia)


Overall Objectives
To contribute to improved access to energy and energy services and reduction of greenhouse gas emissions
As a result of the EEP activities, rural households, livelihoods and SMEs will have better access to RE services and technology

Geographical coverage
China
Burma
Laos
Thailand
Vietnam
Cambodia
Indonesia
Malaysia

EEP Mekong Phase 1 Funding

- Ministry for Foreign Affairs of Finland
- Nordic Development Fund (NDF)
- Total: € 7.9 million for 3 years (2010-2012)

EEP Mekong Components

- Support to national policy, legislation and institutional framework
- Development of RE, WTE and EE technologies and services (demand driven partnership activities)
- Information and Capacity Building on RE, WTE, EE and energy markets

-> Contributes to the CC mitigation through all 3 Components

EEP Mekong Calls for Proposals

- First call for Proposals: October 15 – December 31, 2009
- Second call for Proposals: August 2 – October 15, 2010
- Third call for proposals : January 17-March 11, 2011

Eligible Applicants

- NGOs
- Private companies
- Public institutions
- Research organisations
- Academic institutions

Technical Focus

- Biomass
- Biofuels
- Biogas
- Energy Efficiency/ Conservation
- Geothermal
- Hydro power
- Solar
- Waste-to-Energy
- Wind

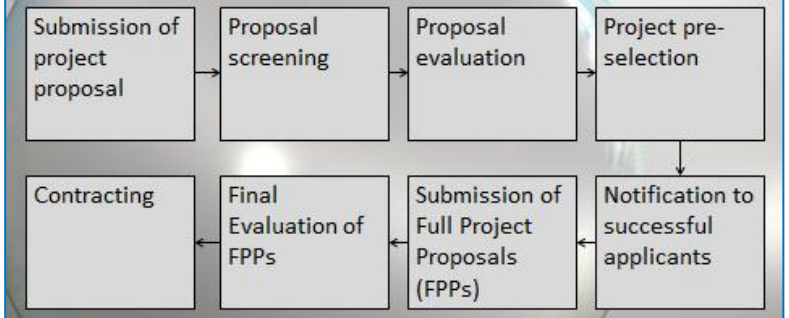
Project activities eligible for funding

- Pilot Projects
- Demonstration Projects
- Pre-feasibility Studies/Feasibility Studies
- Capacity building/training
- Strategic / Policy studies *

Specific technical restrictions

- Projects with biofuel production for export not eligible
- Hydro power: capacity less than 10 MW

Project Selection Process



- Two calls per year

First Call for Proposals

Country	Submitted	Evaluated	Pre-selected	On-going
Cambodia	32	20	3	2
Lao PDR	39	35	5	3
Thailand	17	12	1	0
Vietnam	54	34	4	1
Regional	20	17	0	0
Total	162	118	13	6

Second Call for Proposals

Country	Submitted	Evaluated	Pre-selected	On-going
Cambodia	8	7	2	1
Lao PDR	21	10	4	3
Thailand	22	16	2	1
Vietnam	41	35	4	3
Regional	13	13	2	2
Total	105	81	14	10

Third Call for Proposals

Country	Submitted	Evaluated	Pre-selected	Contracting as per Sept 2011
Cambodia	27	21	5	5
Lao PDR	18	15	3	2
Thailand	13	7	2	1
Vietnam	37	32	10	5
Regional	10	10	1	1
Total	105	85	21	14

On-going projects by Technical Focus

Technical Focus	1st Call	2nd Call	3rd Call	Total
W-T-E	-	1	1	2
Solar	1	2	2	5
Biogas	-	3	1	4
Hybrid	-	1	4	5
Hydro	2	1	1	4
Biofuel	-	1	1	2
Biomass	1	1	2	4
EE/EC	1	-	1	2
RE-General	1	-	-	1
Wind	-	-	1	1
Total	6	10	14	30

On-going projects by Activity

Project Type	1st Call	2nd Call	3rd Call	Total
Demonstration Project	3	1	1	5
Pilot Project		6	9	15
Policy Development				0
Capacity Building	1	1	3	5
Feasibility Study	1	2	1	4
Pre-feasibility Study		-		0
Study	1	-	-	1
Total	6	10	14	30

Examples of on-going projects in Cambodia

1. Energy Savings Siem Reap

- Objective: to raise awareness on energy efficiency and energy conservation in the context of climate change and sustainable development.
- To demonstrate the practical feasibility of simple energy conservation measures by installing solar water heaters in selected sites and distributing compact fluorescent lamps (CFLs) to the general population.

Energy Savings Siem Reap cont.

- Lead Partner: Cambodian Climate Change Department(CCCD), Ministry of Environment
- Partners:
  - Technical University of Denmark,
  - Risoe National Laboratory,
  - UNEP Risoe Centre (URC), Department of Energy Technique (DET),
  - Royal University of Phnom Penh, Department of Environmental Sciences
- Total Project Cost: € 369,950
- EEP Funding: € 299,400 (80,93%)
- Duration: 24 months

2. Improving Access to Solar for Rural Electrification

- Objective: to increase access to solar energy for rural electrification.
- The project aims to remove financial and technical barriers by introducing solar rental schemes, demonstrating the assembling of solar lanterns and solar home systems (SHS) and providing trainings on solar installations and solar entrepreneurship.
- Total Project Cost: € 307,016
- EEP Financing: € 136,997 (45%)
- Duration: 24 months

Lead Partner: Kamworks Ltd.

Partners: Cambodia Mutual Savings and Credit Network (CMSC), Pico Sol Cambodia (PSC)

3.Energy for Floating Communities

- Objective: to develop and demonstrate appropriate and sustainable energy solutions for floating communities, particularly waste-to-energy biodigesters and micro-solar power.

Energy for Floating Communities cont.

- Lead Partner: Live & Learn Environmental Education
- Partners: Engineers Without Borders Australia, Lund University Department of Water, Resources Engineering
- Total Project Cost: € 66,000
- EEP Finance: € 23,000 (34,85%)
- Duration: 20 months

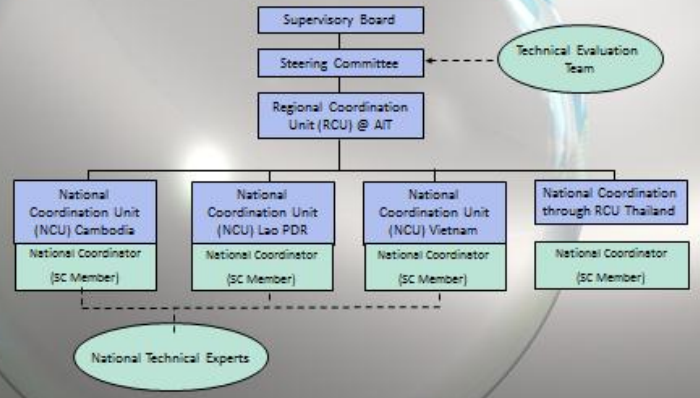
Next Steps

- EEP Mekong Phase 2 (?)
- Fourth Call for Proposal
- Increase interaction between potential partners through Seminars/Workshops/ Forums
- More capacity building activities

Annual Regional Forum

- First Regional EEP Mekong Forum "Implementing Renewable Energy and Energy Efficiency Projects for a Sustainable Development of the Mekong Region" (Vientiane, October 26-27, 2010)
- Second Regional EEP Mekong Forum "Clean Energy Finance: Overcoming barriers to Financing Clean Energy projects in the Mekong Region" (Bangkok, November 15-16, 2011)

Organisational Structure



For further information

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THANK YOU !
For more information:
www.eepmekong.org
Sida
Oxfam
JCCI

Second National Forum on Climate Change
Cambodia
3-5 October 2011

Practical Considerations for a National Cambodian Carbon Policy

Thanakvaro De Lopez

Ecofia

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Outline

1. Trends in the global carbon markets
2. International examples of Clean Development Mechanism (CDM) and carbon policies
3. The carbon offset context in Cambodia
4. Issues to be considered for a national carbon policy in Cambodia

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We're in a severe global financial crisis...

- Industrialised countries are indebted and have few resources to implement domestically greenhouse gas mitigation, or to invest abroad in carbon offset projects.
- The political priorities are job creations and/or the implementation of austerity measures to reduce debt.
- There is growing national concern about the economic costs of emission reduction measures.

- The carbon markets and the climate change sector are integrated in the global economy.
- Market-based solutions and market-based mechanisms are sensitive to the global economic slowdown and credit crunch.

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International negotiations have made little progress towards a successor regime of the Kyoto Protocol

- The first commitment period of the Kyoto Protocol will end by 2012.
- The future of the Kyoto Protocol and of the international climate regime is uncertain.

?

5

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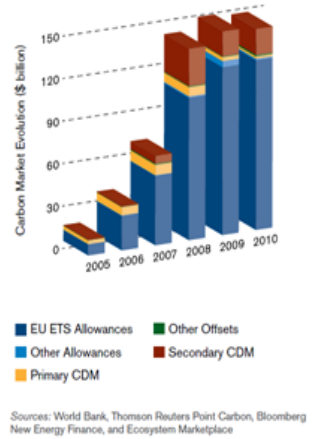
Markets don't like uncertainties...

- After five years of growth, the total value of the global carbon market stagnated in 2010.
- The market volume and value of project transactions fell by about 50% for Certified Emission Reductions (CERs).



Sources: World Bank, Thomson Reuters Point Carbon, Bloomberg New Energy Finance, and Ecosystem Marketplace

6

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The carbon market is a buyers' market

- There is low demand and low supply of post 2012 CERs.
- Fewer new CDM projects are started as buyers prefer cheap, low risk and already issued CERs.

7

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But there are opportunities for quality carbon offsets from Cambodia...

- After 2012, offsets sourced in least developed countries may still be eligible for the EU ETS (European Union Emissions Trading Scheme).
- Clean energy projects from LDCs remain a rare commodity and may be sought after by some ethically minded buyers.
- High quality carbon offsets from LDCs may obtain premium prices.

8

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Voluntary Carbon markets should not be underestimated

- Buyers do not have a legal obligation to offset their emissions, but voluntarily decide to buy carbon credits.
- Volumes are very small when compared to compliance markets (less than a percent), but the voluntary market segment is experiencing rapid growth (more than 30% in 2009-2010).
- There has been a rapid increase in credits from REDD (Reducing Emissions from Deforestation and Forest Degradation).

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Outline

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China's CDM and Carbon Policies (1)

- "Measures for Operation and Management of Clean Development Mechanism Projects in China" (26 articles).
- The priority areas for CDM projects in China are energy efficiency, renewable energy, and methane recovery.
- Only Chinese funded or Chinese-holding enterprises (Chinese majority of capital) are eligible to conduct CDM projects (with foreign partners if necessary).

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China's CDM and Carbon Policies (2)

- The Government of China owns the emission reduction resource;
- The project developer owns the emission reductions;
- The Government of China and the project developer jointly own the revenues from CERs.
- The Government of China takes:
  - 65% of CER transfer benefit from HFC and PFC (to be decreased to 5%);
  - 30% CER transfer benefit from N_2O project (to be decreased to 10%);
  - 2% CER transfer benefit from CDM projects in priority areas and forestry.
- The government share of CER revenues are collected by the China CDM Fund to support climate change activities.

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Vietnam's CDM and Carbon Policies (1)

- "Decision on a Number of Financial Mechanisms and Policies applicable to Investment Projects under Clean Development Mechanism" (Decision 130, August 2007)
- Domains in which CDM projects are formulated and executed: 1) energy efficiency, 2) renewable energy, 3) Fuel switching, 4) Gas recovery from oil drilling, 5) Methane recovery from waste and coal, 6) Afforestation or reforestation, 7) Methane reduction for animal husbandry and cultivation; 8. others.

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Vietnam's CDM and Carbon Policies (2)

- Incentives for CDM projects:
  - Fast depreciation of fixed assets
  - Exemptions for import tax
  - Exemptions for land use levy
  - Price subsidies on products used by the project
- The project developers own the CERs.
- The project developers must register the receipt, allocation and sale of CERs with the Vietnam Environmental Protection Fund.
- The Vietnam Environmental Protection Fund collects CERs sale fees (1.2 to 2%).
- Fees must be fully paid before the transfer of CERs.

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Carbon Projects in Cambodia

- Clean Development Mechanism Projects (CDM)
  - 7 approved by Cambodia's Designated National Authority
  - 5 registered with the CDM Executive Board
    - 3 wastewater methane capture, 1 rice husk cogeneration, 1 heat recovery
    - 1 Large Scale, 4 SmallScale
    - Expected annual emission reductions from 6 to 52 kt CO_2
- Voluntary carbon offsets
  - No legal requirement for project developers to inform the DNA
  - At least 4 projects
    - improved cookstoves, biogas digesters, rice husk gasifiers, community forestry

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Low Volumes of Expensive Carbon Credits

- There are few CDM and voluntary carbon market projects in Cambodia.
- CDM projects are concentrated in large industrialised countries (China, India, Brazil, Mexico etc.) where carbon credits can be produced cheaply.
- The potential for carbon offset in Cambodia consists of small decentralised projects, which involves higher management and administration costs per credit produced.

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Strengths of the Cambodian Carbon Offset Context

- Strengths:
  - No clear national regulatory framework for carbon credits
  - Working CDM governance structure (well functioning DNA with clear procedures)
  - Growing interest among local NGOs and private sector firms
  - No taxation of carbon credits produced in Cambodia
  - Ownership of carbon credits by project developers

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Gaps in the Cambodian Carbon Offset Context

- Gaps
  - No clear national regulatory framework for carbon credits
  - Limited awareness of technologies for sustainable energy (renewable energies, energy efficiency) and of carbon sequestration in forestry
  - Limited capacity and experience to develop carbon offset projects
  - No private financing available for project developers (limited awareness among financial institutions)
  - No public finance (grants, investments etc.) available for project development
  - Limited public support for project development (including in-kind)

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Outline

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Who owns Carbon Credits?

- **Example 1 – Chruk Skome Swine Farm:** Methane is captured from the wastewater and burnt to produce electricity. Land, equipment, and other project assets belong to the farm. The owner pays for all CDM administration costs.

- **Example 2 – Prei Reul Forestry:** A community forestry project where villagers have communal rights of land owned by the State. Training, monitoring, equipment and other project assets are provided by an international NGO. Villagers provide labour.

- **Example 3 – Teuk Tchou Hydro:** The State with foreign private developers builds and operates a hydroelectricity dam on a river. The water is used for irrigation by local farmers.

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Ownership of CERs in Cambodia

- Clarification of the property rights of project participants (developers, local communities, local authorities etc.) may give investors confidence that CDM projects can be safely implemented in Cambodia.
- Under international law there is a presumption that Cambodia has a sovereign right to the GHG reductions achieved by CDM projects hosted within its jurisdiction as well as the CERs.
- In the absence of domestic laws, it may be assumed that these rights are transferred by Cambodia to CDM project participants by the approval of project by the Designated National Authority.

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What domestic policies can support carbon offset projects in Cambodia?

- It is hard to develop profitable carbon offset projects with high sustainable development benefits.
- Taxation of carbon offset projects (CDM and voluntary) needs clarification:
  - Fiscal incentives, exemptions from taxes (income tax, VAT, levees on credit sales) and import duties?
  - Subsidies and preferential treatment for projects with high sustainable development benefits (should there be a priority list)?
  - How should revenues from CERs/VERs, project assets, and business revenues be taxed? Should there be preferential tax treatment?

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Government can help

- Government agencies can also help by:
  - Providing free access to available data on energy production and forest inventory (for the calculations of emission reductions and baselines)
  - Help liaise with local authorities and other stakeholders
  - Share experience of carbon offset activities in Cambodia
  - Promote Cambodian carbon offset activities with foreign buyers and investors
  - Provide clarification on official government position with regards to carbon policies

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Conclusions

- There is only so much a carbon credit policy can achieve... since market based mechanisms depend on the broader economic and investment context of Cambodia.
- Is a complex layer of carbon legislation necessary or a clarification of taxation and ownership rights more appropriate?
- Consultations with local developers and stakeholders (NGOs, private sector firms, beneficiary communities, etc...) on the key elements of a carbon policy may provide a participatory basis for future legislation.

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For Additional Information

Implementing CDM projects – Guidebook to Host Country Legal Issues. UNEP Risoe Centre.

Clean Development Mechanism in China. Department of Climate Change National Development and Reform Commission.

State of the Voluntary Carbon Markets 2011. Ecosystem Market Place & Bloomberg New Energy Finance.

Public domain pictures courtesy of Wikimedia Commons.

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Second National Forum on Climate Change
Cambodia
4 October 2011

Director of Policy Department

ROS Salin

Cambodian Rehabilitation and Development Board
Council for the Development of Cambodia (CRDB/CDC)

National Mechanism on managing development assistance in Cambodia

Responsibilities of respective Government Ministries and agencies for managing external assistance are identified as follows:

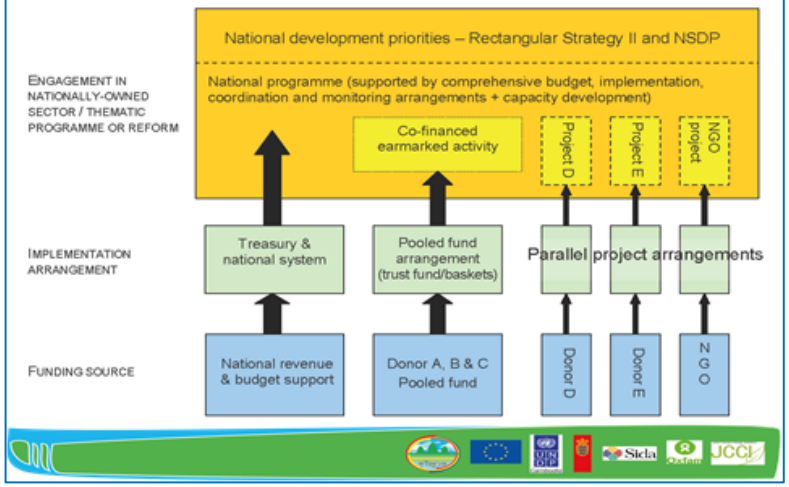
- **The Ministry of Foreign Affairs and International Cooperation** is the diplomatic window.
- **The Ministry of Economy And Finance** prepares the macroeconomic framework for the medium term.
- **The Ministry of Planning,** by cooperating with other ministries and agencies, prepares the 3 year public investment plan.

