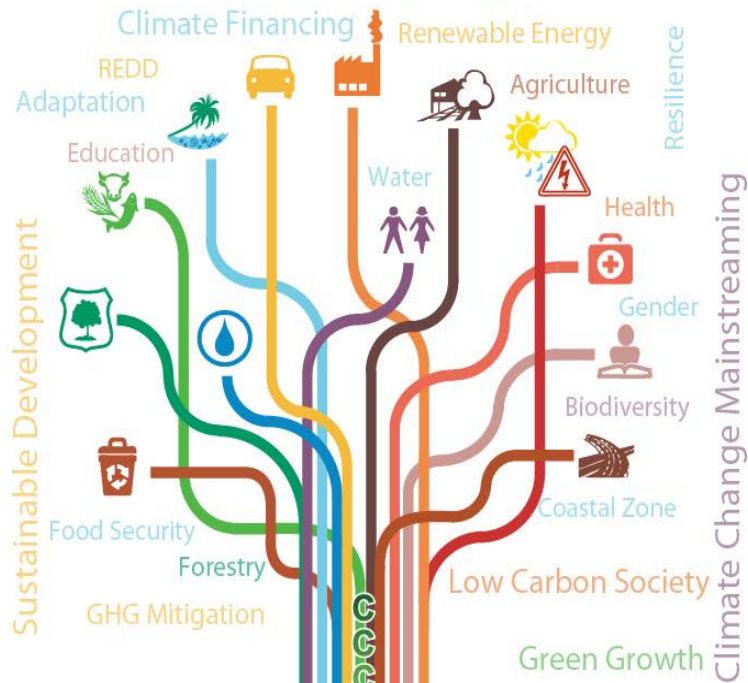


3rd National Forum on Climate Change

5 – 7 November 2013, Cambodia

“Taking Action for Sustainable Development in the Changing Climate”

Climate Change



Mitigation Potential, Progress and Way forward

By Uy Kamal

Deputy Director

6 November 2013

CAMBODIA CLIMATE CHANGE ALLIANCE



Background

- Cambodia ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1995,
- Assessed to Kyoto Protocol in 2002,
- Established Designated National Authority (DNA) in 2003,
- Started implementing REDD+ in 2010

