Climate Change Newsletter #9

General Secretariat, National Council for Sustainable Development
Department of Climate Change

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CLIMATE CHANGE POLICY AND IMPLEMENTATION

JOINT CREDITING MECHANISM IN CAMBODIA HELPS TO REDUCE GHG EMISSIONS

Cambodia has been participating in climate change mitigation mechanisms since 2006 when its first Clean Development Mechanism (CDM) project was approved. Since then, 10 other CDM projects were approved, as well as 2 REDD+ projects and 2 Joint Crediting Mechanism (JCM) projects, with more projects on the pipeline. While CDM and REDD+ mechanisms follow specific requirements set by Conference of the Parties (CoP) of the UNFCCC, JCM is a system to cooperate with developing countries for reducing greenhouse gas emissions, in which the result of reduction is assessed as contribution by both partner countries and Japan.

JCM, established as a bilateral offset credit mechanism, intends to provide greater flexibility in responding to national circumstances of developing countries and facilitating diffusion of GHG reduction technologies, infrastructures, systems and services. The Low Carbon Growth Partnership agreement signed

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LED street lighting technology with wireless network control

INTERNATIONAL CLIMATE DIALOGUES

MEKONG CLIMATE CHANGE ADAPTATION STRATEGY AND ACTION PLAN ADDRESSES TRANSBOUNDARY IMPACTS ON LOWER MEKONG BASIN

The impact of climate change in the Lower Mekong Basin (LMB) countries – Cambodia, Laos, Vietnam and Thailand – is particularly severe, as their economies rely heavily on climate sensitive sectors such as agriculture and fisheries. The cascade of climate change impacts is already putting people's livelihoods at risk despite the efforts undertaken by the individual countries.

An analysis of the four LMB countries' policy responses to water-related impacts of climate change showed that these efforts were not sufficient to address transboundary climate change challenges. This has led the Mekong River Commission and its four member countries to prepare a river basin-wide strategy – Mekong Adaptation Strategy and Action Plan (MASAP).

MASAP focuses on addressing key transboundary issues, including challenges

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IN THIS ISSUE:

EDITOR'S NOTE

Dear Readers,

We would like to welcome you to this issue of the Climate Change Newsletter. We intend to bring this newsletter to you every quarter to reflect on the new climate policy developments in Cambodia and to keep you updated on the work being conducted by Department of Climate Change at the General Secretariat of the National Council for Sustainable Development. Every other quarter, we will be sharing interesting examples of the work being done by many partners and communities to respond to climate change. We are counting on you, dear reader, to join us as a regular or occasional contributor – your Voices from the Ground are essential to the newsletter' success and to our work as climate change practitioners.

EDITORIAL BOARD

This newsletter is prepared, edited and produced by Department of Climate Change of the General Secretariat of the National Council for Sustainable Development with technical assistance from Cambodia Climate Change Alliance.

CLIMATE CHANGE POLICY AND IMPLEMENTATION

JOINT CREDITING MECHANISM IN CAMBODIA HELPS ...

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between Japan and Cambodia in April 2014 marked the start of JCM activities in the country, with the Department of Climate Change, GSSD (JCM's Secretariat) playing a key role in engaging government institutions, private companies and other relevant stakeholders in JCM project development and implementation activities.

The installation of LED street lighting technology with wireless network control, a project approved in 2016, was the first JCM project to be implemented in Cambodia. When all the 9,775 LED units are in place, the project is expected to reduce over 3,500 tCo2eq annually, by reducing electricity consumption through the use of a smart lighting system (wireless network control) and LED high energy efficient light bulbs (up to 80% more efficient than traditional lighting such as fluorescent and incandescent lights). A second JCM project to save energy in a Water Treatment Plant in Phnom Penh was approved this year, with two more renewable energy projects in the pipeline – installation of a 1MW solar powered cooling system at Camko City Aeon Mall, and a 0.8MW solar power generator at the International School of Phnom Penh.