- **CRDB/CDC** manages and coordinates the official development assistance through national policy, mechanism and tools in term of aid management.
- **Line ministries** prepares sectoral strategy and public investment and play role as implementing agency

Mutual Accountability & Monitoring Mechanisms

- **Cambodia Development Cooperation Forum (CDCF)**
  - Progress in the **NSDP** as well as
  - Resource mobilization mechanism.
  - To enhance mutual accountability
- **Government-Donors Coordination Committee (GDCC)**
  - Cross-sectoral reforms
  - Issues of governance
- **Technical Working Group (TWG)**
  - **TWGs** dialogue on sector and thematic issues, mainly on a technical level .
  - **TWG**`s Terms of Reference is the implementation, monitoring and reporting of progress related to the **H-A-R** Action Plan.

Program Bases Approach in Cambodia



Climate change financing and ODA Database

15b. Thematic Marker

In addition to the sectors receiving financial support, identified in 15a above, many projects have additional objectives that may not be funded as a "sector" (for example, capacity development or gender mainstreaming). Indicate below the additional objectives, if any, associated with this project.

No	Thematic Marker	YES	NO
1.	Food security	◉	○
2.	Social protection	○	◉
3.	Income and employment generation	○	◉
4.	Youth support and development	○	◉
5.	Gender equality and women's empowerment	○	◉
6.	HIV/AIDS (awareness, prevention and treatment)	○	◉
7.	Community-based project	○	◉
8.	Climate change	○	◉
9.	Environmental protection (other than climate change-related)	○	◉
10.	Builds or strengthens Government capacity/systems	◉	○
11.	Engagement with civil society or non-state actors	○	◉

THANK YOU FOR YOUR KIND ATTENTION !!!

Why adaptation finance?

- Vulnerable communities around the world are already feeling the effects of changing climate;
- At the national level the government start to put in place the structure and strategies to address the impacts of climate change;
- Climate change requires more investment to reduce vulnerability for a given development outcome ;

How Much?

- Globally: $100 billion annually until 2020
- Cambodia: NAPA – 39 projects – $196,350,000; 20 prioritized projects – $128,850,000; only two implemented.

Barriers identified to further implementation include:

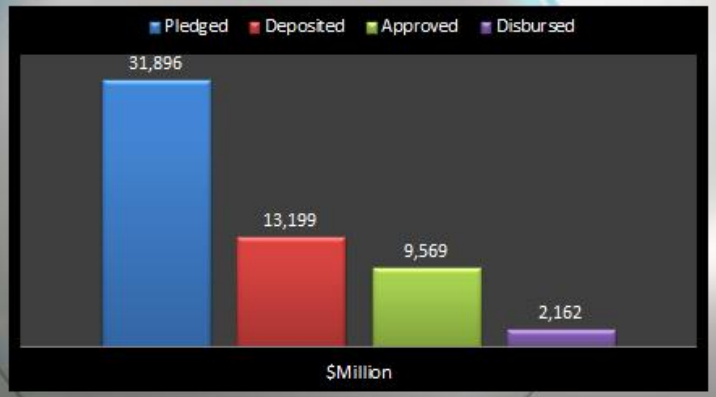
→inadequate technical, financial and institutional capacity of government agencies and local communities in dealing with climate hazards and limited coordination among them;

→ limited awareness of climate change issues

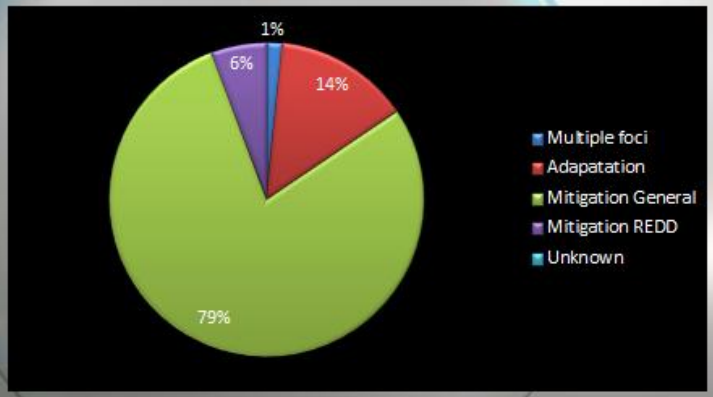
→limited integration of climate change issues into national policies and programmes;

→inadequate delivery of funding from developed countries, as required by the UNFCCC;

Climate Change Funds



Distribution of Climate Change Funds



Climate Change Funds

Fund	Purposes	Budget	Implementing Entity
Least Developed Countries Fund	Preparation and implementation of NAPAs	$400M in grants	Global Environmental Facility Policies and roles /UN Orgs/Multilateral Banks
PPCR (Financed by CIF)	Pilot programmatic approach to integrate climate resilience to development plans; incentive for scaling up	$986M; $80-$105 M for Cambodia (50% grants, 50% concessional loans)	ADB/WB
Adaptation Fund (UNFCCC)	Adaptation projects to allow direct access to funding	$250M - $350M 2% of Certified Emission Reduction	WB/UN Orgs
Special Climate Change Fund (UNFCCC)	Adaptation (NAPA, NCs), Capacity Building, Technology Transfer,	$218M	Global Environmental Facility Policies and roles /UN Orgs/Multilateral Banks

Shortcomings of the existing funds

- Adaptation finance is often channeled around governments without **alignment** with National Adaptation or Development plans
- At the national level, governments are beginning to put in place structures and initial strategies to handle adaptation finance, there often still a lack of clearly identified **leadership** or adequate **coordination**;
- The lack of **participation** and **accountability** of civil society and vulnerable communities, esp. women.

Why Green Climate Fund?

- Provides the potential to build new approach for managing climate change finance at the global level
- **Accountability:** Governments and international agencies must be held accountable for the fair and equitable distribution of adaptation resources.
- **Transparency:** The decision-making process for how adaptation funds are managed and allocated must be transparent and involve local communities.
- **Country ownership:** Country governments and local communities must be fully engaged in the process of designing and implementing adaptation programs and projects.

Green Climate Fund and Country Ownership

To achieve the goal of country ownership, financing by the GCF should be based on:

- **National Level Strategies**, designed and implemented through participatory processed, led by the government agencies, parliament, and local government
- **Direct access** to finance by a national level entity form or led by the government
- **Meaningful and inclusive civil society and community-level** participation in the development and implementation of the national strategies
- **Full accountability** to civil society and vulnerable community in determining how funds are disbursed and used

Green Climate Fund and Country Ownership

- **Gender equality** and women's leadership in the development and implementation of national strategies
- **Robust monitoring and evaluation process** of the implementation of climate finance that includes full participation of stakeholders
- **Full transparency** regarding the specific funding and plans for programs and activities.

Country's ownership

Ownership - the country should be in the driver's seat;

Leadership - the country should exercise leadership

Accountability - adaptation plans and funds should be accountable to the most vulnerable

What would work for Cambodia?

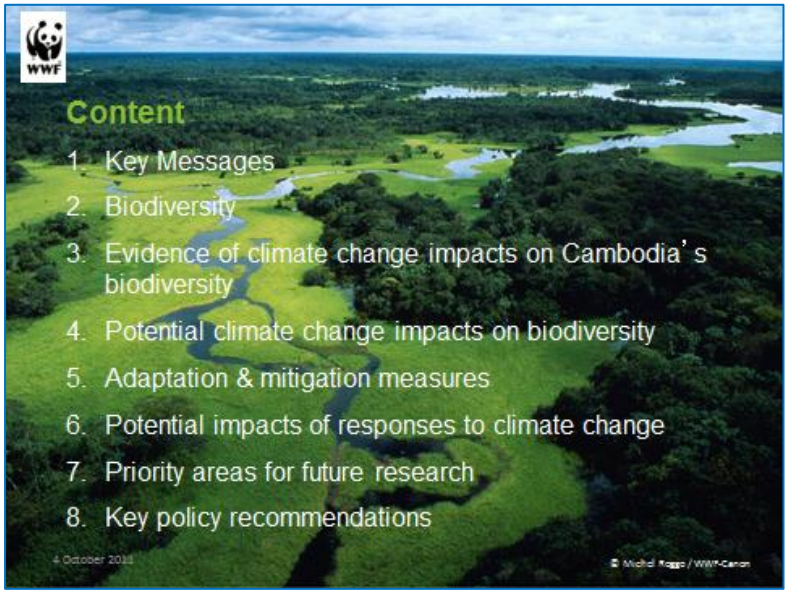
"Adaptation finance needs to be nuanced to address varying needs and capacity"

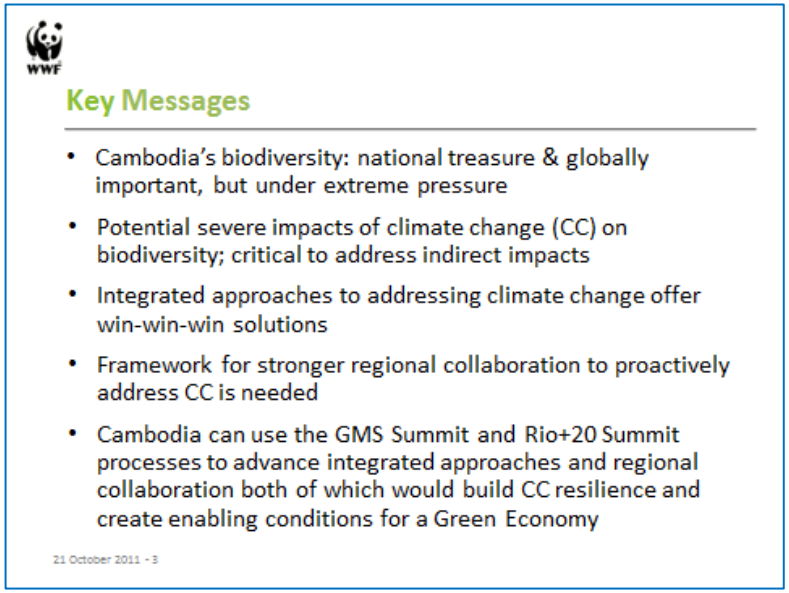
- Supports policy development and institution and capacity building;
- Promotes participation of civil society groups

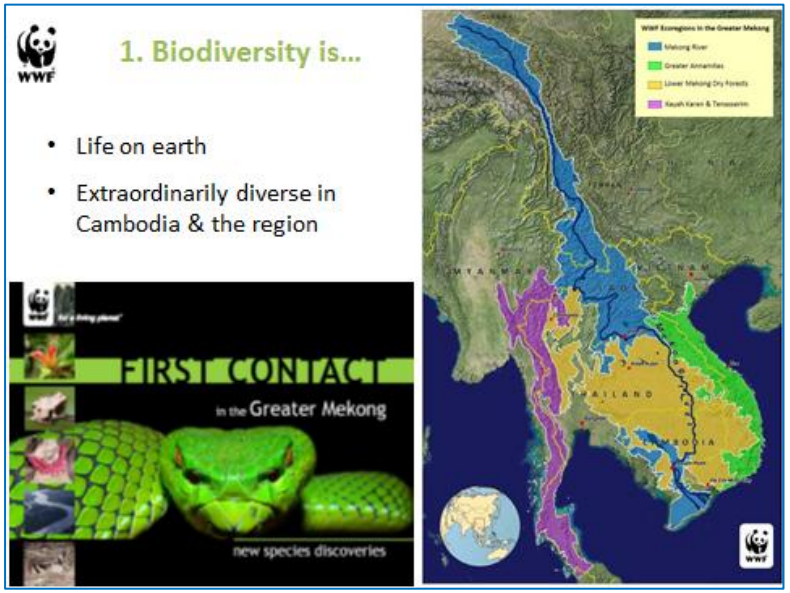
Climate Change Funding Modals
• Health Equity and Global Fund – participatory fund management
• Civil Society and Prop-Poor market – community empowerment
• World Fish Center – Capacity building

THANK YOU !
For more information:
Owning adaptation: country level governance of climate adaptation http://www.oxfam.org/en/policy/owning-adaptation

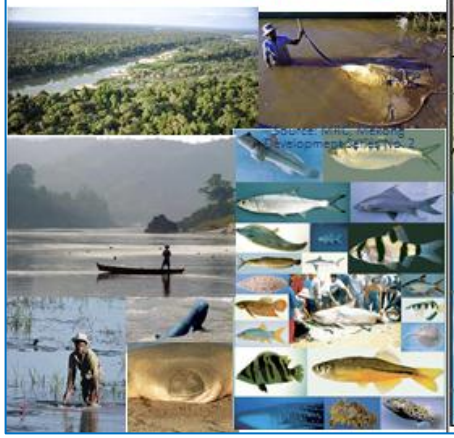
Second National Forum on Climate Change
Cambodia
3-5 October 2011
Biodiversity and Climate Change
Geoffrey Blate, Ph.D.
WWF


Content
1. Key Messages
2. Biodiversity
3. Evidence of climate change impacts on Cambodia's biodiversity
4. Potential climate change impacts on biodiversity
5. Adaptation & mitigation measures
6. Potential impacts of responses to climate change
7. Priority areas for future research
8. Key policy recommendations


Key Messages
• Cambodia's biodiversity: national treasure & globally important, but under extreme pressure
• Potential severe impacts of climate change (CC) on biodiversity; critical to address indirect impacts
• Integrated approaches to addressing climate change offer win-win-win solutions
• Framework for stronger regional collaboration to proactively address CC is needed
• Cambodia can use the GMS Summit and Rio+20 Summit processes to advance integrated approaches and regional collaboration both of which would build CC resilience and create enabling conditions for a Green Economy
21 October 2011 - 3


1. Biodiversity is...
• Life on earth
• Extraordinarily diverse in Cambodia & the region
FIRST CONTACT
in the Greater Mekong
new species discoveries

Mekong River: 2nd Most Diverse, Largest inland Fisheries, Vital for 60 Million People in Basin

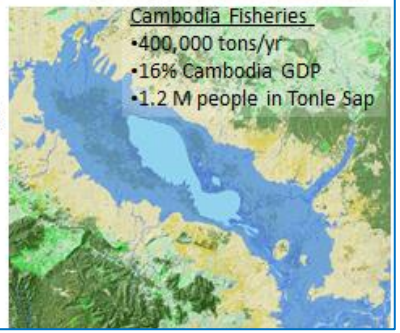


Cambodia Has:

Largest intact dry forest blocks in SE Asia; highest vertebrate richness in Indochina, and largest banteng population in world

1. Biodiversity Is …

- Crucial for livelihoods and food and water security in Cambodia
- Critical for Cambodia's economy
- Extremely threatened
  - Cambodia has most endangered mammals, birds, and fish species per unit area in Mekong region
  - Climate change exacerbates other pressures



21 October 2011 - 7

2. Observed Impacts on Cambodia's biodiversity

- No observed impacts definitively attributed to CC
- No literature due to lack of long-term studies, monitoring, and targeted research
- Challenge: identifying climate change indicators in 'open systems'

21 October 2011 - 8

2. Potential impacts on biodiversity

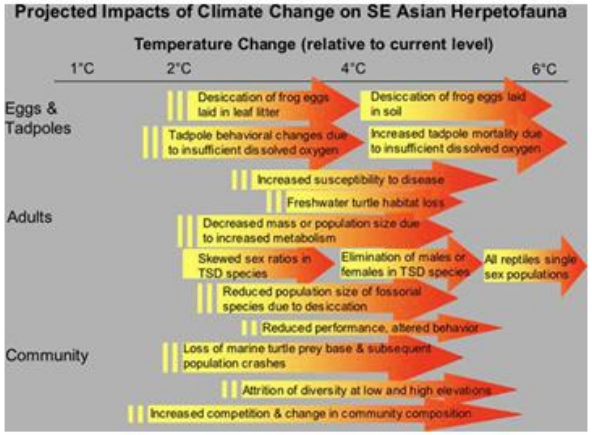
- Shifts in species distributions leading to new ecosystems(Williams *et al.* 2007)
- In the Greater Mekong Region, 133 to 2,835 plant species and 10 to 213 vertebrates could become extinct (Malcolm et al. 2006)

21 October 2011 - 9

Species at Greatest Risk from Climate Change

- Rare, threatened, endangered
- Restricted ranges
- Poor dispersers
- Mountain-top and low-lying island endemics
- Extreme niche specialists
- Narrow physiological tolerances

Reptiles & Amphibians Likely to Be Severely Impacted in SE Asia, including Cambodia



Source: Bickford et al. 2010

Shift Toward Deciduous Forest Ecosystems

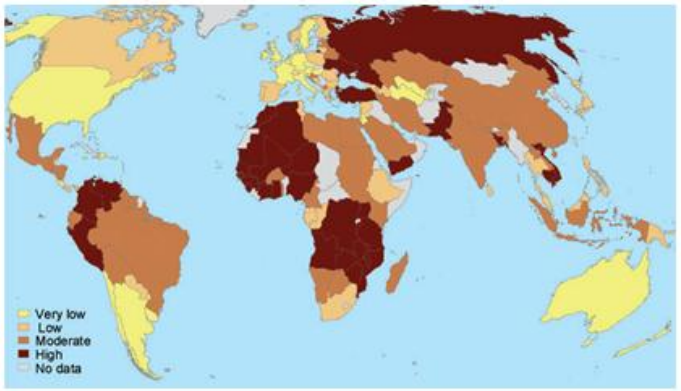
Reduction of forested areas and displacement of evergreen by deciduous forest types

- Subtropical moist forests projected decline from 48% of total forest area to 12% (2100)
- Semi-deciduous broad leaf forest is projected to decrease by 41% in 2020, and by 69% in 2100
- Effects of invasive species & pests?