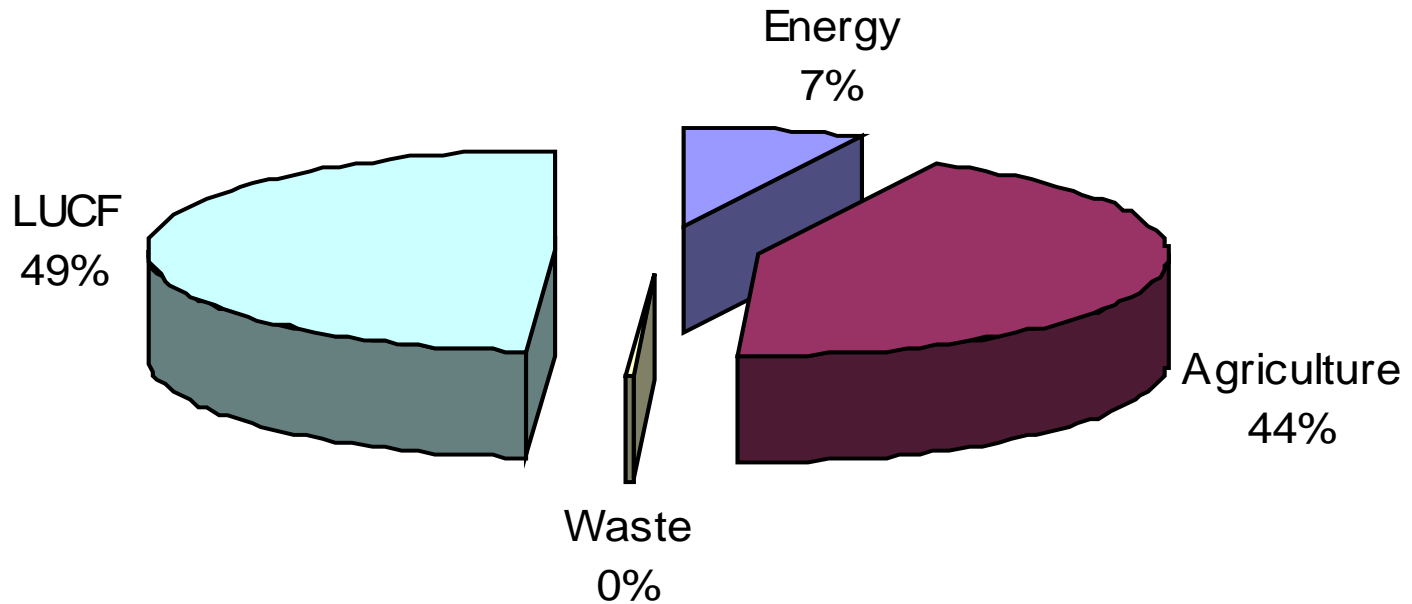
Background

Nat. GHG Inventory for 2000 (1)

GHG Source and Sink Categories	CO₂ Emissions	CO₂ Removals	CH₄	N₂O	Total , Gg CO₂e.
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

Background

Nat. GHG Inventory for 2000 (2)



Potential Sectors for GHG Mitigation in Second National Communication

Energy and Transport (1)

- ❑ Under the baseline **total emissions** for the energy and transport sector increase from **2,632 GgCO₂ eq.** in 2000 to **25,549 Gg CO₂ eq.** in 2050
- ❑ However, **emissions per capita** remain low relative to neighboring countries, increasing from **0.2 tCO₂ eq./per/y** in 2000 to **1.3 tCO₂ 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. CO₂ eq.**, followed by the energy industries (electricity generation) with **8,888 Gg. CO₂ 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 CO₂ eq. reduction by 2050
- Scenario analysis indicates a potential range in emission savings from 573 to 7,094 Gg. CO₂ eq. The lower bound estimate relates to **short term options financially attractive to the private sector**. The maximum emission reduction of 7,094 Gg. CO₂ eq., a 28% reduction relative the baseline, requires **a mixture of private sector investment, donor financing and Government policy development**.

Agriculture, Forestry and Land Use (AFOLU) (1)

- ❑ Overall, emissions are projected **to increase** from -8,822 GgCO₂eq. 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 tCO₂eq./capita in 2050
- ❑ The GHG emissions from the **agricultural sector** is forecast to almost double, increasing from 21,559 GgCO₂e in 2000 to 38,601 GgCO₂e in 2050
- ❑ Within the agriculture sector, emissions from agricultural soils increase the most (2,362 to 6,362 GgCO₂e) followed by livestock (4,872 to 10,018 GgCO₂e) and rice cultivation (14,365 to 22,625 GgCO₂e).

Agriculture, Forestry and Land Use (AFOLU) (2)

- The LUCF sector remains a **net sink**, however the sink capacity falls from -30,421 GgCO₂e in 2000 to -4,836 GgCO₂e 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 GgCO₂e in the agriculture sector and net sinks increased by -20,545 GgCO₂e 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.