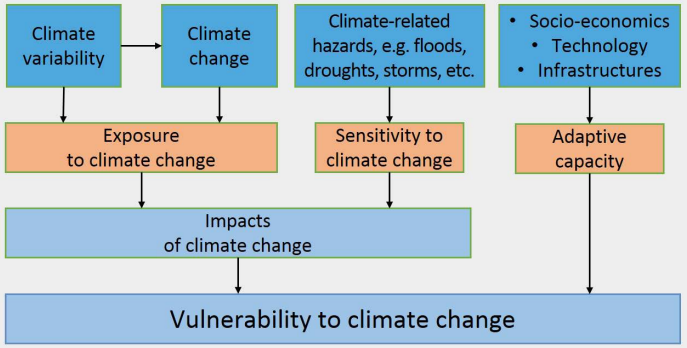
These projects showcase how new energy efficient technologies can help both reduce GHG emissions and cut costs, while contributing to Cambodia's Nationally Determined Contribution (NDC).

CLIMATE CHANGE VULNERABILITY ASSESSMENT: FROM ADAPTATION RESEARCH TO PRACTICE

The Department of Climate Change, General Secretariat for Sustainable Development (GSSD) and the National Committee for Sub National Democratic Development (NCDD) are using the official guidelines for conducting vulnerability reduction assessment (VRA) at the sub-national level. The requirement to conduct the VRA is part of the inter-ministerial Prakas on technical guidelines on the preparation and establishment of subnational development plans and rolling investment programmes, approved by Ministry of Planning and Ministry of Interior in March 2017. VRA results can be used to mainstream climate change adaption and disaster risk management into Commune Development Plans (CDPs) and Commune Investment Programmes (CIPs).

The prakas includes technical guidance on how to conduct a community participatory vulnerability assessment, looking at how climate change has been affecting local communities by examining climate-related hazards, their exposure, sensitivity and adaptive capacity in order to minimize risks. However, the drawback of using this VRA approach is that it does not yet integrate downscaled climate data in the identification of local adaption measures. A next step to improve VRA results will be to use downscaled climate data and climate projections information, as well as to introduce guidance on how to avoid maladaptation in project prioritization.

Vulnerability of a system (i.e. community, environment, infrastructure, etc.) to climate change is assessed in terms of its exposure, sensitivity and adaptive capacity to extreme climatic events as shown in the figure below. Exposure to climate change refers to the degree to which a system is exposed to significant climatic variations. In other words, exposure of a community to climate change refers the presence of that community (including its people, livelihoods, infrastructure and other environmental, economic, social or cultural assets) in places that could be adversely affected by significant climate variation. Sensitivity is the degree to which a system is affected either adversely or beneficially by climate-related hazards. Hazard generally refers to climate-related physical impacts that may cause loss of life or otherwise endanger health, infrastructure, livelihoods and environmental resources. Adaptive capacity is the ability of a system to cope with climate-related risks. For example, a community with high adaptive capacity is one that is prepared and has the means to cope with climate change (e.g. a community that is less dependent on climate sensitive sectors or livelihoods or has adopted climate resilient infrastructure and adaptation technologies).



Conceptual framework of vulnerability assessment

Meeting on the climate change mainstreaming in to CDP and CIP, August 09, 2017, Koh Kong Province

VRA TOOLS

1. Hazard mapping to capture local vulnerability to and impacts of climate change with the participation of key local stakeholders.
2. Historical trend analysis of climate-related hazards is conducted to understand the degree of exposure and sensitivity to extreme climate events in terms of their frequency, intensity and impacts among vulnerable groups, including women and the poor.
3. H form analysis is a participatory evaluation tool to consolidate the trend analysis by exploring key extreme events and their impacts in specific local areas. This tool also helps to mobilizing local available resources and formulating adequate adaptation measures.
4. Ranking of proposed adaptation projects to reduce vulnerability of target groups. This tool helps to prioritize adaptation options and to mobilize support from potential partners.

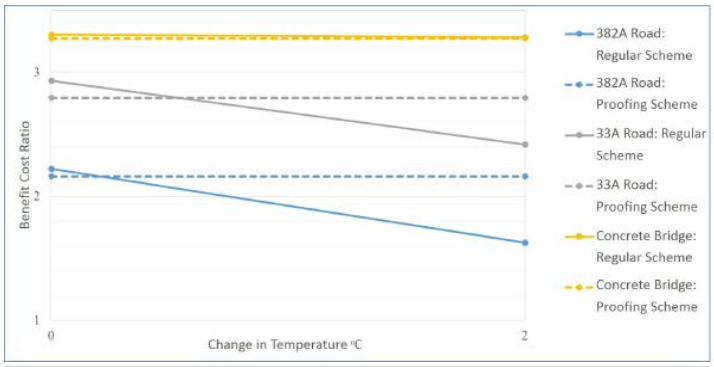
CLIMATE RESPONSIVE BUDGETS CAN HELP ENHANCE CAMBODIA'S GDP GROWTH

Cambodia is ranked among the top ten most vulnerable countries to climate change. 17% of communes are rated as being "highly" vulnerable and 32% "quite" vulnerable to climate change (NCSD, 2014). Ultimately, climate change losses could reduce GDP growth by 1.5% in 2030 and by 3.5% in 2050. Without climate change action, GDP growth could be reduced to just 1% per year by 2050 (CCFF, 2014).