Source: ADB April 2009

Seasonal Wetlands Especially Vulnerable

Cambodia's Economy Extremely Vulnerable in Part Due to Potential Impacts on Fisheries



Source: Allison et al. 2009

2. Potential impacts on biodiversity

- Changes in ecosystems e.g., riparian to flooded forests, evergreen to dry forest, desertification
- Potential impacts to fisheries sustainability (loss of spawning areas) and forest resources (loss of NTFPs)
- Increase in invasive and/or tolerant species e.g. rats & other 'pest' species, reduction in biodiversity
- Food insecurity for people dependent on agriculture, fisheries and NTFPs

3. Adaptation & Mitigation Measures

- Reduce fragmentation and ensure connectivity of habitats to allow species dispersal under different scenarios
- Landscape planning to ensure connectivity of core biodiversity habitats
- Utilise 'soft' infrastructure that is adaptable to climate change
- Integrate ecosystems and communities in adaptation and development planning

Key Mitigation Strategy: Maintain Cambodia's and Region's Forests

"Soft" & "Ecosystem-Based" Adaptation Measures

HAZARD	IMPACT	OPTION
Sea level rise & storm surges	Damage to settlements	**Set-backs** (prevent development immediately on coastal fronts)
Coastal flooding	Damage to settlements	**Mangrove restoration**
Flooding	Reduced agriculture productivity	**Adaptive crops** (new varieties that can grow in flooded conditions)
Drought	Reduced agriculture productivity	**Rainwater harvesting** (water conservation methods)
Drought & aridity	Decreased food security	**Drought insurance** (community based insurance scheme)

4. Potential impacts of human responses to climate change

- The impacts of human responses to CC on biodiversity can dwarf the direct impacts (Turner et al. 2010)
- Maladaptation

  [Climate change responses are] maladaptive when they do not enable a person, system, or society to cope with some aspect of change, but also when they worsen a problem or reduce the capacity to respond to future unforeseen events and circumstances. P. 414, Fazey et al. 2010

- Importance of avoiding mal-adaptation

4. Potential impacts of human responses to climate change

- Connected, biologically diverse systems provide resilience to climate change…

  "natural processes of flood and recession – the flood pulse – drive the natural productivity of agriculture and fisheries." p. 50, Cambodia HDR 2011

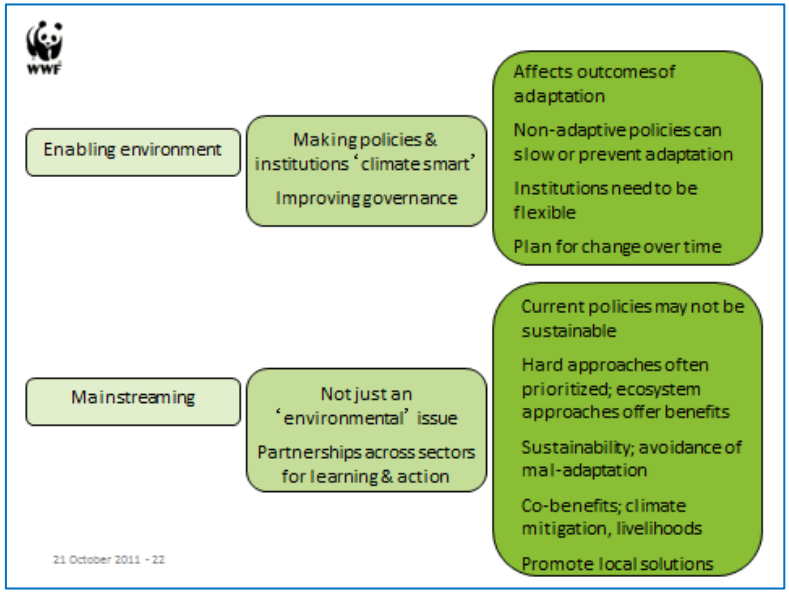
  "Because of the linkages between fish populations, the flooded forests, and the well being of the local people in … northeastern Cambodia, the survival of these forests is critical" p. 137, Baird et al. 2007

- … but infrastructure, habitat loss, fragmentation reduce resilience

  "Already, it appears that changes in the hydrology in the mainstream Mekong River caused by upriver dams in China may be the cause of the deaths of large numbers of flooded forest trees in the Mekong River in Stung Treng Province, northeastern Cambodia. p. 139, Baird et al. 2007

5. Priority areas for research

- Impact on ecosystem integrity and services at **national** and **regional scale** from planned developments, and demonstrating alternatives to hard infrastructure
- **Adaptability** of institutional frameworks
- Areas for policy revisions to **enable** and **mainstream** climate change adaptation and mitigation
- Develop integrated approaches to addressing climate change
- Identification of capacity needs to develop **integrated approaches** to land use planning



ELAN

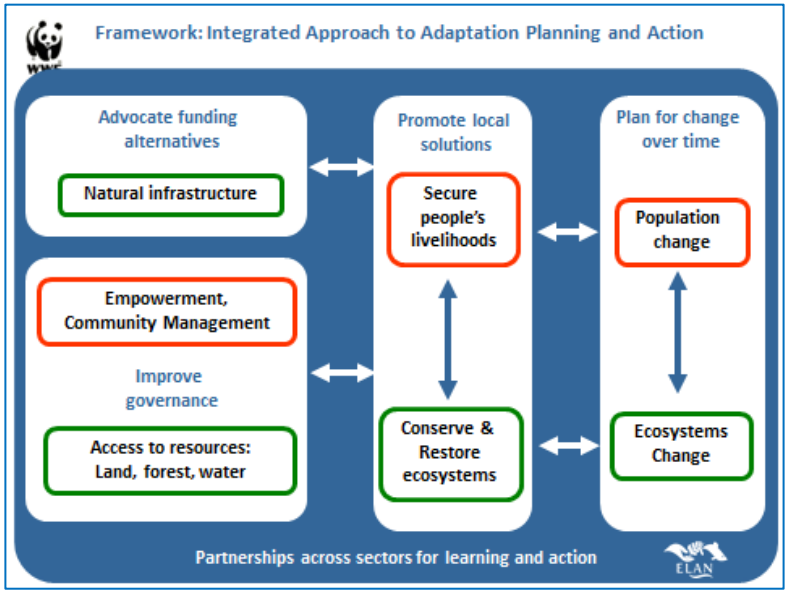
ECOSYSTEMS & LIVELIHOODS ADAPTATION

Developing an integrated approach to Adaptation Planning and Action

care iied IUCN WWF

Why this integrated approach?

- Vulnerable communities and ecosystems are at risk
- Large 'hard' infrastructures are dominant, but risky investments
- Local solutions enhance resilience of people and of ecosystems
- Promote 'natural' infrastructure



Towards an integrated approach

- Promote locally relevant and long-term adaptation solutions
- Advocate for funding alternatives to high costs infrastructure
- Embrace natural infrastructure
- Consider in planning that ecosystems change
- Conserve and restore ecosystems and at the same time address the needs of the people
- Tackle fundamental justice issues and related governance changes
- Develop partnerships across sectors for rapid learning and action

ELAN

6. Key policy recommendations

- Support **soft alternatives** to hard infrastructure; **invest in natural infrastructure**
- Policies, plans, and infrastructure need to be **flexible**, adapt and evolve as the climate changes (i.e., plan for change)
- Planning and coordination required **across sectors;** new partnerships are needed across sectors for learning & action
- Develop a supportive **enabling environment** (including improved governance) for successful adaptation and mitigation measures
- Commit to **regional collaboration** to address climate change and aggravating impacts from development

21 October 2011 - 27

Second National Forum on Climate Change Cambodia
3-5 October 2011

Women, Gender and Climate Change

Annaka Peterson Carvalho

Oxfam

Outline

1) Why Gender Equality and Climate Change
2) Impacts of Climate Change on Women
3) Gender and Climate Change – Cambodia's NAPA
4) Overall Recommendations

2

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Why Gender Equality and Climate Change

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Why Gender Equality and Climate Change

- Gender inequality is linked to vulnerability and risk
- Existing inequalities will be exacerbated by the impacts of climate change
- Gender inequality limits the effectiveness of mitigation and adaptation strategies if gender relations aren't considered

4

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Impacts of Climate Change on Women

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Why does climate change hit women harder?

- Women make up a majority of the poor
- Women work in sectors most affected
- Women are primary caregivers for children and extended family
- Women have less access to and control over resources, services and decision making
- Existing gender inequalities

6

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In Cambodia Women…

- Play a major, labor intensive role in agriculture
- Play a lead role in ensuring food security
- Are responsible for household water
- Are the primary caregivers

7

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In Cambodia…

Climate Change will mean that women face:

- Increased pressure to find alternative ways to feed their families
- Increased competition for water and other natural resources (more time)
- Negative health effects and increased responsibilities as caregivers

Greater stress on off-farm income earners when households experience shocks

8

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Gender and Climate Change – Cambodia's NAPA

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NAPA Examples

NAPA Project	Gender Issues	Suggestions
Rehabilitation of a Multiple-Use Reservoir in Takeo Province	Women's water requirements for productive and domestic uses may receive low priority compared to other uses Can divert water and make it more difficult or burdensome for women to access Creates job opportunities primarily for men with limited opportunities for women	Ensure access to water resources needed by women Use a gendered approach when analyzing and planning water requirements Promote training and hiring of both men and women

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NAPA Examples

NAPA Project	Gender Issues	Suggestions
Community Mangrove Restoration and Sustainable Use of Natural Resources	May ignore the impacts on both men and women's productive activities and fail to address the consequences May prohibit activities women use to cope with shocks Men and women may partake in voluntary work in rehabilitation and conservation activities differently. There is potential to increase the unpaid work of women	Analyze gender relations associate with the use of, access to, management and control of resources Facilitate women's participation and decision-making Take advantage of women's and men's knowledge Encourage paying women for their work on environmental restoration

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Engendering the NAPA

- Vulnerability and Risk Assessments and Analysis need to account for differences amongst men and women
- Criteria for prioritization and project selection should include gender equality
- Facilitate the participation and representation of both men and women in the processes
- Refine projects before implementation

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Overall Recommendations for Gender Responsive Climate Change Responses

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Gender Responsive Climate Change Responses Must:

- Understand existing inequalities between women and men and ways in which these can be exacerbated by climate change
- Identify different impacts of climate change on women, men, boys and girls
- Ensure meaningful participation of both men and women
- Recognize the knowledge of both men and women at community –level and build on this
- Monitor the impacts of adaptation measures on both men and women

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THANK YOU !

Second National Forum on Climate Change
Cambodia
3-5 October 2011

Background on CCCA Trust Fund

Tin Ponlok, Deputy Director-General, Head of TFS
Ministry of Environment

Cambodia Climate Change Alliance (CCCA)

- CCCA is a comprehensive programme launched in February 2010 to address climate change and disaster risks in Cambodia.
- Overall objective:
  To strengthen the capacity of the NCCC to fulfill its mandate to address climate change and to enable line ministries and CSOs to implement priority climate change actions

Cambodia Climate Change Alliance (CCCA)

Focus of CCCA is on:

1. Capacity building and institutional strengthening in preparing for and mitigating climate change risks;
2. Directly helping vulnerable communities by enhancing their resilience to climate change and other natural hazards

CCCA Trust Fund (1)

- CCCA Trust Fund is a financing facility to support activities under the CCCA Programme.
- Sponsored by EU, Sida, Danida and UNDP
- Managed by the MoE on behalf of NCCC
- Administered by UNDP

CCCA Trust Fund (2)

- CCCA Trust Fund aims at supporting key line government ministries/agencies and civil society organisations with a key focus on building their capacities to address climate change.
- Complimentary to a parallel WB/ADB-administered PPCR programme which directly provides funds into key sectors to implement climate change resilience actions.

1st Call for Proposals

- Launched in Feb. 2011, CCCA Trust Fund solicited climate change adaptation projects in the following key sectors in line with existing national priorities:

  Agriculture, Forestry, Fisheries, Water Resources, Meteorology, Infrastructure and Health

Final Results (1)

8 Projects approved (out of 60 concept notes)

- 6 from Government applicants (Line Ministries, Provincial Governments, University)
- 2 from CSO applicants (Local NGOs)

Final Results (2)

Variety of interventions:

Geography: Prey Veng, Takeo, Sihanoukville, Ratanakiri, Tonle Sap/Mekong, Siem Reap, Kampong Thom, Preah Vihear, etc.

Sectors & other cross-cutting issues:
Community forestry, CPAs, fisheries, urban management, local governments, small scale farmers

Conclusion

- Copenhagen & Cancun promise increasing CC fund flow to developing countries (fast track, $100/y by 2012, bilateral, etc.)
- Cambodia needs to improve its absorbing capacity
- CCCA TF serves as a precursor toward a more permanent funding mechanism for Cambodia – a unified engagement point for DPs and a multi-donor financial facility to provide resources for climate change activities in Cambodia.
- A future TF should be built based on key principles such as national ownership, stakeholder representativeness, trust building, transparency, professionalism, accountability, neutrality, competiveness, effectiveness and efficiency.

THANK YOU !

For more information, please contact the CCCA Trust Fund Secretariat at secretariat@camclimate.org.kh

Second National Forum on Climate Change
Cambodia
3-5 October 2011
Launching Ceremony

Approved projects under CCCA Trust Fund

CCCA Trust Fund Secretariat

"Building Capacity of Institutions to Help Farmers Better Adapt to Climate Change in Cambodia"

Applicant: Royal University of Agriculture (RuA)
Partner: Chea Sim University of Kamchymear (CSUK)
Location: Prey Veng province
Duration: 15 months Budget: US$300,000

"Adaptation to climate change through alternative livelihoods in community forestry"

Applicant: Community Forestry Office,
Forestry Administration
Location: Oddar Meanchey, Siem Reap, Kampong Thom, Koh Kong, Kampot provinces
Duration: 15 months Budget: US$ XXX

"Building resilience against climate change for small scale farmers and local authorities in Ratanakiri province"

CEDAC

Applicant: CEDAC
Partner: Provincial Department of Agriculture
Location: Ratanakiri province
Duration: 15 months Budget: US$ 149,841

"Sustainable Sihanoukville Through Climate Change Planning and Adaptation"

Applicant: Provincial Hall of Preah Sihanouk Province
Partner: UN-Habitat
Location: Sihanoukville Municipality
Duration: 15 months Budget: US$ XXX

"Building Capacity for Integrating Climate Change Adaptation in Fisheries Sector in Cambodia"

Applicant: Fisheries Administration, MAFF
Partner: WorldFish
Location: Tonle Sap and Mekong river area
Duration: 15 months Budget: US$ XXX

"Together Addressing Climate Change Initiative - Prey Veng"

Applicant: WOMEN
Partner: Provincial Departments in Prey Veng
Location: Prey Veng province
Duration: 15 months Budget: US$ 150,000

"Capacity Strengthening for Community Protected Area communities in Boeung Per Wildlife Sanctuary to Adapt to impacts of Climate Change"

Applicant: Ministry of Environment
Partner: RECOFTC
Location: Kampong Thom, Siem Reap and Preah Vihear provinces
Duration: 15 months Budget: US$ 298,346

"Local Governments and Climate Change"

Applicant: National Committee for Sub-National Democratic Development (NCDD)

Partner: UNCDF

Location: Takeo province

Duration: 15 months Budget: US$ XXX

Second National Forum on Climate Change
Cambodia
3-5 October 2011

Orientation to CCCA Trust Fund

Reiko Kurihara, Trust Fund Administrator

CCCA Trust Fund Secretariat

CCCA TF - Building preparedness through…

- Awareness raising – knowledge sharing
- Institutional and technical capacity building
- Mainstreaming climate change into different sectors
- Facilitating partnerships (Govt-CSOs, etc…)
- Preparing Cambodia for climate change financing and implementation
- Agreeing on priorities and resource requirements – CCCSP

CCCA Trust Fund supports ….

- Building preparedness at national, sub-national levels – in line with national priorities
- Understanding and addressing CC as a development issue
- Capacity building and national ownership

Vision for CCCA Trust Fund

CCCA Trust Fund is a pilot mechanism for the future **national trust fund** to be administered by the Government.

Assessment will be undertaken during the current phase of CCCA Programme to look at:

1. Scope and priorities
2. Financing modality
3. Institutional set-up/oversight functions
4. legal framework
5. Resource mobilisation strategy
6. Steps for transition

What does it fund?

- Projects aimed at **capacity development** and **institutional strengthening** in support of the priorities and actions identified in the National Adaptation Programme of Action to CC (NAPA), NSDP-Update, and the CCCSP (under preparation);
- Projects which will facilitate and ensure **integration of climate change** considerations into national policy, strategy, plans and programmes;

What does it fund?

- Projects which seek to integrate climate change considerations into other mainstreaming actions for other **cross-cutting issues**, thereby leveraging mutual benefits such as gender, poverty reduction, biodiversity, governance, community-based development, aid-effectiveness etc.;
- Projects which will **raise awareness and preparedness** in Governments and the broader society;
- Projects which will contribute to establishment and operation of a Climate Change **Knowledge Management and Learning** Platform;

Who can apply?

1. Government institutions (independently or in partnerships with CSO/International Organisations)
2. CSO/International Organisations – must be in partnership with Government institution(s)

What is the size of funding?

- Up to US$300,000 (for Government applicants)
- Up to US$150,000 (for Civil Society Organisation applicants)

What is the duration of a project?

- Defined for each call
- 1st Call for Proposals – 18 months

Main feedback on the 1st Call for Proposals

- Key is to find relevance of CC with your area of work
- Consider CC in your field of expertise/mandate
- Consider CC as one of the risks that pose threat to our lives – "not in isolation" to other issues

Where will we find the Call for Proposals?