Progress and Current Activities

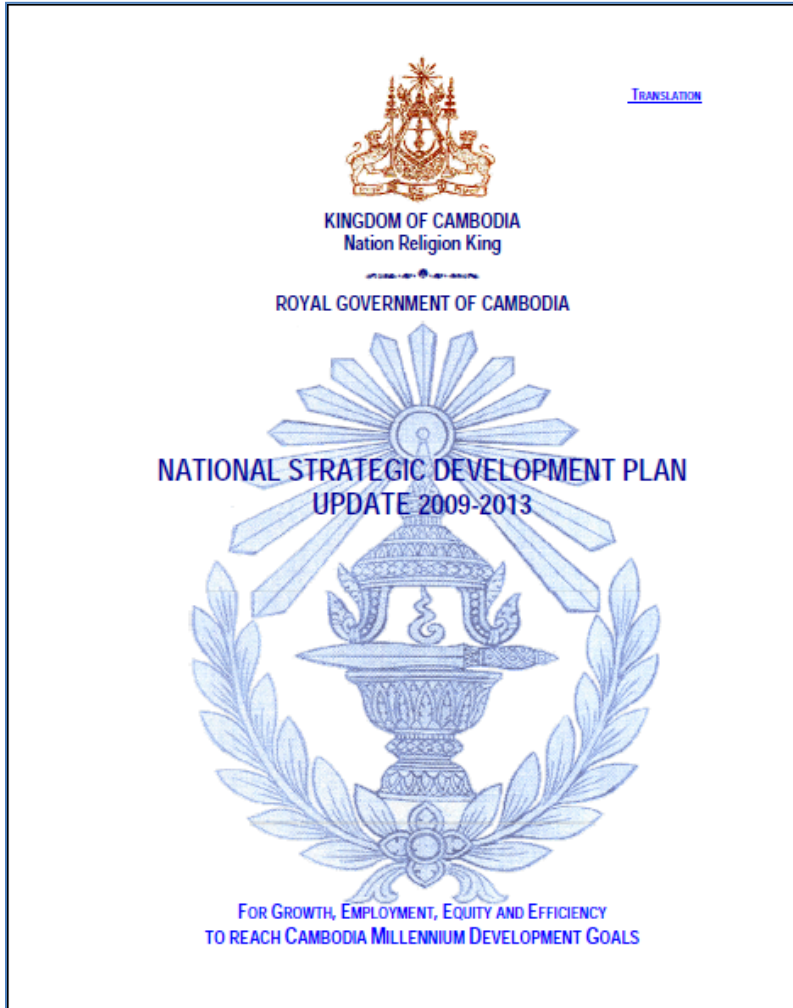
Progress

CDM Projects Approved by Cambodian DNA

Type of project/Year	2006	2007	2008	2009	2010	2011	2012	Total
Biogas		2		1	1			4
Hydro power			1			1	2	4
Waste/heat gas utilization			1					1
Biomass	1							1
Total	1	2	2	1	1	1	2	10

Progress

Integration of Climate Change Responses into National Strategic Development Plan 2014-2018



- IMPROVING AGRICULTURAL PRODUCTIVITY AND DIVERSIFICATION
- FISHERIES REFORM
- FORESTRY REFORM
- ENVIRONMENTAL PROTECTION, CONSERVATION, AND CLIMATE CHANGE
- DISASTER MANAGEMENT
- PRIVATE SECTOR DEVELOPMENT AND EMPLOYMENT
- CAPACITY BUILDING AND HUMAN RESOURCES DEVELOPMENT
- ...

Progress

Development of CCCSP & CCCAP

Vision:

Cambodia develops towards a greener, climate resilient, equitable, sustainable and knowledge-based society.

MISSION

Creating a national framework for engaging public and private sectors, and civil society in a participatory process for responding to climate change to support sustainable development.