Since 2015, CCCA has been working with MAFF, MoWRAM, MPWT, and MRD to help them integrate climate change in their budgeting and planning processes. GIZ has provided similar support to MOE and MOH. Climate-sensitive cost-benefit analysis shows that climate responsive budgets and climate smart planning increase economic benefits and GDP growths.

The figures shown here compare projects included in MPWT's budget request to MEF for fiscal year 2017 with and without climate proofing.

Analysis made for the rehabilitation of Road 382A in Prey Veng, upgrading from the current laterite structure to Double Bituminous Surface Treatment (DBST) for 1.2km length and 6m width, found that:



Climate Change Implications for Benefits in the Pilot Analysis

- The investment should be justified by taking climate change into account. The analysis shows that the Benefit Cost Ratio (BCR) for regular scheme falls from 2.22 to 1.63 once climate change is factored in while BCR for the climate

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INTERNATIONAL CLIMATE DIALOGUES

MEKONG CLIMATE CHANGE ADAPTATION STRATEGY ...

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placed by growing energy and water demands of the four LMB countries, where seasonal water shortages are already common. LMB countries' climate changes responses often include significant investment on hydropower and irrigation dams in main and tributary streams of the Mekong river as part of their priority adaptation and mitigation measures, which in turn are causing significant changes in Mekong's water regimes. This is resulting in increased threats to national food security and environment and natural resources degradation, in particular in downstream countries.

Once approved, MASAP will provide guidance and support to MRC member countries on critical transboundary issues, including:

1) the need to address the climate and water linkage at basin level using integrated water resources management (IWRM) approach;
2) the need to address transboundary issues associated with climate change adaptation; and
3) the need to support riparian countries to implement their adaptation strategies and plans at national, regional and international level.

MASAP includes also a portfolio of concept notes for trans-boundary adaptation projects, and focuses on seven strategic priorities:

1) Mainstreaming CC into regional and national policies, programs and plans;
2) Regional and international cooperation and partnership on adaptation;
3) Implementation of transboundary, gender sensitive adaptation options;
4) Access to adaptation finance;
5) Monitoring, data collection and sharing;
6) Capacity development for climate change adaptation strategies and plans;
7) Outreach of MRC products on climate change and adaptation.

Third regional consultation on MASAP was organized in Cambodia, November 18, 2016, Siem Reap Province

The development of MASAP, which started with a kicked-off meeting in 2014, included several rounds of consultations. The most recent was held in Lao PDR on 26 June, where a Regional Stakeholder Forum provided a final opportunity for civil society, non-governmental and governmental organizations, and regional and international groups to comment on the draft document.

This basin-wide strategy is a unique opportunity to complement the existing national climate change strategies and plans of the four LMB countries, as well as their Intended Nationally Determined Contributions related to adaptation. The final draft of the MASAP is to be discussed and endorsed in the joint committee with formal approval expected later this year.

CLIMATE CHANGE POLICY AND IMPLEMENTATION

CLIMATE RESPONSIVE BUDGETS CAN HELP …

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proofed scheme is maintained at 2.16, which strengthens the case for climate proofing the design of rehabilitation.

- The benefits of climate proofing are in the form of avoidance of climate damage and associated emergency repair and maintenance costs.
- For the case of the pilot bridge construction (yellow lines in the graph), the benefits of climate proofing are less obvious.

The Royal Government of Cambodia has integrated climate change references into the Budget Strategic Plan circular (BSP) 2018-2020 and annual budget law circular 2018. Concerned line ministries can now use cost-benefit analysis to demonstrate the increased benefits of climate-proofed infrastructure over time, and justify the higher initial investment costs. For the recurrent budget, ministries should screen their activities to determine if they are climate relevant and request additional resources for climate proofing where required. Continuous engagement between MEF and line ministries is required to ensure that this information on the economic benefits of climate-responsive budgeting is reflected in government investment decisions.