- National newspapers
- Website (upcoming)

Where can we obtain the guidelines ?

- CD-ROM
- Website (upcoming)

THANK YOU !
For more information, please contact the
CCCA Trust Fund Secretariat at
secretariat@camclimate.org.kh

Second National Forum on Climate Change
Cambodia
3-5 October 2011

Climate Change Policy and Strategic Plans – International and Regional Experiences

Valdemar Holmgren

Chief Technical Adviser, CCCA, Ministry of Environment

Presentation Outline and Purpose

- This presentation will provide an overview of selected regional and international examples of developing and implementing climate change strategies and action plans in support of climate change policy development.

- Purpose

- To illustrate the various solutions that other countries apply in their efforts to formulate Climate Change (CC) policy, strategies and action plans.

2

Introduction

- The experience of other countries in making a CC Strategy and/or Action Plans (SAPs) can help us make a good version for Cambodia;
- The following slides will briefly present examples of different formats and contents of CC 'SAP' in 5 selected countries;
- Each country overview starts with the name and duration of its main CC 'SAP' document;

3

Bangladesh

- B-desh CC Strategy & Action Plan 2008 (to 2018)
- Coordinated by Min. Environm. & Forests, for the National Steering Committee on CC;
- 'Strategy part' = the Bali Action Plan;
- The Action Plan has 6 themes, **focus on Adapt.**: Food Security, Social Protection & Health; Comprehens. Disaster Management; Infrastructure; Research & Knowledge Management; Mitigation and Low Carbon Development; Capacity Building and Institutional Strengthening. A National Trust Fund has been establ.;
- - To be implemented by sector agencies;

4

India

- National Action Plan on CC 2008 (to 2017);
- Prime Minister's council on CC;
- The NAPCC contains 8 'Missions' /"multi- pronged, long-term, integrated strategies to achieve CC goals": Solar, Enhanced Energy efficiency, Sustainable Habitat, Water, Sustaining Himalayan Ecosystem, Green India, Sustainable Agriculture, Strategic Knowledge for CC;
- Inter-sectoral groups including MoFin., Planning Commission, Industry experts and CSOs, have a guidance role in the ministries' 'Missions';
- **Equal focus on Adapt. & Mitig**., & Energy, NRM;

Philippines

- National Framework Strategy on CC (2010-22)
- CC Commission / Office of the President;
- Provides guidelines for 'Nat. CC Program', has Key Result Areas (strategies), **integrating Mitigation and Adaptation**, and cross-sectoral DRM;
- A national action plan is envisioned to be developed within 1 year, from which local government would prepare Local CC APs;
- The NF Strategy guides national /sub-national development & investment processes / plans;

6

Viet Nam

- The National Target Program (NTP) to Respond to Climate Change 2008;
- Ministry of Agriculture & Rural Development;
- NTP response to CC **comprises both Adap**., to flooding, **& Mitigation**, of GHG emissions;
- Next phase: 'VN CC Strategy' to be based on Nat'l Adapt Plan + Low Carbon Dev Strategy to cover "many related but separate policies and programs", with sea-level rise as priority;

7

Thailand

- CC Strategic Plan 2008-2012, under Min. of Natural Resources and Environm. /OCCC-ONEP
- The CCSP comprises a package of 6 strategies:
  - Cap. Dev. - CC adaptation & reducing vulnerability;
  - Promotion of GHG mitigation activities;
  - Support research & dev on adaptation & mitigation;
  - Raise awareness and public participation;
  - Cap. Dev., for institutions & staff; Support Int Coop;
- **Comprise both Adapt. & Mitig** aspects: rural & urban;
- New 10 yr CC Master Plan: agriculture, industry & energy, health, infrastructure, tourism;

8

Conclusions

- In summary:
  - Most of the 'SAPs' presented here are aligned with national development plans, one focused on one overriding challenge to sustainable development (Viet Nam, in regard to flooding);
  - All 'SAPs' indicate a reliance on implementation at local level through engagement by sector agencies
  - Some 'SAPs' include components of research that feed back into SAP development and all 'SAPs' had CC awareness raising and institutional Cap. Dev.;
  - There is no single best model to follow, we can use experience from others to make a sound CCCSP;

9

Conclusions / Recommendations for Cambodia

- Of interest to Cambodia / to draw on for CCCSP:
  - Thailand experience in CCSP set-up & its devel to a CC Master Plan, with rural livelihoods and DRR in MRB;
  - Lessons from India in building CC public awareness as support for CCCSP development and implementation;
  - Lessons from Viet Nam in sector & province mainstreaming of CC into development plans, with a standard framework by Min Planning & Investment;
  - Bangladesh experience in National CC Trust Fund establishment, operationalization and 'marketing';
  - Lessons from Philippines on recognizing synergy of mitigation and adaptation in implementing CCCSP;

10

Second National Forum on Climate Change
Cambodia
3-5 October 2011

Sectoral Policies Relevant to CCCSP

Mr. Khim Lay
Assistant Country Director,
Environment and Energy Team Leader
UNDP Cambodia

Objectives

- To provide an analysis of existing sectoral policy, strategy, plans and programmes related to climate change (CC) in Cambodia
- To propose sectoral engagement in the process of the development of Cambodia CC Strategic Plan

2

Sectoral Policy Analysis

Four points to look at :

- Proposed sectoral interventions in NAPA and SNC
- Compatibility and relevance to NAPA, SNC
- Policy recognition
- Policy recommendation

Key sectors are:

- Agriculture and water resources,
- Health
- Disaster Risk Reduction
- D+D
- Forestry,
- Fishery
- Land
- Energy

3

Agriculture and Water Resource

A+W in NAPA	Out of 39 projects identified in NAPA, about 20 projects proposed to deal with agriculture and water. Primarily focus on "No regret interventions" such as water management, crop protection, public awareness, agricultural productivity and access to water, etc.
Strategy for Agriculture and Water 2006-2010	• Aims for poverty reduction, food security and economic growth • Its proposed actions and programmes considered as "no regret interventions" and relevant to NAPA • Recognizes CC impact on A+W and recommends that appropriate steps to be taken to respond to climate change • Approaches to climate change adaptations are agro-ecosystem, watershed management, and river basin planning • SAW proposes the following recommendations: 1. Study and assess climate change impacts on surface water and ground water, crop forecasting and seasonal planning. 2. Forecast effects on agriculture and design measures to mitigate adverse impacts 3. Interventions to effectively deal with disaster preparedness (floods and droughts) by establishing and implementing agriculture-centered disaster preparedness measures;

4

Health

NAPA	• Identified health as one of the five key sectors in reducing vulnerabilities of people • Out of 20 high priority projects, 4 projects are related to health focusing production of biopesticides, development of health facilities, provision of safe water in high risk malaria regions, and malaria education and mosquito habitat clearance campaigns
Health Strategic Plan 2008-2015	• Recognises environmental pollution and global climate change effect on human health. • Strengthens and improves environmental, quality and reducing environmental risks; • Identifies financial and human resources in the areas of identify, manage, monitor and evaluate the impact of environmental factors on health; and the effect of environmental health interventions.
National Health Policy and National Environmental Health Action Plan (NEHAP):	• National health policy recognises the impacts of CC and environment on human health and proposes to develop National Environmental Health Action Plan (NEHAP) • NEHAP aims to protect human health and environmental considerations particularly given Cambodia's rapid recent economic and industrial development • Identifies 7 National Thematic Working Groups (NTWG) that include Climate Change, Ozone depletion and Ecosystem Change • The NEHAP proposes to address the linkages and impacts environmental health due to global and regional climate change

5

Disaster Risk Reduction

NAPA	• Recognised the need of disaster prevention and preparedness in reducing Cambodian vulnerability to disaster events. • Out of 39 projects, DRR is prioritised as the one of the cross sectoral interventions focusing on strengthening of community disaster preparedness and response capacity
Strategic National Action Plan for Disaster Risk Reduction (SNAP-DRR 2008-2013	• Its vision is to build a resilient community to natural disaster in accordance with Hyogo Framework for Action • Covers a number of themes relevant to climate change adaptation, including mainstreaming disaster risk reduction into national, sector and local development policies and plans; national and local risk assessments; improved flood forecasting and early warning capabilities; education and awareness raising; and the promotion of structural and non-structural measures to enhance resilience. • The SNAP-DRR proposes alignment with the NAPA by identifying and supporting common activities and projects. Both the SNAP-DRR and the NAPA seek to address community vulnerability to hazards.

6

Decentralization and Deconcentration

• NAPA	• The implementation of the 39 projects are supposed to be carried out by the technical ministries and its line departments at the sub-national level.
• National Programme for Sub-national Democratic Development	• Vision: Develop management systems of provincial/municipal, district/khan and Commune/Sangkat levels based on the principles of "democratic participation". • NP-SNDD identified Climate Change as a cross-cutting program. • Enable climate change mainstreaming in SNA planning, management and service delivery is implemented. The NP SNDD has proposed to develop CC National Adaptation Assessment Framework, Assess SNA capacity to develop CC mitigation and adaptation plans and develop guidelines and procedures and training on CC mainstreaming in all SNAs. • Identify and transfer of first package functions including appropriate functions on climate change issues to councils of each SNA. • Develop guidelines and procedures for climate change mainstreaming in all SNAs and conduct relevant training, • Establish and pilot systems and procedures for climate change cost accounting.

7

Fisheries

NAPA	• Out of 39 projects identified in NAPA, four dealing with Fisheries (2 with costal zones, 1 cross sector and 1 with Agriculture and Water. • Those projects focus on rehabilitation of Mekong waterways and capacity building to local authorities on integrated water resource management and conservation.
Draft Strategic Planning Framework for Fisheries (2010-2019)	• Vision: Management, conservation and development of sustainable fisheries resources to contribute to ensuring people's food security and to socioeconomic development in order to enhance people's livelihoods and the nation's prosperity. • SPF acknowledges that Climate Change is a threat to the Fisheries sector. • SPF has recognised the importance of properly understanding the likely effects of climate change, and including measures to both adapt to and mitigate these effects. A sub-group has been established under the Technical Working Group to focus on Climate Change within the Fisheries sector. • SPF has stipulated the importance of implementing the framework along with the D&D framework. • SPF has emphasized on the importance of addressing climate change and mainstreaming the climate change issues through its policies, laws and institutions

8

Forestry

NAPA	The NAPA included forestry projects dealing with community agro-forestry in deforested watersheds and coastal area and community based soil conservation
National Forestry Programme 2010-2029	• Its vision is ecologically, socio-economically, culturally and environmentally sound forest management • Recognition and valuation of ecosystem services of the forests, in relation to water supply, infrastructure protection, and climate change adaptation • Proposed approaches related to CC: Reducing Emissions from Deforestation and forest Degradation (REDD), the Clean Development Mechanisms of the Kyoto Protocol (CDM), and other innovative schemes and forest conservations . • Advocates for rights of local communities and the importance of decentralised management of natural resources.
REDD+ READINESS ROAD MAP	• REDD+ Readiness Road Map was developed based on broad based stakelholder consultation in cooperation between FA and GDANCP. It was approved in 2001 • Cambodia UN-REDD Programme and WB Readiness Proposal have been approved to support the implementation of the RaodMap • REDD+ Strategy will be developed. • National REDD Task Force will be formed • Good example of developing sectoral roadmap for climate change mainstreaming

9

Sustainable Land Management

NAPA	Integrated sustainable land management into projects dealing with water resource management, water supply, soil conservation, flood control and integrated farming
10 National Action Programme for sustainable land management (Agricultural land and forestry land), 2011-2020	• 10 Year vision: Sustainable agricultural land management and improved adaptation to climate change • Goal: Enable widespread adoption of sustainable land management practices and improved adaptation to climate change in the agriculture sector • It follows an integrated approach addressing simultaneously the natural and socio-economic aspects of the processes of land degradation and climate change • Analysis the linkage of land degradation, biodiversity loss and climate change • Analyze the effects of CC in agriculture • Proposed watershed approach for sustainable land management that is relevant to approach for CC adaptation and mitigation. • Proposed an integrated financing strategy for SLM and CC adaptation • Propose best practices for sustainable land management and CC adaptation and mitigation • Proposed 4 strategic objectives out of which one SO on Soil Management and Climate Adaptation Practices by proposing projects on demonstrating good practices in soil management and climate change adaptation and ddecision support for sustainable land management at farm and landscacpe levels.

10

Energy

Second national Communication	• Identifies mitigation options for energy industries (Electricity Supply) , manufacturing industries and construction, transport, commercial institutional etc • Proposes mitigations options such energy efficiency measures, solar power, rice husk gasification with combined heat and power, electric vehicles, efficient cookstoves, etc
Draft Cambodia Energy Sector Strategy	• Acknowledges the impacts of global warming and climate change and advocates for the development of renewable energy sources such as biomass, solar and mini-hydro, while ensuring the supply of electricity to the industry, commercial and residential uses • Harmonization of the economic growth, the energy security and the environmental protection, • Strengthen efforts in implementing the sustainable energy efficiency program • Develop capacity and mechanisms to deal with climate change, and improve knowledge on climate change mitigation
Green Growth Road Map 2009	• Access to renewable energy is one of the 7 accesses proposed in GGRM • Analyze the drivers of green growth • Identify paths for greening the economic development • Proposes interventions for short term (2-5 years); medium terms (5-10 years) and long term (10-20 years)

11

Propose sectoral engagement in development of Cambodia CC Strategic Plan

- Expected results:
  - A sectoral CC strategy / CC road map with implementation plan developed to guide investment;
  - Priority sectoral CC issues, and options for CC adaptation and mitigation identified;
  - Sectoral CC assessment approved by Minister / Head of Agency;
  - Sectoral CC startegic objectives and activities reflected in the CCCSP and stakeholder engagement strengthened;
- Inputs and Approach
  - Each sector express interest to develop the sectoral road map through a short concept note
  - NCCC to review and decide on the sectors
  - CCCA to provide about 25 K to key priority sectors to develop sectoral road maps based on good stakeholder consultation
  - Use existing mechanisms as much as possible to support the process such as TWGs, REDD Task Force,
  - Agreement to be signed between MOE and selected sectoral agency on the use of 25 K.

12

Propose sectoral engagement in development of Cambodia CC Strategic Plan (cont.)

Sectoral CC Mainstreaming Roadmap

- Conduct situation analysis by using some tools such as SWOT analysis
- Conduct literature reviews of CC relevant to the sector
- Use the analysis of V+A and Green House \gass Inventory Reports of key sectors, NAPA, SNC and CHDR on CC
- Use the existing policy, strategies and programme related to CC to provide a good basis to start with identify sectoral strategic objectives on CC
- Map out existing projects/programmes and interventions related to CC of the sector
- Conduct policy and stakeholder analysis
- Propose Strategic Objective Statements and Strategic Activities
- Good examples are REDD+ Readiness Road Map and Green Growth Road Map

Stakeholder engagement Plan

- Period: 2 and half months (October-December)
- Need head agency endorsement to start with
- Members of the NCCC should be a political focal point
- Set up a task force/team if needed
- Members of CCTT should be a technical and coordination focal point
- TWGs should play a strategic role in helping to build a consensus of proposing strategic objectives and actions.
- Focus group stakeholder consultations and stakeholder validation

13

Conclusions

- Impressive progress of policy recognitions and interventions with key sectors after the first National CC Forum
- The existing sectoral policy recognitions and recommendations on CC provide a good entry points to develop sectoral roadmaps
- Sectors now have an opportunity to be strategically engaged in the process of the development of CCCSP- please take it
- The sectoral road map will subsequently be used to turn into programme/project interventions to develop sectoral resilience to CC impacts.

14

15

Presentation Outline and Purpose

- This presentation will provide the background, rationale, objectives and draft contents of the CCCSP, and its Roadmap for implementation.

- Purpose
- An introduction to the concept of the CCCSP, and its guideline framework, the Roadmap.