Timeframe

10 years with 5 years revision in line with NSDP mandate



KINGDOM OF CAMBODIA

Nation, Religion, King

ROYAL GOVERNMENT OF CAMBODIA

CAMBODIA CLIMATE CHANGE STRATEGIC PLAN

2014 – 2023

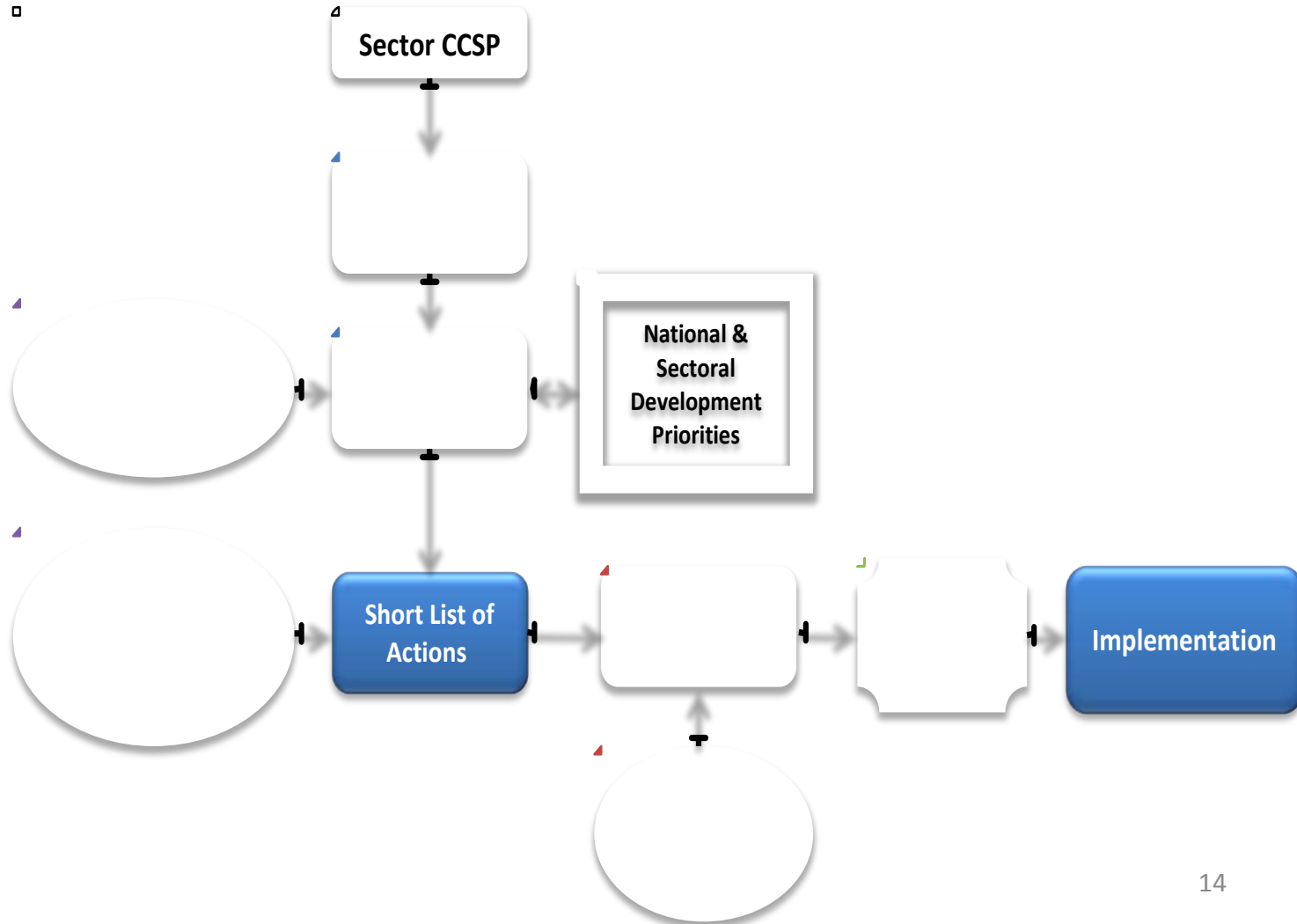
2013

National Climate Change Committee

Progress

Climate Change Action Plan

The CCAP is being developed to support the implementation of Sectoral Climate Change Strategic Plans of line ministries; It will be finalized in Dec. 2013



Current Activities

Clean Development Mechanism (CDM)