Consultation meeting with MPWT to mainstream climate change into MPWT's Investment Programme and Budget Plan for 2018, by using CBA results, June 6, 2017 at MPWT office

VOICES FROM THE GROUND

HOW THE PROVINCIAL COMMITTEE FOR DISASTER MANAGEMENT BUILDS ITS CAPACITY AGAINST CLIMATE RISKS

Kep province is a coastal province in southern Cambodia. It is exposure to climate risk is causing great concerns, with increasely frequent and more severe extreme weather events such as storm surges and drought, as well as salt water intrusion. The Provincial Committee for Disaster Management (PCDM) at its different levels (provincial, district and commune) and other relevant provincial departments have strengthened their capacity to deal with climate risk. Ms. Keo Ny, deputy director of the Provincial Department of Women's Affairs and member of the PCDM for Kep, has been working with PCDM to deal with climate risk.

Ms. Keo Ny, Representative of Damnak Chang Erh District, and Pong Toek commune chief (from the right to left) give a status update on the capacity to deal with the climate risk

Though Ms. Keo Ny is new to this field – her first training on climate change was in 2016 – she has always been engaged in building capacity and commune activities. She attended trainings, together with other provincial staff on disaster risk reduction and commune councils, on how to announce extreme weather events to local communities through public speakers. She has expanded this early warning tool by using announcements on radio, TV, and mobile phone. Thanks to a training on environmental education, which included a specific part on climate change, she became familiar with climate change, its causes and impacts, and with adaptation and mitigation measures which could be adopted to cope with it.

For her, the early warning system is an ideal instrument to generate and disseminate, in a timely manner, information on climate hazards. This helps commune to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss. However, the system has not yet been available in Kep. The provincial staff has then decided to apply a problem-based approach to tackle climate risk. For example, they, together with sectoral departments, constructed a sea wall along the seashore to help reduce problems with salt

Sea wall along the seashore to prevent salt intrusion

intrusion. In addition, the provincial department of agriculture enhanced people's capacity on climate change adaptation by providing basic awareness, distributing more resilient rice varieties, and training on livestock raising. District officials have also educated people on water and sanitation management through small group meetings.

In her opinion, the knowledge gained from the trainings is not yet sufficient because they are too short and the materials provided are not adequate. She suggests some recommendations to improve preparedness and community awareness:

- Conduct a training of trainers on climate change tailored to the local context;
- Develop training materials more focused on climate change and providing practical interventions;
- Avoid short one-day trainings;
- Provide support to make the early warning system available in the province;
- Make posters on practical adaptation and mitigation measures available in commune offices.

RICE INTENSIFICATION SYSTEM INCREASES PEOPLE CAPACITY TO ADAPT TO CLIMATE CHANGE

Ms. Nhem Phea, a 48-years old farmer living in Bosleav Krom village, Kratie province, shows us how to adapt to climate change using the System of Rice Intensification (SRI). She currently lives in a small wooden house, and owns two plots of land (6 ares) where she grows rice and vegetables. Until recently, the yield of her crops had never been high because she lacked knowledge of good agriculture practices. In addition, climate change, particularly irregular rains, drought and flood, has damaged seedlings and pulse crops, and has triggered pests.

Seeing this situation, Ms. Nhem Phea decided to change her farming method in 2016, by setting up the SRI on part of a land plot with support from Save Cambodia's Wildlife and their project on "Improvement of rice production in Kratie Province". The SRI is a series of agricultural techniques which could help reduce climate change impacts and increase rice production. Ms. Phea and villagers participated in five sessions of SRI approaches in line with rice growing phases:

Session 1: Rice seeds selection
Session 2: Seed bed preparation and seeding
Session 3: Rice transplanting
Session 4: Maintenance
Session 5: Rice collection and storage

After practicing this technique for a while, she observed that the amount of seeds used had been reduced with a single seedling per clump (primary shoot) producing at least 20 to 30 secondary shoots with longer panicle. This more than doubled her rice yield. She noted that she could increase production by farming in the early rainy season before flooding. She manages to increase her production up to 302 kilograms while in the previous year, it was only 160 kilograms. Ms. Phea noticed that she had never participated in previous projects. She used to be careless in seed selection and maintenance and she was using more varieties. She now uses less seeds, her family has more money to buy food and she can save for other family expenses.