2

Introduction

- While initiatives are being implemented in the country to address climate change, Cambodia does not have a comprehensive national-level policy or strategy to address climate change;
- The development of a Cambodia Climate Change Strategic Plan (CCCSP) is one of the key results of the Cambodia Climate Change Alliance (CCCA);

3

Rationale for the CCCSP

- The formulation of the CCCSP is in line with the country priorities as indicated in the NSDP update.
- Development of the CCCSP is consistent with Cambodia's commitment under UNFCCC, and with the relevant COP decisions such as the Nairobi Work programme on CC adaptation, and the Cancun Agreement;
- A framework to guide coordination of the cross-cutting issues and opportunities of CC is needed;

4

CCCSP: coordination tool for the CC agenda

- The CCCSP will help Cambodia and the NCCC to prepare for global and regional CC impacts,
- - and prepare Cambodia to take opportunities of global funding support for CC initiatives that contribute to sustainable development and poverty reduction;
- The CCCSP will also provide strategic guidance on how Cambodia can contribute to emission reduction, paving the way for a green-growth low-carbon development of the country;

5

The Roadmap for CCCSP

- To define an articulate, comprehensive and relevant CCCSP is a complex task, and requires a road map content guideline) to assist in formulation, and to avoid overlap and inconsistency;
- Key guideline for the CCCSP is the Council of Ministers Announcement no. 433, (7 April 2011) on Preparation and Development of Policies, Strategic Plans and Action Plans, on which CCCA team developed the CCCSP draft;
- CCTT reviewed & endorsed draft CCCSP on 27th Aug. '11;
- The NCCC endorsed the draft CCCSP on 4th Aug. 2011, with minor amendments proposed;

6

Scope of the CCCSP

- CCCSP definition to include justification and key guiding principles;
- CC and climate hazard/risk profile in Cambodia;
- CC policy response according to Cambodia position and CC priorities, and aligning with Regional and International frameworks on CC;
- Sectoral strategies for adaptation, primarily focusing on priority sectors and sub-sectors, e.g: agriculture, water resources, fisheries, forests, human health, coastal zone, biodiversity, protected areas, and their key policy responses;

7

Scope of the CCCSP - continued

- Mitigation strategies concerning energy and non-energy sectors to support green growth;
- Strategies to address CC impacts on, and CC opportunities for, cross cutting issues such as: coordination, institutional development, capacity building, awareness raising, gender equity, food security, financing, research and development, weather forecast and monitoring, SN-D&D, and Disaster Risk Reduction;
- CC financing strategies and proposed financing mechanisms;

8

CCCSP Implementation approach

- Review and synthesize the existing national and sector documents related to CC;
- Gain consensus of NCCC members on draft CCCSP vision, mission and objectives;
- Define Cambodia's position on CC in the context of sustainable socio-economic development and rational use of natural resources;
- Conduct a sector CC policy analysis in key sectors with analysis of CC policy coherence;

9

Conclusion / Next steps

- Engagement of sectors in CCCSP development is central to building a strong CC response, and a national & sectoral ownership of CCCSP;
- CCCSP sector activities begin after this Forum;
- Priority sectors of CCCSP to be agreed on the basis of stakeholder consultation and NCCC endorsement:
  - Sectors that are the key priority of the Government;
  - Sectors that are most likely vulnerable to CC;
  - Sectors that support Cambodia's sustainable development and poverty reduction;

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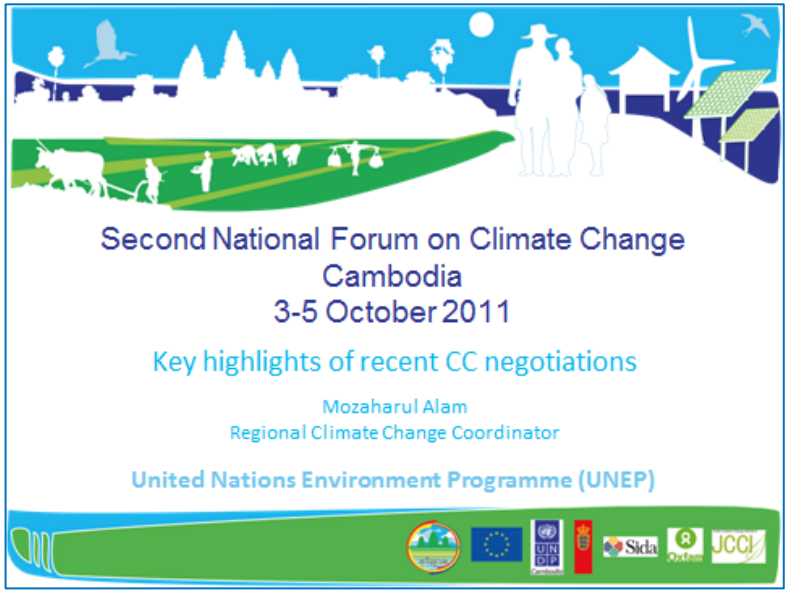


About Presentation

- UNFCCC: background, objectives, principles, key landmarks, negotiations processes and institutions
- Cancun agreement and issues for Durban
- Challenges
  - Complexity of issues and institutional inter-linkage
  - Emission gaps

UNFCCC: Background

- Climate Change for the first taken by the UN General Assembly in 1988
- It has adopted resolution 43/53 of 6 December 1988 on the "Protection of the Global Climate for Present and Future Generation of Mankind"
- UN General Assembly established an Intergovernmental Negotiating Committee (INC) for negotiating a framework convention on climate change in 1990.
- The INC adopted by consensus the UNFCCC on 9 May 1992 at New York and Open for signature at the "Earth Summit" in Brazil.

UNFCCC: The Ultimate Objective

- Stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time-frame sufficient
  - to allow ecosystems to adapt naturally to climate change,
  - to ensure that food production is not threatened and
  - to enable economic development to proceed in a sustainable manner.

UNFCCC: Principles

- On the basis of equity and common but differentiated responsibilities and respective capabilities. Developed country Parties should take the lead.
- The specific needs and special circumstances of developing country Parties should be given full consideration.
- The Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects.
- The Parties have a right to, and should, promote sustainable development.
- The Parties should cooperate to promote a supportive and open international economic system that would lead to sustainable economic growth and development in all Parties

UN life to combat CLIMATE CHANGE

UNFCCC: Kyoto Protocol, 1997

- To meet the commitment (5.2 % reduction) Kyoto Protocol has devised three flexible mechanisms for reducing greenhouse gases
  - Article 6 : Annex I may transfer to, or acquire from, any other such party emission reduction unit (ERU).
  - Article 12 : CDM shall have to assist parties not included in Annex I in achieving sustainable development.....and to assist parties included in Annex I in achieving compliance with their quantified emission limitation and reduction commitments.
  - Article 17 : Annex-B parties may participate in emission trading to fulfill their commitments. This is a non-project based activity.

UN life to combat CLIMATE CHANGE

UNFCCC: Bali Action Plan, 2007

- Established a comprehensive process to enable the full, effective and sustained implementation of the Convention through long-term cooperative action, now, up to and beyond 2012
- Five key building blocks
  - A shared vision for long-term cooperative action
  - Enhanced national/international action on mitigation of climate change
  - Enhanced action on adaptation
  - Enhanced action on technology development and transfer to support action on mitigation and adaptation
  - Enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation

UN life to combat CLIMATE CHANGE

Copenhagen Accords

- *The Conference of the Parties takes note of the Copenhagen Accord of 18 December 2009*
  - *Since the Conference of the Parties neither adopted nor endorsed the Accord, it provisions do not have any legal standing in UNFCCC Process even if some Parties decide to associate themselves with it (Ref, DBO/drl, 25 January 2010, Bonn, UNFCCC).*
- However, the Accord can be seen as an important political step that can guide the process for developing a binding post 2012 agreement but obviously it will depend on negotiation process;
- The Conference at Copenhagen demonstrated unprecedented worldwide attention, an extraordinary mobilization of public opinion and action and the highest level political engagement from countries.

UN life to combat CLIMATE CHANGE

Copenhagen Accords

- **Emission reduction targets for industrialized countries:**
  - Annex 1 Parties commit to implement, individually or jointly, quantified economy-wide emissions targets for 2020;
  - Pledges are not close to the 25-40% reduction by 2020 from 1990 baselines – a reduction that is likely to be needed to remain temperature increase below 2 degree
- **Nationally appropriate mitigation actions by developing countries:**
  - Non-Annex I Parties to the Convention will implement mitigation actions and will list their voluntary pledges;
  - A number of key countries such as China and India proposed their own "carbon intensity" targets as a first step towards deviation from business as usual growth.

UN Unite to combat CLIMATE CHANGE

Copenhagen Accords

- **Financial and technological resources to assist developing countries in mitigation and adaptation:**
  - The Accord includes commitment by developed countries to provide US$30 billion over the next three years to support developing country adaptation and mitigation efforts;
  - The Accord also includes a commitment to the goal of mobilizing US$100 billion a year by 2020, and a Panel to study potential sources of revenue for these funds.
- **Institutional setup and on the governance structure to channel financial and other support to developing countries:**
  - The Accord calls for the establishment of the Copenhagen Green Climate Fund as an operating entity of the financial mechanism of the Convention to support projects.

UN Unite to combat CLIMATE CHANGE

Copenhagen Accord: UN System mobilizing financing

- UN Secretary General has established a high-level panel to design and oversee a $100 billion fund annually by 2020 for climate mitigation and adaptation financing in poor countries
- It will design a mechanism to channel cash from developed nations to projects aimed at protecting agriculture and infrastructure from rising seas and weather extremes
- It will propose strategies for boosting renewable energy and clean technology investments in poor nations
- Funding would include both public and private sources

UN Unite to combat CLIMATE CHANGE

Cancun agreement: key elements and issues for Durban

Build on Cancun agreements

Finance
- Make Green Climate Fund operational;
- Identify sources of Long term funding.

Technology
- Progress on the Technology Mechanism: agree on a process for host of CT Center and operationalising the CT Network.

Mitigation
- Agreed to take NAMAP in the context of SD, supported and enabled by technology, financing and capacity-building

REDD
- Agree on safeguards, reference levels, MRV and forest monitoring (SBSTA);
- Produce recommendations on financing options for REDD+ (LCA).

Adaptation
- Make the Committee and Framework operational

Agree on pending issues

Future of the Kyoto Protocol
- Clarity on the second commitment period.

Legal Form of the Bali Road Map outcome
- Agree on the form of the outcome (global agreement including all major emitters vs binding targets for industrialized countries and voluntary actions for developing countries).

Legally binding nature of pledges
- Top down vs bottom up (pledge and review) nature of pledges.

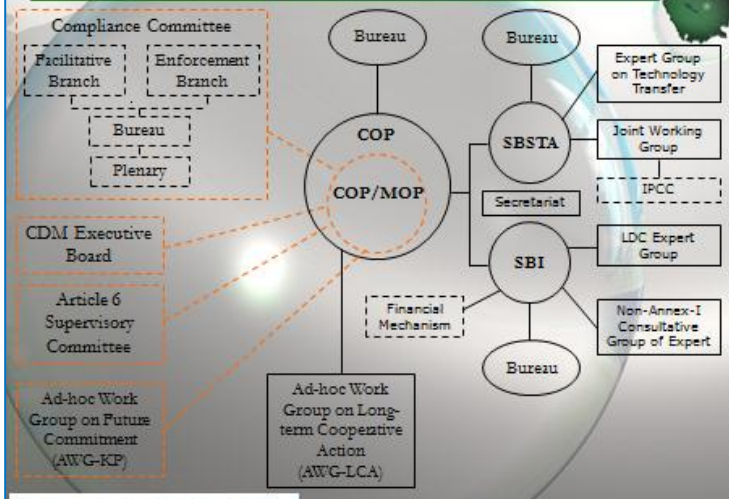
How to close the Emission Gap?
- Process for closing gap between pledges and what is needed to keep below 2°C.

UNFCCC: Multiple Institutions

- Intergovernmental Negotiating Committee (INC)
- Conference of the Parties
- Subsidiary Bodies (SBSTA and SBI)
- Ad-hoc Working Group on Berlin Mandate (AGBM)
- Bureaux
- LDC Expert Group (LEG)
- Consultative Group of Expert (CGE)
- Expert Group on Technology Transfer (EGTT)
- CDM Executive Board
- Compliance Committee
- Financial Mechanism : GEF
- Intergovernmental Panel on Climate Change (IPCC)
- Ad-hoc Working Group on Long-term Cooperative Action (AWG-KP)
- Ad-hoc Working Group on Kyoto Protocol (AWG-KP)

UN life to combat CLIMATE CHANGE

UNFCCC: Institutions



UN life to combat CLIMATE CHANGE

UNFCCC: Key Negotiating Blocks

- Annex-I and Non-Annex I under convention
  - Responsibility and Commitment
- Five Regional Groups
  - Africa, Asia, Central and Eastern Europe, Latin America and the Caribbean states (GRULAC), and the Western Europe and Others Group (WEOG)
- In the negotiations
  - G77 and China
  - AOSIS
  - LDC
  - EU
  - Umbrella
  - OPEC
  - Others
- Observer Organizations and Media
  - Environment, Business, Research

UN life to combat CLIMATE CHANGE

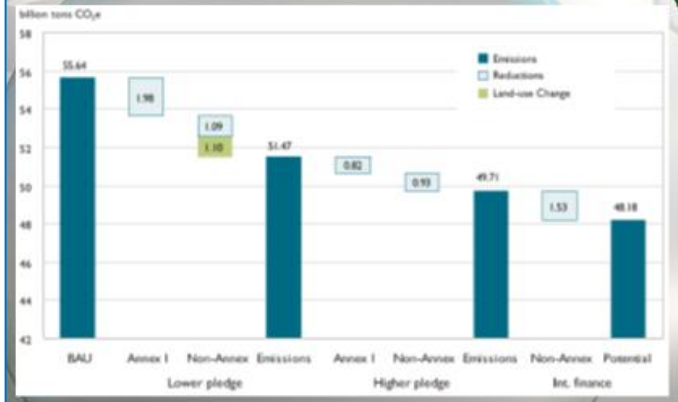
Copenhagen Accord: mitigation pledges

- 106 Countries supported Copenhagen Accord (40 developed and 66 developing) initially which has grown to 117;.
- 72 have listed specific national emission reduction plans;
- The national pledges currently listed in the Copenhagen Accord would reduce emissions to between 49.7 and 51.5 billion tons in 2020;
- $50 billion international financial assistance for mitigation could reduce emissions to as low as 48 billion tons.

Source:
Trevor Houser, March 2010
UNFCCC, November 2010

UN life to combat CLIMATE CHANGE

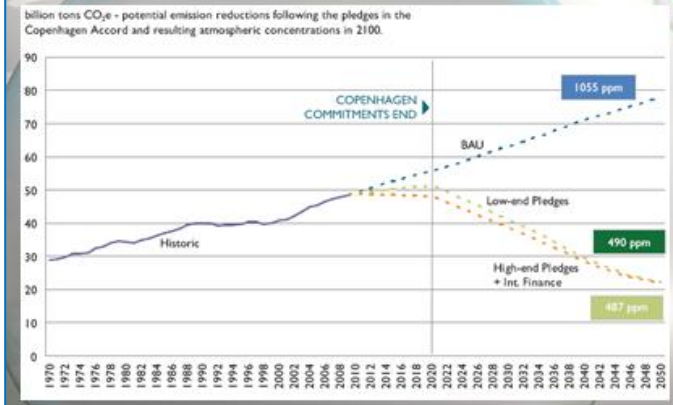
Copenhagen Accord: Mitigation Potential



Source: Trevor Houser, March 2010

UN Mobilizing to combat CLIMATE CHANGE

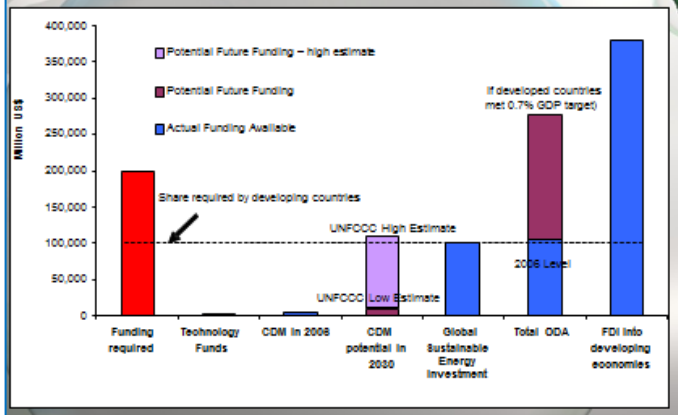
Copenhagen Accord: Mitigation up to 2050



Source: Trevor Houser, March 2010

UN Mobilizing to combat CLIMATE CHANGE

Climate mitigation investment – how much will be needed?



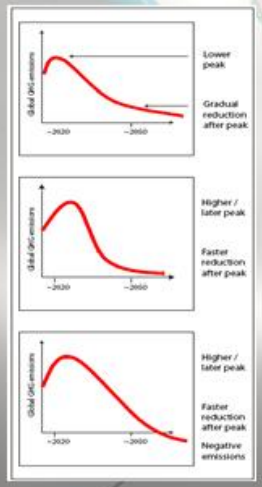
Source: p11, UNEP PFM

Global additional annual investment needs for mitigation by 2030

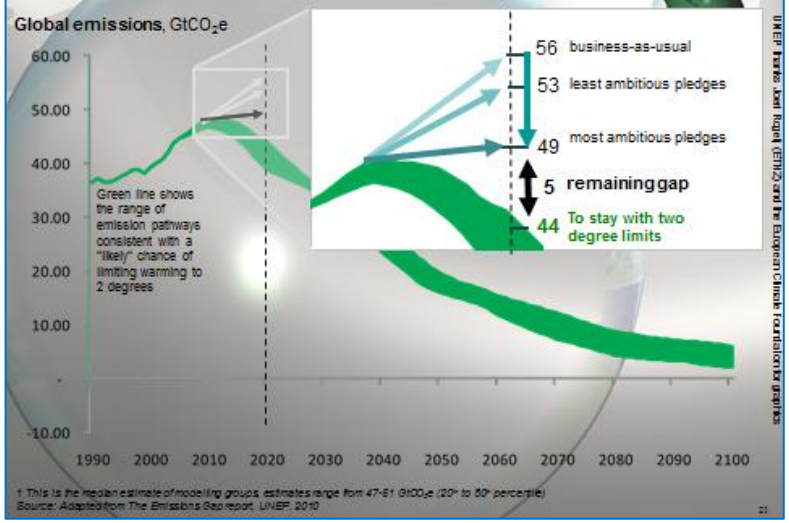
UN Mobilizing to combat CLIMATE CHANGE

What are we aiming for?

1. Meeting a temperature target depends largely on *cumulative* emissions
2. Different pathways correspond to same cumulative emissions



Where are we heading?



1 This is the median estimate of modelling groups, estimates range from 47-51 $GtCO_2e$ (20th to 80th percentile)
Source: Adapted from The Emissions Gap report, UNEP, 2010

What does the gap consist of?

- **Gap without action (business-as-usual)** — 12 $GtCO_2e$
- **Move from business-as-usual to unconditional pledges (lower ambition)** — - 3 $GtCO_2e$
- **Moving from unconditional (lower ambition) pledges to conditional (higher ambition)** — - 2 to -3 $GtCO_2e$
  - Ambitious action from other countries
  - Provision of climate finance
  - Passing of domestic legislation
- **Ensuring 'strict' rules** surrounding: — - 1 to -2 $GtCO_2e$
  - Land use/forest accounting
  - Surplus emissions units

→ **Remaining gap of ~5 $GtCO_2e$**

Total reduction approx. -7 $GtCO_2e$

Main Options for Reducing the Gap

- **Increase in ambition** of country targets from those with targets
- **National emissions outperforming targets** due to policies not reflected in national targets, international finance beyond that required to deliver the existing pledge
- **Mitigation in sectors not covered by national targets** –e.g. international aviation and maritime

And essential <u>complimentary</u> actions

- **Addressing short lived climate forcers**, e.g. black carbon, tropspheric ozone and other gases such as HCFCs, HFCs

THANK YOU !