- Continue capacity building activities for DNA members within regional and international consultation meetings/dialogs to find appropriate future carbon market mechanisms
- To explore more inputs from local relevant stakeholders including private sector for any possibility to engage more CDM and CDM PoA in the current situation where demand side of carbon credit is dramatically dropping down to minimum level ,
- Study possibility to link CDM with other new market mechanisms such as NAMA and JCM, and to find appropriate funding mechanisms and supported policy and programs,

Current Activities

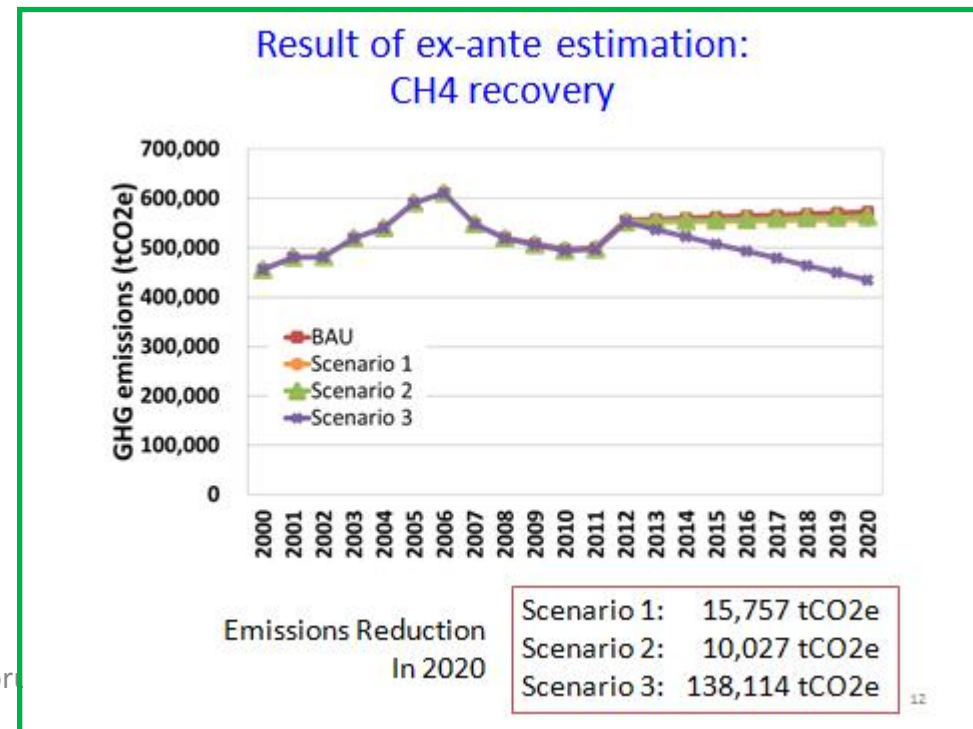
Developed Standardized Baseline (SB)
for rice mill in order to implement PoA

- SB has been submitted to CDM EB for approval on 25 September 2012,
- The recent update from EB secretary suggested to update data in F-CDM-PSB form so that the submission will be considered at the EB76 in early Nov 2013,

Current Activities

National Appropriate Mitigation Action (NAMA)