She will continue this practice and use it on a larger piece of land. In addition, she is committed to disseminate and share her experience with other villagers. *(Text by SCW through NGO Forum on Cambodia).*

15 day-old SRI rice field of Ms. Nhem Phea

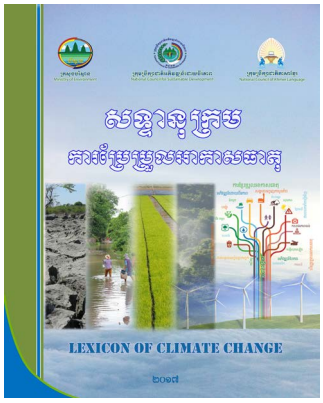
Ms. Nhem Phea shows her field demonstration

System of Rice Intensification Approach:
SRI aims to create optimal conditions for the growth of roots and tillers. As root growth increases, tillers and grains per plant increase. The basic SRI ideas or principles include:

- Transplanting healthy, vigorous, relatively young seedlings grown from healthy, full-bodied seeds which are sown in an upland nursery bed, similar to a vegetable bed, and watered by hand as needed.
- Wider spacing between each rice plant, preferably with one seedling per hill and with wider and equal spacing between each hill, in a square pattern, to avoid competition among individual rice plants for the spread and growth of their roots and canopies.
- Shallow and gentle transplanting (just 1-2 cm deep) to ensure faster root growth.
- Aerobic soil conditions by avoiding continuous field saturation with flooded standing water.
- Frequent weeding to control weed competition, preferably with a mechanical hand weeder -- such as active soil aeration which favors root growth and the growth of beneficial soil organisms.
- Increase organic matter in the soil through application of compost, which boosts soil biological activity.

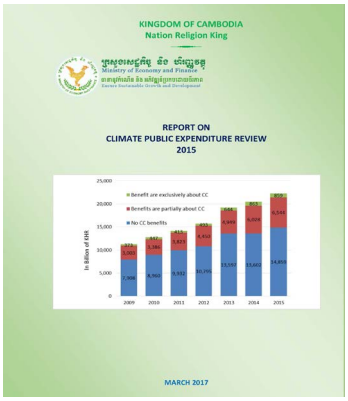
(Source: CEDAC 2012)

RECENT PUBLICATIONS



Lexicon of Climate Change
www.camclimate.org.kh/en/lexicon.html

Lexicon of Climate Change App
For Andriod: CCLexcicon
For iOS: CCLexicon



Report on Climate Public Expenditure Review (CPER) 2015
www.camclimate.org.kh/en/documents-and-media/library/category/39-financing.html?

IN THE NEXT ISSUE ...

Government and Development Partners discuss the establishment of ongoing policy dialogue and coordination response to climate change

Climate change is a cross-cutting issue, not a sector in itself. Isolated climate change programmes should not be developed in Cambodia as silo approaches to climate change do not work. The only way to achieve results is by integrating climate change actions into sectors' daily work, including in their planning and budgeting processes, and by ensuring that climate financing is well aligned with national priorities and that there is better coordination among partners to avoid duplication. In the next issue, you will learn the steps being taken to improve policy dialogue and coordination between government and development partners.

UPCOMING PUBLICATIONS

Adaptation Guides help mainstream climate adaptation into Agriculture, Water Resources, and Green Infrastructure sectors

Adaptation Guides are a series of practical tools to inform decision makers on how to mainstream climate resilience into specific sectors, including Agriculture, Water Resources, and Green Infrastructure. The guides, developed with support from the Mainstreaming Climate Resilience into Development Planning (MCRDP) and in consultation with the respective line ministries (i.e. Ministry of Agriculture, Forestry and Fisheries, Ministry of Water Resources and Meteorology, Ministry of Rural Development, and Ministry of Public Works and Transport), are expected to be published in September 2017, both English and Khmer.

UPCOMING EVENTS

Aug: Training workshop on climate change to Youth in Koh Kong province
Aug: Advanced training workshop on GIS climate change downscaling
Aug: Regional conference on community-based disaster risk management
Sep: Training workshop on climate change at Prek Leap National School of Agriculture
Sep: 2nd meeting of the National Council for Sustainable Development

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Contact:
Department of Climate Change
General Secretariat of the National Council for Sustainable Development
c/o Ministry of Environment
No. 503, Road along Bassac River, Sangkat Tonle Bassac, Chamkarmon, Phnom Penh
Tel: +855-23 640 8370 | E-mail: admin@camclimate.org.kh
Website: www.camclimate.org.kh