For more information:
Mozaharul Alam
Regional Climate Change Coordinator
United Nations Environment Programme (UNEP)
Email: mozaharul.alam@unep.org
Web: www.unep.org/climatechange

Second National Forum on Climate Change
Cambodia
3-5 October 2011

Towards Durban, South Africa: Draft Cambodia's Positions

Mr. Sum Thy
Director of Climate Change Department, National Project Coordinator of CCCA - Climate Change Policy Development and Knowledge Management Project
Ministry of Environment

Presentation Outline

- Adaptation and its associated means of implementation
- Mitigation and its associated means of implementation
- Financial Resources
- Development and Transfer of Technology
- Capacity building

2

Adaptation and its associated means of implementation

- Commitment to adaptation and mitigation actions should be equally treated for the future climate regime;
- Cambodia welcomes the Adaptation Framework established in Cancun and its provision for a process for LDC to formulate and implement national adaptation plans (NAP) to address not only, most urgent, immediate and short, but also medium and long term both concrete actions on the ground and policy reforms to support these actions. The NAP should be driven by in-country priorities and flexible to revise. COP17 needs to adopt guidelines and modalities to allow LDCs to formulate and implement medium and long-term NAPs;

3

Adaptation and its associated means of implementation

- Support the Adaptation Committee established under the authority of the Conference of Parties (COP) of the Convention and call for its rapid operationalization in Durban;
- The implementation of adaptation action should cover full cost without incremental cost or co-financing;
- An adaptation mechanism for LDCs should be established in the Green Climate Fund;
- An international adaptation centre and regional adaptation centers should be established to provide support and input to better understand the issues related to impacts, vulnerability and impact of climate change.

4

Adaptation and its associated means of implementation

- Cambodia supports the Kyoto Protocol second commitment period. The simplifications of CDM implementation procedures should be explored to enable LDCs participate fully in CDM projects;
- All Annex I Parties must take legally binding additional mitigation commitments or actions taking into account the Principles of the Convention to reduce their GHG emission by at least 45% below 1990 levels by 2020 and at least 95% below 1990 levels by 2050 in order to ensure GHG and aerosol concentration below 350 ppm CO_2 equivalent and temperature rise below 1.5C;

5

Mitigation and its associated means of implementation

- Commitment reductions must be measurable, reportable and verifiable (MRV) in accordance with a compliance mechanism to be adopted by the Parties;
- Non-annex I Parties shall take voluntary mitigation actions in accordance with the principles and provisions of the Convention. However, major developing countries should show willingness to voluntarily reduce their emissions to contribute to global goal of emission reduction. Furthermore, mitigation efforts by LDCs should be voluntary and be fully funded and enabled by technology, financing and capacity building that should be provided by the developed countries;

6

Mitigation and its associated means of implementation

- Nationally appropriate mitigation actions (NAMA) by developing country Parties are those voluntary actions determined and formulated taking national circumstances into account, in the context of sustainable development, and enabled and supported through finance, technology and capacity building from developed country Parties, in a measurable, reportable and verifiable manner.
- Cambodia sees that over recent years a decision on REDD+ has been unduly delayed in spite of the fact that all developed and developing countries are ready to move forward. Cambodia wants to see the conclusion of discussion and catalyze meaningful REDD+ finance and actions.

7

Financial Resources

- Support the provision of new, additional and predictable finance from public sources by Annex 1 countries. It should be fast track, direct and easy access of public funds following provisions of the Convention particularly Article 4. The private sector through market-based mechanisms shall complement or leverage the public finance;
- Individual developed country Parties and other developed country Parties included in Annex II contributions shall take into account historical responsibilities and principles of the Convention;

8

Financial Resources

- Funds required are not a donation but a commitment as per the Convention and must be over and above ODA with separated functional principles taking historical responsibility into account;
- The scaled up commitments for climate change actions shall be at least 1.5 % of gross domestic product (GDP) per annum of individual developed country Parties and other developed country Parties included in Annex II, of which 60% of this fund shall be used to address adaptation issues and 40% for mitigation. In addition, 70% of the scaled up adaptation finance shall be allocated to LDCs in line with provisions of Article 4.9 of the Convention;

9

Financial Resources

- Cambodia welcomes the establishment of the Green Climate Fund (GCF) and that of the transitional and standing committees and call for the urgent operationalization of the green climate fund established in Cancun;
- Co-financing shall not be a barrier or conditionality to accessing the funds.

10

Development and Transfer of Technology

- Cambodia supports the Technology Needs Assessment, particularly the urgent need for development and transfer of technologies for adaptation in all developing country Parties, in particular small island developing states (SIDS) and least developed countries (LDCs). In addition, the Technology Action Plan should be prepared and implemented with support from Developed Countries. Technology transfer should be country driven and based on learning by doing practices;
- Cambodia welcomes the establishment of Cancun International Technology Mechanism operating under the authority of the COP;

Development and Transfer of Technology

- Cambodia supports the establishment of the Technology Executive Committee (TEC) and the Climate Technology Centers and Networks (CTCN);
- Support the provision of necessary and immediate financial and capacity building support to develop national technology action plans including through Climate Technology Centres and Networks;
- Support specific and urgent measures to remove barriers arising from intellectual property rights in developing countries and least developed countries on environmentally sound technologies.

Capacity building

- Cambodia supports enhanced action on capacity building to improve the enhancement of the capacities and capabilities of developing countries. The capacity building should be a continuous process, be country-driven, participatory and integral to enhanced action on all elements of the Bali Action Plan. In addition, it should support developing country Parties in developing and implementing capacity building projects and strengthen subnational, national and regional capacities to address the climate change;

Capacity building

- Support action for empowering and strengthening relevant institutions, including focal points and national coordinating bodies and organizations;
- Support the need for capacity building to be measured through the use of agreed and effective performance indicators and all Parties should report on progress made in enhancing capacity to address climate change in their national communication.

APPENDIX 4- BIOGRAPHIES

DAY 1- OCTOBER 3RD, 2011

INTRODUCTORY SESSION

1) LATEST UPDATES ON CLIMATE CHANGE SCIENCE, IMPACTS AND OPPORTUNITIES

Mr. Mozaharul Alam, Regional Climate Change Coordinator, Regional Office for Asia and the Pacific, UNEP

Mr. Mozaharul Alam has joined the UNEP as Regional Climate Change Coordinator for Asia and the Pacific Region located in Bangkok. Since August 2009, he is overseeing, providing technical and policy guidance in implementation of UNEP climate change sub-programme in the AP region. Before joining UNEP, he has conducted and coordinated significant amount of research on climate change impacts, vulnerability and adaptation at national, regional and international levels. He is working as Lead Author for Working Group II of the IPCC Fifth Assessment Report. He has been attending climate change negotiations since 2000 and attended over the past years climate change negotiations as a member of Bangladesh Delegation.

2) UPDATES ON RECENT CLIMATE CHANGE DEVELOPMENTS AND KEY CLIMATE CHANGE INITIATIVES IN CAMBODIA

Mr. Uy Kamal, Head of GHG Inventory & Mitigation Office, CCD, Ministry of Environment

Mr. UyKamal received his Master degree in environmental engineering and management from the Asian Institute of Technology in 2006. As a government official, he started working for Ministry of Environment in 1997. He has been involving with climate change activities since 1999. He is now in charge of Greenhouse Gas Inventory and Mitigation sector, and he is also serving as the team leader of the Climate Change Knowledge and Learning sector of the Cambodia Climate Change Alliance.

3) PRESENTATION OF THE KEY FINDINGS OF THE SECOND NATIONAL COMMUNICATION

Dr. Tin Ponlok, Deputy Director General, Administration for Nature Conservation and Protection, Head of the CCCA Trust Fund Secretariat, Ministry of Environment

Dr. Tin Ponlok received his PhD degree in technical sciences from the Russian Federation in 1994. From 1996-2009 he had been managing a number of environment and climate change projects funded by USAID, UNDP, UNEP, GEF and EU, including two GEF-funded projects to prepare the Initial and Second National Communications to the UNFCCC. He now works for the Ministry of Environment as Deputy Director General in charge of climate change. He also serves as the Head of the Trust Fund Secretariat.

PARALLEL WORKING SESSION 1: CLIMATE CHANGE ADAPTATION – SUCCESSES CHALLENGES, AND LESSONS LEARNT

1) STATUS OF NAPA IMPLEMENTATION AND THE PROJECT "PROMOTING CLIMATE CHANGE RESILIENT WATER MANAGEMENT AND AGRICULTURAL PRACTICES IN RURAL CAMBODIA (NAPA FOLLOW UP)

1a) Dr. Heng Chan Thoeun, Deputy Director of Climate Change Department
1b) Mr. Hok Kimthourn, National Project Manager, Project Support Unit, Ministry of Agriculture, Forestry and Fisheries

2) THE CAMBODIA CLIMATE CHANGE ALLIANCE (CCCA) AND THE PILOT PROGRAM FOR CLIMATE RESILIENCE (PPCR)

2a) Mr. Sum Thy, Director of Climate Change Department, National Project Coordinator of CCCA-Climate Change Policy Development and Knowledge Management Project

Mr. Sum Thy is currently the Director of the Climate Change Department and the National Project Coordinator of Cambodia Climate Change Alliance (CCCA) grated Project "Climate Change Policy Development and Knowledge Management". He's got a Masters of Development Management. Mr. Sum Thy has been involved in the Climate Change related projects since 1999, starting from the preparation of the Cambodia's first National Communication to the United Nations Frameworks Convention on Climate Change (UNFCCC), Capacity Development for the Clean Development Mechanism, National Adaptation Programme of Action (NAPA), and the Second National Communication. He is actively involved in the development of national climate change institutional arrangements, such as the National Climate Change Committee, Climate Change Technical Team and the establishment of the Climate Change Department. He is a member of the Cambodian delegation to the UN Climate Change Negotiation.

2b) Mr. Meas Sophal, Deputy Director General, Administration for Nature Conservation and Protection, Ministry of Environment

3) CLIMATE CHANGE AND HEALTH

Mr. Kol Hero, Deputy Director, Department of Health Prevention, Ministry of Health

4) CLIMATE CHANGE AND FOOD SECURITY: THE CAMBODIAN CONTEXT

H.E. Srun Darith, Deputy Secretary General & Head of TWG-FSN Secretariat, Council for Agricultural and Rural Development (CARD)

H. E. Mr. Srun Darith has been working for the Council for Agricultural and Rural Development (CARD) since the establishment in 1998. He is currently Deputy Secretary General of the Council and head of the secretariat of the Technical Working Group on Food Security and Nutrition (TWG-FSN) since 2005. He has extensive experience in the area of FSN, especially in coordination, capacity building, policy/strategy formulation and M&E. HE Darith holds a Master's degree in Public Administration, a Bachelor's degree in English Education as well as a Bachelor's degree in Electrical Engineering. He participated in various oversea training courses on multiple subjects including FSN (concept, situation analysis, and intervention), project management, M&E, and regional management.

PARALLEL WORKING SESSION 1: CLIMATE CHANGE MITIGATION – STATUS, PROGRESS, LESSONS LEARNT, POLICY GAPS AND RECOMMENDATIONS

1) STATUS AND PROSPECT OF VOLUNTARY CARBON MARKET

Ms. Marion Verles, Executive Director, Nexus Carbon for Development

Ms. Marion Verles is the Executive Director of Nexus Carbon for Development, an alliance of development practitioners dedicated to foster climate friendly and pro poor development pathways. While studying at EDHEC business school, Marion took a gap year and worked with social entrepreneurs in developing countries. Her mantra became "Change investment patterns and you'll change the world!" After her MSc, she joined the M&A team of Barclays Bank in London, where she worked on the acquisition of Lehman Brothers.

2) COMPLIANCE CARBON MARKET: FROM KYOTO PROTOCOL TO NEW MARKET MECHANISMS

Ms. Akiko Fukui, Assistant Researcher, Market Mechanism Group, IGES

Ms. Akiko is Assistant Researcher of the Market Mechanism Group, IGES. She is involved in the CDM capacity building in Cambodia and Laos. She is the author of IGES CDM monitoring and issuance database and the paper of MRV (monitoring, review and verification) of CDM. Ms. Akiko Fukui supported calculating grid emission factor in Cambodia and developed the grid emission calculation sheet.

3) CDM STATUS AND EXAMPLE OF CDM PROJECT IN CAMBODIA

3a) Mr. Uy Kamal, Head of GHG Inventory & Mitigation Office, CCD, Ministry of Environment.

Mr. Uy Kamal received his Master degree in environmental engineering and management from the Asian Institute of Technology in 2006. As a government official, he started working for Ministry of Environment in 1997. He has been involving with climate change activities since 1999. He is now in charge of Greenhouse Gas Inventory and Mitigation sector, and he is also serving as the team leader of the Climate Change Knowledge and Learning sector of the Cambodia Climate Change Alliance.

3b) Mr. Adisorn Chieu, Managing Director, Angkor Bio-Cogeneration

Mr. Adisorn Chieu holds a Bachelor's Degree in engineering from the Chulalongkorn University in Thailand. Mr. Chieu is since 1999 the Executive Director of Angkor Kasekam Roongroeung Co., Ltd. and since 2004 the Managing Director of Angkor Bio Cogen Co., Ltd.

4) CAMBODIA REDD + ROADMAP

Dr. Keo Omaliss, Deputy Director of Department of Wildlife and Biodiversity, Forestry Administration, Ministry of Agriculture, Forestry and Fisheries

5) POLICY OPTIONS FOR PROTECTED AREAS REDD+

Mr. David Ashwell, Independent Expert

Mr. Ashwell is one of the pioneers of forest conservation in post-war Cambodia. As a forest ecologist, Mr Ashwell worked for a number of Victorian State Government agencies in Australia prior to taking up the position as IUCN's representative in Cambodia from 1992 to 1997. In that role he was instrumental in capacity building in both the Forestry Administration and the Ministry of Environment. Since then he has had a number of representational, policy and technical roles related to forests and biodiversity in Cambodia. This presentation focuses on some of the outcomes of his work at the Washington D.C. based Center for Clean Air Policy.

DAY 2, OCTOBER 04, 2011

PARALLEL WORKING SESSION 2: CLIMATE CHANGE ADAPTATION – SUCCESSES CHALLENGES, AND LESSONS LEARNT

5) DISASTER RISK REDUCTION (DRR)

Mr. Soth Kimkolmony, Deputy Director of Training and Preparedness Department, National Committee for Disaster Management (NCDM)

6) MRC CCAI: EXAMPLE OF ADAPTATION FROM A REGIONAL PERSPECTIVE

Dr. Kien Tran-Mai; Climate Change Programme Officer, Mekong River Commission

Having 15-years research and working experience in the field of global environmental change and climate change studies, currently Dr Kien Tran-Mai is the Climate Change

Programme Officer of the Mekong River Commission Secretariat, responsible for the formulation and implementation of the MRC Climate Change and Adaptation Initiative (CCAI). His research interests range from climate change adaptation and mitigation, disaster risk reduction, climate policy, community-based adaptation, stakeholders participation through to environmental health and public health. Dr. Kien Tran-Mai holds a Master in Medical Science and Public Health and completed his PHD in 2000 in the Russian Federation, on global environmental change and its impacts to public health. He has published several international journal articles and book chapters on climate change and public health has teaching practice in Universities in Vietnam and has served as keynote speaker, resource person or presenter in many international conferences, seminars and workshops. Prior to joining the MRC on 2008, Dr. Kien has been working as a senior researcher then a department's deputy director of the Vietnam National Institute of Meteorology, Hydrology and Environment (IMHEN).

7) BARRIERS TO EFFECTIVE ADAPTATION – GLOBAL AND REGIONAL EXPERIENCES – AND POSSIBLE POLICY RECOMMENDATIONS FOR CAMBODIA

3a) Mr. Alex Heikens, Regional Policy Advisor Climate Change UNDP Asia-Pacific Regional Centre

For the last 8 years, Alex Heikens has been working for FAO and UNDP in various countries in Asia on environment and climate change. Alex currently works as climate change policy advisor for the UNDP Asia-Pacific Regional Centre. He supports UNDP country offices and governments in Asia-Pacific on a broad range of climate change issues, nowadays focusing much on supporting countries to access and deliver climate finance.

3b) Dr. Richard Friend, Institute for Social and Environmental Transition

Dr. Richard Friend has a background in social anthropology and development studies and has been working in the Mekong Region for over 17years. He has worked as a programme manager, researcher and consultant in areas related to human development, governance and natural resource management. Most recently he worked as the International Lead Author for the United Nations 2011 Human Development Report for Cambodia entitled – 'Building Resilience; the future of rural livelihoods in the face of climate change'.

PARALLEL WORKING SESSION 2: CLIMATE CHANGE MITIGATION – STATUS, PROGRESS, LESSONS LEARNT, POLICY GAPS AND RECOMMENDATIONS

6) GREEN GROWTH, LOW CARBON DEVELOPMENT

Ms. Aneta Slaveykova Nikolova, Environmental Affairs Officer, Environment and Development Division, UNESCAP

Ms. Aneta Slaveykova Nikolova is currently the Environmental Affairs Officer at the Environment and Development Policy Section, Environment and Development Division at UNESCAP. She has a broad educational background with degrees in Scientific Information Management, Hydrogeology and Engineering Geology (Engineer) and European Politics and Administration. Ms. Nikolova has been managing EU, UN and bilateral donors projects and programmes addressing the needs of developing countries and countries with economies in transition in Europe, Africa and Asia for more than 20 years. Ms. Nikolova has a rich professional experience in development, analysis and advocacy of green growth and sustainable development policies, as well as providing capacity development, institutional strengthening and technical advice, while managing a regional green growth capacity development programme.