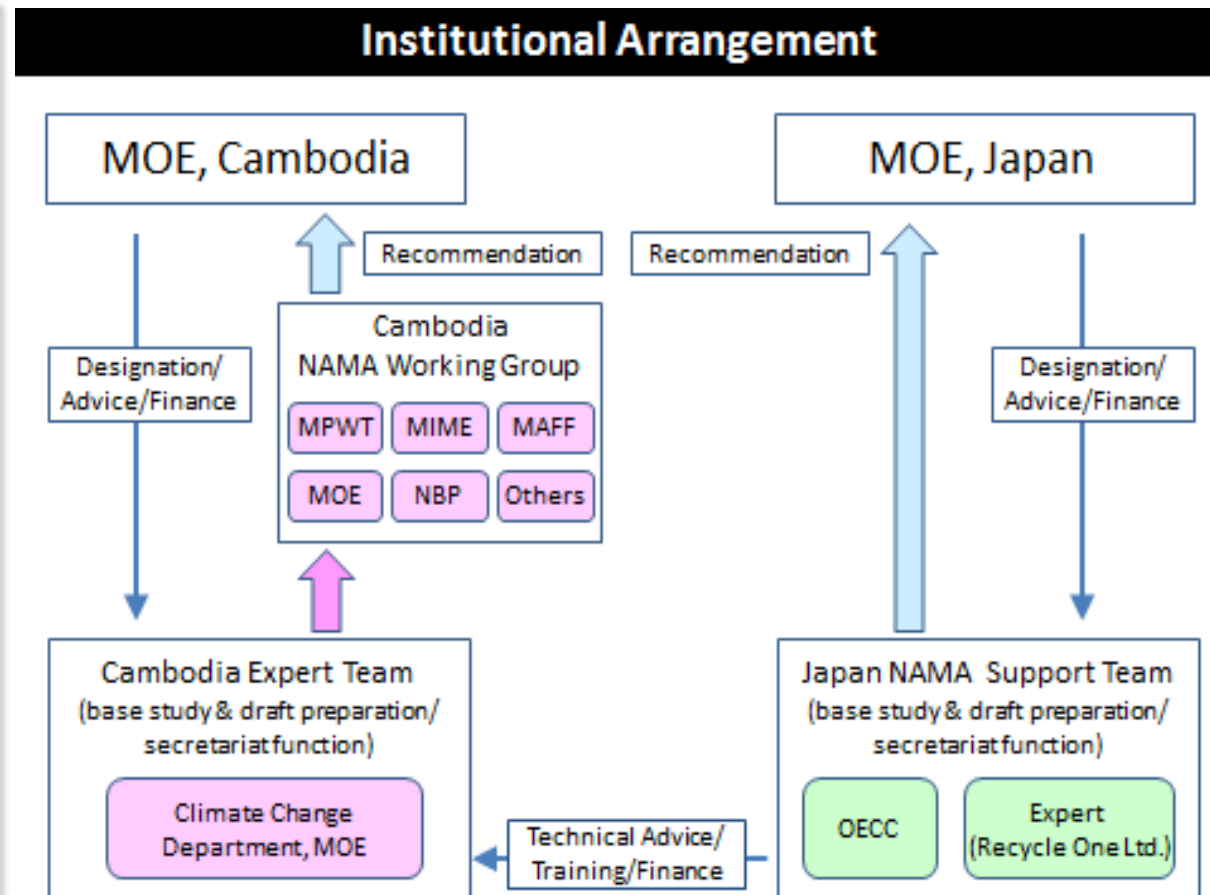
- Under cooperation with OECCC of Japan, CCD started conducting feasibility study on Cambodia NAMA in 2011
- National Bio-digester Program was selected for a case study during July 2011- March 2012



Current Activities

National Appropriate Mitigation Action (NAMA)

- NAMA feasibility study (Aug. 2013-Feb 2014)
 - Operation of NAMAs Implementation Framework
 - Information collection for Business-as-usual (BAU) and NAMA
 - Investigation of BAU and NAMA in energy and transport sector



Current Activities

Project Proposal on developing Joint Crediting Mechanism seeds in the water supply sector in Cambodia

What is “Joint Crediting Mechanism (JCM)”?

- JCM is a new scheme proposed by the Government of Japan to promote low-carbon societies in developing countries
- JCM provides developing countries with opportunities to facilitate diffusion of energy saving technologies, products, systems, service and infrastructure
- Japan hopes to contribute to reducing global greenhouse gas emissions through supporting implementation of greenhouse gas mitigation projects in host countries under the JCM



Current Activities

Reducing Emissions from Deforestation and Forest Degradation (REDD)

Cambodia REDD+ Taskforce will develop:

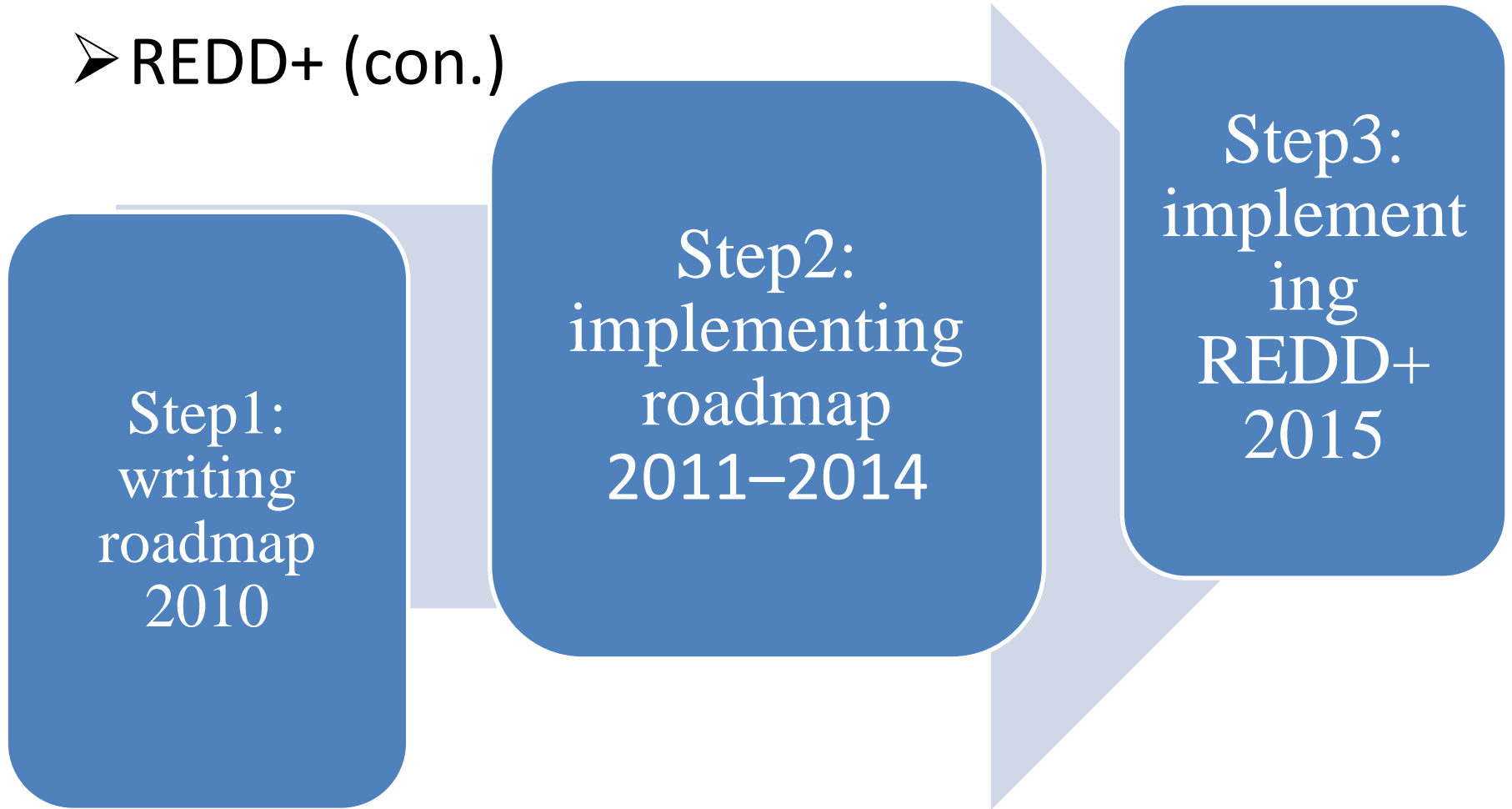
- National REDD+ strategies
- National monitoring system
- Reference level
- Safeguards systems