7) RE MARKET IN CAMBODIA: SOLAR PV AND WIND TECHNOLOGIES

Ms. Margaret Jane Ryan, Partner, Khmer Solar

8) EEP MEKONG: EXAMPLE OF MITIGATION FROM A REGIONAL PERSPECTIVE

Ms. Kati Veijonen, Counsellor, Energy and Development, Embassy of Finland

Ms. Kati Veijonen is currently Counsellor, Energy and Environment, at the Development Co-operation Section at the Finish Embassy in Bangkok, Thailand. Before joining the Embassy, Kati worked as a research scientist at the Technical research center of Finland, specialised in international co-operation, Biomass technology, and combustion technology, from 1996-98, 2000-2006 and 2008-2009. From 1998 – 2000, Kati was a researcher at the CIEMAT Research Center for Energy, Environment and Technology, Specialised in Combustion technology in Madrid, Spain. From 2006 – 2008 she was the Energy and Environment Programme Officer at the UNDP Country Office in Cambodia. Kati holds a Master of Science in Engineering, (Energy technology/ Energy economy), from the Technical University of Lappeenranta, Finland, 1996.

9) CARBON CREDIT POLICY: REGIONAL/GLOBAL EXPERIENCES AND BARRIERS TO EFFECTIVE MITIGATION IN CAMBODIA AND PROPOSED RESPONSES

Dr. Thanak De Lopez, Managing Director, Ecofia

Dr. Thanak currently manages climate change projects for Ecofia, a socially responsible enterprise based in Singapore. He was at the Risoe Centre, at Denmark's Technical University, where he developed carbon offsets projects in bio energy and forestry in Africa with local NGOs and private sector firms. His interests include community based and small scale carbon projects. He has worked in most Southeast Asian countries.

PARALLEL WORKING SESSION 3: CLIMATE CHANGE FINANCING

1) AID EFFECTIVENESS AND COORDINATION

Mr. Ros Salin, Head of Policy and Aid Coordination Department, CDC

2) ADAPTATION FINANCING

Ms. Sophoan Phean, Regional Policy Advisor, Oxfam America

Ms. Sophoan Phean is Regional Policy Advisor, Oxfam America East Asia Regional Office (EARO). Sophoan was a long term government employee at the Ministry of Water Resources and Meteorology between 1995 and 2004. As the Regional Policy Advisor at Oxfam America, Sophoan plays a very important role in leading and implementing advocacy and campaign related initiatives including grant-making, policy research & analysis, capacity building & networking, advocacy & campaigning. Sophoan got a Master's Degree on Public Policy specializing in Policy Analysis from the Australian National University, Australia in 2006.

PARALLEL WORKING SESSION 3: CLIMATE CHANGE CROSS-CUTTING ISSUES

1) BIODIVERSITY AND CLIMATE CHANGE

Dr. Geoffrey Blate, Senior Advisor, Landscape Conservation & climate change, WWF Greater Mekong Programme

Mr. Geoffrey Blate is the senior technical advisor on WWF's landscape conservation and climate change initiatives in the Greater Mekong Subregion. He is a tropical forest ecologist with 19 years of research and project management experience in the Amazon, Indonesia, and most recently in mainland Southeast Asia (Cambodia, Laos, Thailand, and Vietnam). Dr. Blate's career has focused on forest conservation, the role of forests in international development and climate change mitigation, and climate change adaptation options for forests and freshwater ecosystems. Geoff received a Ph.D. in tropical forest ecology from the University of Florida, a Master's Degree from the Yale School of Forestry and Environmental Studies, and his B.S. from the University of Rochester, all located in the USA.

2) GENDER AND CLIMATE CHANGE

Ms. Annaka Peterson Carvalho, Regional Programme Coordinator Oxfam America

Ms. Annaka Peterson Carvalho is the Regional Programme Coordinator for Oxfam's agriculture and climate change programme. She joined Oxfam in 2004 and has been based in Boston, Vietnam and Cambodia. Annaka has worked extensively on gender mainstreaming in development work. Most recently, she managed a literature review, which documented the current level of practice and knowledge in relation to women, gender and climate change in Cambodia. She is currently analyzing the data in the KAP study from a gender perspective. She earned a B.A. from the University of Wisconsin-Madison with majors in international political economy and Chinese language and literature, and an M.A. in policy studies from the University of British Columbia.

PLENARY SESSION: CLIMATE CHANGE FINANCING (CONT.)

1) LAUNCHING CEREMONY FOR THE APPROVED GRANTS FROM THE CCCA TF 1ST CALL

1a) Dr. Tin Ponlok, Deputy Director General, Administration for Nature Conservation and Protection, Head of CCCA Trust Fund Secretariat, Ministry of Environment

Dr. Tin Ponlok received his PhD degree in technical sciences from the Russian Federation in 1994. From 1996-2009 he had been managing a number of environment and climate change projects funded by USAID, UNDP, UNEP, GEF and EU, including two GEF-funded projects to prepare the Initial and Second National Communications to the UNFCCC. He now works for the Ministry of Environment as Deputy Director General in charge of climate change. He also serves as the Head of the Trust Fund Secretariat.

1b) Dr. Kao Sochivi, Deputy Director General, Fisheries Administration, Ministry of Agriculture, Forestry and Fisheries
1c) Mr. Chea Sarith, President, WOMEN
1d) Ms. Kristina Kuhnel, Minister Counsellor, Country Director, SIDA

2) ORIENTATION ON CCCA TRUST FUND

Ms. Reiko Kurihara, CCCA Trust Fund Administrator, Ministry of Environment

Ms. Reiko Kurihara is the Trust Fund Administrator for the Cambodia Climate Change Alliance Trust Fund. She is working out of the Trust Fund Secretariat established at the Ministry of Environment and is responsible for day-to-day administration of the Trust Fund. Before joining CCCA, she has worked in the demining sector as resource management specialist where she was responsible for managing multiple funding streams, including trust funds, in Afghanistan, Sudan and at the UN HQ.

DAY 3- OCTOBER 5TH, 2011

PLENARY SESSION: CLIMATE CHANGE POLICY FRAMEWORK: TOWARDS A CAMBODIA'S CLIMATE CHANGE STRATEGIC PLAN

1) CLIMATE CHANGE POLICY AND STRATEGIC PLANS – INTERNATIONAL AND REGIONAL EXPERIENCES

Mr. Valdemar Holmgren, Chief Technical Advisor, CCCTA, Ministry of Environment

Mr. Valdemar is Chief Technical Adviser to the CCCA and is based in the climate change Dept of the Ministry of Environment. He is an ecologist with 25 years field and institutional experience of climate change and biodiversity in both Africa and Asia. He is a Swedish

national but lives in the countries he works in. Prior to beginning his work with CCCA in December 2010, Valdemar held positions of CTA, with UNDP mainly, in the Mekong countries, Bangladesh, Mongolia, Nepal and Ethiopia.

2) SECTORAL POLICIES RELEVANT TO CCCSP: SAW, FISHERIES, ENERGY, FORESTRY, HEALTH, DRM

Mr. Khim Lay, Assistant Country Director, Environment and Energy Team Leader, UNDP

Mr. Khim's main background is in social and conservation forestry. He has extensive experience in the areas of biodiversity conservation and protected areas management, climate change adaptation, rural energy, and sustainable land and forest management. Khim has been with UNDP Cambodia for more than 10 years. He is currently an Assistant Country Director and Team Leader of the Environment and Energy Unit of UNDP.

3) TOWARDS A CAMBODIA'S CLIMATE CHANGE STRATEGIC PLAN

Mr. Sum Thy, Director Climate Change Department, National Project Coordinator of CCCA-Climate Change Policy Development and Knowledge Management Project, Ministry of Environment

Mr. Sum Thy is currently the Director of the Climate Change Department and the National Project Coordinator of Cambodia Climate Change Alliance (CCCA) grated Project "Climate Change Policy Development and Knowledge Management". He's got a Masters of Development Management. Mr. Sum Thy has been involved in the Climate Change related projects since 1999, starting from the preparation of the Cambodia's first National Communication to the United Nations Frameworks Convention on Climate Change (UNFCCC), Capacity Development for the Clean Development Mechanism, National Adaptation Programme of Action (NAPA), and the Second National Communication. He is actively involved in the development of national climate change institutional arrangements, such as the National Climate Change Committee, Climate Change Technical Team and the establishment of the Climate Change Department. He is a member of the Cambodian delegation to the UN Climate Change Negotiation.

4) KEY-HIGHLIGHTS OF RECENT CLIMATE CHANGE NEGOTIATIONS

Mr. Mozaharul Alam, Regional Climate Change Coordinator, Regional Office for Asia and the Pacific, UNEP

Mr. Mozaharul Alam has joined the UNEP as Regional Climate Change Coordinator for Asia and the Pacific Region located in Bangkok. Since August 2009, he is overseeing, providing technical and policy guidance in implementation of UNEP climate change sub-programme in the AP region. Before joining UNEP, he has conducted and coordinated significant amount of research on climate change impacts, vulnerability and adaptation at national, regional and international levels. He is working as Lead Author for Working Group II of the IPCC Fifth Assessment Report. He has been attending climate change negotiations since 2000 and attended over the past years climate change negotiations as a member of Bangladesh Delegations.

5) TOWARDS DURBAN, SOUTH AFRICA: DRAFT CAMBODIA'S POSITIONS

Mr. Sum Thy, Director Climate Change Department, National Project Coordinator of CCCA-Climate Change Policy Development and Knowledge Management Project, Ministry of Environment

Mr. Sum Thy is currently the Director of the Climate Change Department and the National Project Coordinator of Cambodia Climate Change Alliance (CCCA) grated Project "Climate Change Policy Development and Knowledge Management". He's got a Masters of Development Management. Mr. Sum Thy has been involved in the Climate Change related projects since 1999, starting from the preparation of the Cambodia's first National

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APPENDIX 5- PARTICIPANT DIRECTORY

No	Name	Position	Institution
Welcome and Opening Remarks			
1	H.E Yim Chhayly	Deputy Prime Minister, representative of **Samdech Akka Moha Sena Padei Decho Hun Sen**, Prime Minister of the Kingdom of Cambodia	Royal Government of Cambodia
2	H.E. Dr. Mok Mareth	Senior Minister, Minister of Environment, NCCC Chair	Ministry of Environment
3	H.E. Suy Sem	Minister of Industry, Mines and Energy	Ministry of Industry, Mines and Energy
4	H.E. Ros Seilava	Deputy Secretary-General	Ministry of Economy and finance
5	Mr. Douglas Broderick	UN Resident Coordinator, UNDP Resident Representative	UN RESCO Office, UNDP
6	Mr. Peter J. Brimble	Senior Economist	Asian Development Bank
7	H.E. Rafael Dochao Moreno	Chargé d' Affaires	Delegation of the European Commission to Cambodia
Co-Chairs			
8	H.E. Chheng Kimsun	Delegate of the Royal Government of Cambodia, Head of Forestry Administration	Forestry Administration
9	H.E. Dr. Sat Samy	Secretary of State and NCCC Vice Chair	Ministry of Industry, Mines and Energy
10	H.E. Nuth Chansokha	Under-Secretary of State	Ministry of Planning
11	H.E. Srun Dara	Under-Secretary of State	Ministry of Economy and Finance
12	H.E. Kol Vathana	Under-Secretary General	Cambodian National Mekong Committee
13	Mr. Koen Everaert	Attaché, Cooperation	Delegation of the European Commission to Cambodia
14	Ms. Elisabeth Folkunger	Environment and Climate Change Specialist	SIDA
15	Mr. Meng Monyrak	Vice Director of Department of International Conventions and Bio-Diversity	Ministry of Environment
16	H.E. Pon Narith	Secretary-General	National Committee for Disaster Management
17	Mr. Ken Serey Ratha	Deputy Director General	Ministry of Environment
18	H.E. Chay Samith	*Delegate of the RGC, Director-General, GDANCP*	Ministry of Environment
19	Ms. Sophie Baranes	Deputy Country Programme Director	United Nations Development Programme
20	Mr. Douglas Broderick	UN Resident Coordinator, UNDP Resident Representative	UN RESCO Office, UNDP
Presenters			

No	Name	Position	Institution
21	Dr. Tin Ponlok	Deputy Director General	Ministry of Environment
22	Mr. Sum Thy	Director of Department	Ministry of Environment
23	Dr. Heng Chan Thoeun	Deputy Director of Department	Ministry of Environment
24	Mr. Uy Kamal	Head of GHGs Inventory & Mitigation Office	Climate Change Department/Ministry of Environment
25	Mr. Kol Hero	Deputy Director of Department	Ministry of Health
26	Mr. Hok Kimthourn	National Project Manager	Ministry of Agriculture Forestry and Fisheries
27	Mr. Soth Kimkolmony	Deputy Director of Department	National Committee for Disaster Management
28	Mr. Khim Lay	Assistant Country Director, Environment and Energy Team leader	United Nations Development Programme
29	Dr. Keo Omaliss	Deputy Director, Department Wildlife and Biodiversity, Forestry Administration	Ministry of Agriculture Forestry and Fisheries
30	Ms. Sophoan Phean	Regional Policy Advisor	Oxfam America
31	Mr. Ros Salin	Head of Policy and Aid Coordination Department	Council for the Development of Cambodia
32	Mr. Chea Sarith	President	WOMEN
33	Dr. Kao Sochivi	Deputy Director General, Fisheries Administration	Ministry of Agriculture Forestry and Fisheries
34	Mr. Meas Sophal	Deputy Director General	Ministry of Environment
35	Mr. Mozaharul Alam	Regional Climate Change Coordinator	UNEP
36	Ms. Margaret Jane Ryan	Partner	Khmer Solar Co., Ltd.
37	Ms. Aneta Nikolova	Environmental Affairs Officer	UNESCAP
38	Mr. David Ashwell	Researcher	Freelance
39	Dr. Geoffrey Blate	Senior Advisor	WWF
40	Ms. Annaka Peterson Carvalho	Regional Programme Coordinator	Oxfam America
41	Mr. Adisorn Chieu	Managing Director	Angkor Bio-cogeneration
42	H.E. Srun Darith	Deputy Secretary General	CARD
43	Dr. Thanakvaro De Lopez	Managing Director	ECOFIA, Singapore
44	Mr. Valdemar Holmgren	Chief Technical Advisor, CCCA	Ministry of Environment
45	Dr. Richard Friend	Researcher	Institute for Social and Environment Transition
46	Ms. Akiko Fukui	Assistant Researcher	IGES, Japan

No	Name	Position	Institution
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48	Dr. Kien Tran-Mai	Climate Change Programme Officer	Mekong River Commission
49	Ms. Marion Verles	Executive Director	NEXUS
50	Ms. Reiko Kurihara	Trust Fund Administrator	Cambodia Climate Change Alliance
51	Ms. Kati Veijonen	Counselor, Energy and Development	Embassy of Finland
52	Ms. Kristina Kuhnel	Head of Development Cooperation	Embassy of Sweden
Provincial Department of Environment			
53	Yim Ly	Director	Bantey Meanchey Province
54	Morm Chay Chorn	Director	Bantey Meanchey Province
55	Chhay Yuob	Director	Battambang Province
56	Kong Vannak	Deputy Director	Battambang Province
57	Choub Sarun	Deputy Director	Battambang Province
58	Phouk Savuth	Deputy Director	Kampong Cham Province
59	Ban Bunthoeun	Director	Kampong Cham Province
60	Boeu Bun Thorn	Deputy Director	Kampong Chhnang Province
61	Pov Bun Thorn	Director	Kampong Chhnang Province
62	Kuy Sochin	Deputy Director	Kampong Speu Province
63	Khun Nakry	Deputy Director	Kampong Speu Province
64	Heng Hout	Director	Kampong Thom Province
65	Top Kakada	Deputy Director	Kampong Thom Province
66	Suy Thea	Director	Kampot Province
67	Ven Virak	Deputy Director	Kampot Province
68	Sum Sarith	Deputy Director	Kandal Province
69	Oum Phat	Director	Kandal Province
70	Kung Sophal	Director	Kep Province
71	Kem Sinaroth	Deputy Director	Kep Province
72	Hun Marady	Deputy Director	Koh Kong Province
73	Morn Phalla	Deputy Director	Koh Kong Province
74	Sek Bun Heng	Deputy Director	Kratie Province

No	Name	Position	Institution
75	Nop Chanthy	Director	Kratie Province
76	Chhit Sophal	Director	Mondolkiri Province
77	Rath Sovann	Deputy Director	Mondolkiri Province
78	Tun Sovanny		Ratanakiri Province
79	Chou Sopheak	Director	Ratanakiri Province
80	Ngor Hour	Director	Oddor Mean Chey Province
81	Yay Thloeurn	Deputy Director	Oddor Mean Chey Province
82	Thin Sambath	Deputy Director	Pailin Province
83	San Thoeun	Director	Pailin Province
84	Chim kalyaney	Deputy Director	Preah Sihanouk Province
85	Phe Thun	Deputy of Provincial Governor	Preah Sihanouk Province
86	Khoy Khun Chanroth	Director	Preah Vihear Province
87	Oum Sobourin	Deputy Director	Preah Vihear Province
88	Im Chhoeurn	Director	Prey Veng Province
89	Seav Leang Heng	Deputy Director	Prey Veng Province
90	Thay Chantha	Director	Pursat Province
91	Ros Marady	Deputy Director	Pursat Province
92	Lun Kanel	Director	Siem Reap Province
93	Hong Daravuth	Deputy Director	Siem Reap Province
94	Eng Phyrong	Director	Stung Treng Province
95	Hak Vimean	Deputy Director	Stung Treng Province
96	Koet Saroeun	Deputy Director	Svay Rieng Province
97	Hae San	Deputy Director	Svay Rieng Province
98	Men Khav	Director	Takeo Province
99	Hong Phearak	Deputy Director	Takeo Province
Government Institutions			
100	Im Chan Thol	Staff	Anti Corruption Unit
101	Sok Lakhena	Deputy Director General	APSARA Authority
102	Sok Sotheavy	Head of Administration	Assembly of Cambodia Chamber of Commerce
103	Sem Tola Sreypeou	Communications Officer	Cambodia Climate Change Alliance

No	Name	Position	Institution
104	Kien Danary	Administration	Cambodia Climate Change Alliance
105	Youn Daravuth	Accountant	Cambodia Climate Change Alliance
106	Chrun Naren	Secretary	Cambodia Climate Change Alliance
107	Sok Khon	National Coordinator	Cambodia National Mekong Committee
108	Mak Soleang	Consultant	Cambodia National Mekong Committee
109	Men Samron	Deputy Director	Chief of the armed forces
110	Sun Bunsak	Vice Commander	Chief of the armed forces
111	Long Sokha	Director of Department	COM
112	Sok Selo	Deputy Director General	Council for Agricultural and Rural Development
113	Oun Narun	Chief Officer	Council for Agricultural and Rural Development
114	Chou Bunheang	Director of Department	Council for Agricultural and Rural Development
115	Un Bun Thoeun	Officer	Council for the Development of Cambodia
116	Long Rathanakkoma	Deputy Director of Department	Forestry Administration
117	Khun Vathana	Deputy Director of Department	Forestry Administration
118	Ouk Setha	Officer	Forestry Administration
119	Hok KimThoun	Project Director	Ministry of Agriculture Forestry and Fisheries
120	Prak Thav Amida	Deputy Director General	Ministry of Agriculture Forestry and Fisheries
121	Ho Puthea	Deputy Director	Ministry of Agriculture Forestry and Fisheries
122	Pich Chan	Deputy Director	Ministry of Commerce
123	Chan Nora	SIS	Ministry of Commerce
124	Chhan Langdy	Chief Officer	Ministry of Commerce
125	Ean Sotheavy	Deputy Director of Department	Ministry of Culture and Fine Arts
126	Hap Chanthea	Deputy Director of Department	Ministry of Economy and Finance
127	Touch Chankresna	Chief of WBD	Ministry of Economy and Finance
128	Meas Chandeth	N/A	Ministry of Economy and Finance
129	Sun Bunna	Deputy Director of Department	Ministry of Education Youth and Sports
130	Meung Veasna	Vice Chief Officer	Ministry of Education Youth and Sports

No	Name	Position	Institution
131	Chan Sophea	Director of Department	Ministry of Education Youth and Sports
132	H.E. Hak Soeung Ly	Under Secretary of State	Ministry of Education Youth and Sports
133	Sam Sarum	Vice Chief Officer	Ministry of Education Youth and Sports
134	Leang Sophal	Officer	Ministry of Environment
135	Sovath Seyla	Vice Chief Officer	Ministry of Environment
136	Kim Menglim	CCCA Staff	Ministry of Environment
137	Manfred Staab	PPCR	Ministry of Environment
138	Moy Vathana	Chief of Administration and Planning	Ministry of Environment
139	Tin Sophors	Chief of Education and Outreach	Ministry of Environment
140	Taing Kruy	Deputy Director	Ministry of Environment
141	Ly Sokhaphirum	Deputy Director	Ministry of Environment
142	Chey Yuthearith	Deputy Director	Ministry of Environment
143	Kong Seakly	Vice Chief Officer	Ministry of Environment
144	Pak Sokhavuth	Deputy Director	Ministry of Environment
145	Yin Bunnang	Deputy Director	Ministry of Environment
146	Chhor Prolit	Chief Officer	Ministry of Environment
147	Nop Sothearith	Deputy Director	Ministry of Environment
148	Srey Marona	Director of Department	Ministry of Environment
149	Lim Say	Officer	Ministry of Environment
150	York Sothearith	Vice Chief Officer	Ministry of Environment
151	Yin Samray	Director of Department	Ministry of Environment
152	Ros Chor	Deputy Director	Ministry of Environment
153	Kim Sarin	Deputy Director	Ministry of Environment
154	Kim Nong	Deputy Director General	Ministry of Environment
155	Long Sokhabony	Deputy Director	Ministry of Environment
156	Lam Sao Leang	Chief Officer	Ministry of Environment
157	Ek Sereysopheap	Deputy Director	Ministry of Environment
158	Roath Sith	Deputy Director	Ministry of Environment
159	Sou Sorom	Adviser	Ministry of Environment

No	Name	Position	Institution
160	Chheang Sokha	Deputy Director of Department	Ministry of Environment
161	Heng Chan Thoeun	Deputy Director of Department	Ministry of Environment
162	Sem Sundara	Director of Department	Ministry of Environment
163	Lay Chanthy	Vice Chief	Ministry of Environment
164	Ouk Navann	Deputy Director General	Ministry of Environment
165	Lao Kimchhy	Deputy Director of Department	Ministry of Environment
166	Choub Chansophal	Deputy Director of Department	Ministry of Environment
167	Thiv Sophearith	Chief Officer	Ministry of Environment
168	Chak Sokvicheaboth	Chief Officer	Ministry of Environment
169	Pouk Bunthet	Chief Officer	Ministry of Environment
170	Mok Sophea	Deputy Director of Department	Ministry of Environment
171	Ma Chansothea	Deputy Director of Department	Ministry of Environment
172	Keo Piseth	Officer of CCD	Ministry of Environment
173	Hoy Sopheap	Deputy Director	Ministry of Foreign Affairs and International Cooperation
174	Srun Sina	Officer	Ministry of Foreign Affairs and International Cooperation
175	Setha Panna		Ministry of Foreign Affairs and International Cooperation
176	H.E. Soth Sothun	Under Secretary of State	Ministry of Foreign Affairs and International Cooperation
177	H.E Sear Huong	Under Sectary of State	Ministry of Health
178	Ngoun Narin	Chief Officer	Ministry of Industry Mines and Energy
179	Heang Bora	Deputy Director of Department	Ministry of Industry Mines and Energy
180	H.E.Hor Sopheap	Secretary of State	Ministry of Information
181	Soam Rithy	Deputy Director General	Ministry of Information
182	Un Bunthat	Officer	Ministry of Interior
183	Prum Chin	Deputy Director of Department	Ministry of Interior
184	Mao Touch	Representative	Ministry of Interior
185	H.E. Kim Sovan	Under Secretary of State	Ministry of Interior
186	Nan Sarith	Deputy Director	Ministry of Interior

No	Name	Position	Institution
187	Im Savoeun	Vice Chief Officer	Ministry of Interior
188	Pich Sthlaserey	Chief Officer	Ministry of Labor and Vocational Training
189	Chhim Sokun	Deputy Director General	Ministry of Land Management, Urban Planning & Construction
190	Nou Manith	Deputy Director of Department	Ministry of Land Management, Urban Planning & Construction
191	Meas Soung	Chief Officer	Ministry of Land Management, Urban Planning & Construction
192	Than Narin	Deputy Director	Ministry of Land Management, Urban Planning & Construction
193	H.E. Bin Sambathrath	Under Secretary of State	Ministry of Land Management, Urban Planning & Construction
194	Chhun Rasmeyrith	General Director	Ministry of Parliamentary Affairs and Inspection
195	Hong Khong	Deputy Director General	Ministry of Parliamentary Affairs and Inspection
196	Kong Mony Piseth	Deputy Director of Department	Ministry of Planning
197	Pin Than Nara	N/A	Ministry of Planning
198	Seng Soeurn	Deputy Director General	Ministry of Planning
199	H.E. Ou Orhath	Secretary of State	Ministry of Planning
200	Prak Seang An	Deputy Director General	Ministry of Post and Telecommunication
201	Chreang Pallak	Chief Officer	Ministry of Public Works and Transport
202	Duy Chandara	Deputy Director of Department	Ministry of Public Works and Transports
203	Ou Manyra	Deputy Director of Department	Ministry of Rural Development
204	H.E Dr. Seng Ly Meng	Under Secretary of State	Ministry of Rural Development
205	Srun Pithou	Deputy Director	Ministry of Rural Development
206	Seng Bong	Deputy Director of Department	Ministry of Rural Development
207	You Sothy	Deputy Director General	Ministry of Social Affairs Veteran and Youth Rehabilitation
208	Nuth Sokha	Chief Officer	Ministry of Tourism
209	In Vitourak	Representative	Ministry of Water Resource and Meteorology
210	Sok Piseth	Officer	Ministry of Women Affairs

No	Name	Position	Institution
211	H.E. Prak Channay	Under Secretary of State	Ministry of Women Affairs
212	Touch Sokun	Officer	NA
213	Duch Samang	DMPC	NA
214	Sok Pisal	Assistant	NA
215	Ang Chamroeun	E.D	NAPA Kompong Speu province
216	Kul Sopheak	Deputy Director of Department	National Audit Authority
217	H.E. Ma Norith	Adviser	National Committee for Disaster Management
218	H.E. Pon Narith	Deputy Secretary General	National Committee for Disaster Management
219	Iv Kheng	Under Secretary of State	Office of Council of Ministers
220	Tes Norearith	Chief Officer	Phnom Penh Department of Environment
221	Noun Somnavuth	Deputy Director of Department	Phnom Penh Municipality
222	Kim Vathanakthida	Deputy Director	Phnom Penh Municipality
223	Kham Kim Sou	Deputy Director of Department	Phnom Penh Municipality
224	Morm Sothy	Vice Chief Officer	Phnom Penh Municipality
225	Doung Daravann	Vice Chief of Commune	Phsar Tmey Commune
226	H.E. Phay Phan	Vice Governor	Preah Sihanouk
227	Chum Saray	Chief of Commune	Sensok
228	H.E Bun Ny	Under Secretary of State	State Secretariat of Civil Aviation
229	Khov Meas	Director of Department	Tonle Sab Authorities
NGOs			
230	Aaron Watson	Technical Adviser,	WOMEN
231	Chea Sarith	President	
232	Sarat Bora	Programme Advisor	AEC
233	Bou Vorsak	Programme Manager	Birdlife International
234	Chhhim Rumuny	Programme Assistant	Cambodia' Leading Independent Development Policy Research Institute
235	Ses Vong Sambath	Programme Coordinator	CCK
236	Kin Mengse	Programme Director	CEDAC
237	Yim Soksophors	Programme Officer	

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239	Hour Limchhun	National Coordinator	Clinton Foundation
240	Sam Phalla	Deputy Director	COMPED
241	Min Bunnara	Director	Conservation International
242	Taber Hand	Advisor	Conservation International
243	Nop Polin	Climate Change Officer	DCA/CA
244	Henry Matieu	Forestry Officer	FAO (LIN)
245	Kirtiman	National Coordinator	FFI
246	Berry Mulligan	Country Manager	FFI
247	Matt Zimmerman	Country Director	GERES
248	Duong Sarak	Ass. Operations Officer	IFC
249	AkihiraKuriyama	Researcher	IGES
250	Kong Kimseng	Senior Programme Officer	IUCN
251	Uwe Singer	Climate Change Coordinator	IUCN, Laos PDR
252	Rob Hughes	Project Manager	Live and Learn
253	Amaury Peeters	Food Security Advisor	Louvain Cooperation Development
254	Ych Achhara	Office Admin.	Louvain Cooperation Development
255	Chantal Dorf	Regional Director	Louvain Cooperation Development
256	Vincent Henin	Expert Food and Economic Security	Louvain Cooperation Development
257	Nuon Vanna	JRP	Mekong River Commission
258	May Ly	Programme Manager	Mlup Baitong
259	Marion Santini	Communications Manager	NEXUS
260	Paulo Lopes	NA	NEXUS
261	Ms. Raffel	NA	NEXUS
262	Im Phallay	Programme Manager	NGO Forum
263	Chea Phallika	Programme Coordinator	NGO Forum
264	Sophan.Kanchna	Project Coordinator	NGO Forum
	Ung Soeun	Environmental Programme Coordinator	NGO Forum
265	Jason Martin	Marketer	Oxfam America

No	Name	Position	Institution
266	Amy Robin	Marketer	Oxfam America
267	Sok Srya	Team Leader	PACT
268	Khun Bunna	Project Officer	Plan International
269	Mom Bunna	Monitoring Officer	DPA
270	Jim Stephenson	Programme Officer	RECOFTC
271	Edwin Payuan	Country Programme Coordinator	RECOFTC
272	Tonn Kunthel	Project Manager	Save Cambodia's Wildlife
273	Khter Uzaman Sano	Advisor	Save the Earth
274	Nico Jansssen	Programme Coordinator	SNV
275	Heng Hak	Climate Change Project Officer	Star Kampuchea
276	Nicole. J.Sayres	Deputy Country Representative	The Asia Foundation
277	Sam Chanthy	Research Associate	Stockholm Environment Institute
278	Lesley Perlman	Programme Manager	Wildlife Alliance
279	Hugo Rainey	Technical Advisor	Wildlife Conservation Society
280	Mark Gately	Country Director	Wildlife Conservation Society
281	Leng Vireak	Senior Manager	WVC
282	Michelle Owen	Conservation Progarmme USA	WWF
283	Robert van Zalinge	Technical Advisor	WWT
UN & Donor Agencies			
284	Vong Silang	NA	USAID
285	Yim Pichmalika	National Programme Assistant	ILO/BFC
286	Mey Sokheng	NA	JICA
287	Mona Laczo	Deputy Regional Director	Oxfam
288	Karl Anders Larsson	Counselor	Sida
289	Phearanich Hing	Policy Analyst	UNDP
290	Hay Nita	National Intern	UNDP
291	Houn Soriya	National Intern	UN-HABITAT
292	Liam Fee	Advisor	UN-HABITAT
293	Sok Vanna	Programme Manager	UN-HABITAT

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294	Sok Narin	NA	UNIDO
295	Teffera Betru	Foreign Service Officer	USAID
296	Prak Tepvichet	Programme Analyst	UNDP
Private Sector			
297	Nou Sotiara	UP and D.4	ACLEDA
298	Luos Seyha	President	CAID / SAK Co. LTD
299	Ngoun Sipheng	Dep. OP. Manager	CINTRI
300	Sim Saroeurn	Project Manager	Comin Khmer
301	Britta Heine	Consultant + Trainer	Freelance
302	Jorg van den Hoveng	CEO	Kamworks
303	Ford Thai	President	Khmer Solar
304	Heav Veasna	Adviser	MRT Group
305	Tybona In	Representative	New Apollo Energy
306	Leng Sun Rafael	NA	Pig Farm
307	Thorn Sereythim	President	Sarom Trading
308	Hiun Chamouen	SME-RE	SME-RE
309	Mao Samyat	Director	Solar Energy
Academic Institutions			
310	Kob Mat	Student	Royal University of Phnom Penh
311	Roeun Savany	Admin	Cambodia Mekong University
312	Lim Kimheng	Student	Cambodia Mekong University
313	Than Boravodey	Student	Cambodia Mekong University
314	Rorn Den	Student	Cambodia Mekong University
315	Bun Theany	Student	Cambodia Mekong University
316	Heng Chenhak	Student	Cambodia Mekong University
317	Reth Chamroeun	Student	Cambodia Mekong University
318	Chhin Kona	Student	Cambodia Mekong University
319	Sun Sonita	Student	Cambodia Mekong University
320	Chon Ravy	Student	Cambodia Mekong University

No	Name	Position	Institution
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322	Sok Reasmey	Student	Cambodia Mekong University
323	Sitha Rithy	Student	Cambodia Mekong University
324	Keo Buntheng	Student	Cambodia Mekong University
325	Man Kangkheang	Student	Cambodia Mekong University
326	Hor Sengleang	Student	Cambodia Mekong University
327	Sameourn Rathanak	Student	Cambodia Mekong University
328	Pin Vannaro	Vice Rector	Chea Sim Kamchaymear University
329	Yoeurn Minea	Student	Chenla University
330	PHoung Bopha	Student	Chenla University
331	Say Nuon	Student	Chenla University
332	Kun Sokhon	Student	Chenla University
333	Hoem Vanna	Student	Chenla University
334	Brohn Ratha	Student	Chenla University
335	Ly Sokunthea	Student	Chenla University
336	Sien Chhaya	Student	Chenla University
337	Sreng Pheary	Student	Chenla University
338	Kheng Seyhak	Student	Chenla University
339	Soy Sovannveasna	Student	Chenla University
340	Chhen Sreyny	Student	Chenla University
341	Heng Chamroeun	Student	Chenla University
342	Rith Chankirina	Student	Chenla University
343	Pich Phyrun	Student	Chenla University
344	In Sophal	Student	Chenla University
345	Hong Phara	Student	Chenla University
346	Seng Vanak	Student	Chenla University
347	Kok Dalors	Student	Chenla University
348	Heng Charya	Student	Chenla University
349	Nop Thai	Student	Chenla University

No	Name	Position	Institution
350	Chay Mao	Student	Chenla University
351	Miech Rathana	Student	Chenla University
352	Preab Polis	Student	Chenla University
353	Ol Daneth	Student	Chenla University
354	Norn Sovan	Student	Chenla University
355	Noy Kanann	Student	Chenla University
356	Chhoeung Sarith	Student	Chenla University
357	Non Sitha	Student	Chenla University
358	Sem Pisey	Student	Chenla University
359	Oern Sopheak	Student	Chenla University
360	Ben saveun	Student	Chenla University
361	Chhim Kong	Student	Chenla University
362	Men Nareth	Head of the Department	Institute of Technology of Cambodia
363	Hour Pok	Student	Pannasastra Uunversity of Cambodia
364	Chen Pay	Student	Pannasastra Uunversity of Cambodia
365	Sovannar	Teacher	RED
366	Kim Soben	Lecturer	Royal University of Agriculture
367	Din Kimsrean	NA	Royal University of Agriculture
368	No Sophearith	Student	University of Cambodia
369	San Boromerichan	Student	University of Cambodia
370	Dy Virak	Student	University of Cambodia
371	Leng Sotheary	Student	University of Cambodia