Photo: REDD+ Secretary

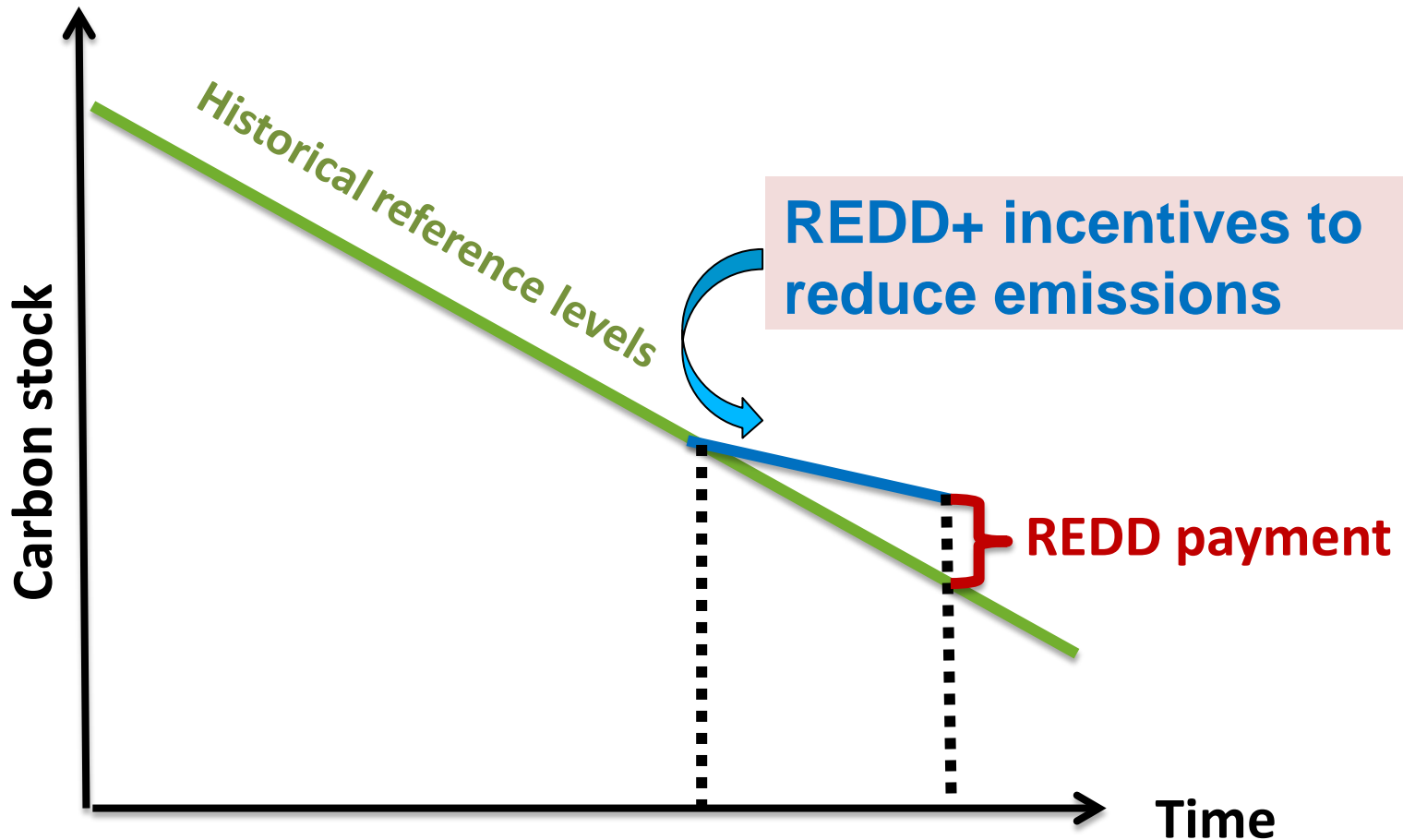
Current Activities

➤ REDD+ (con.)



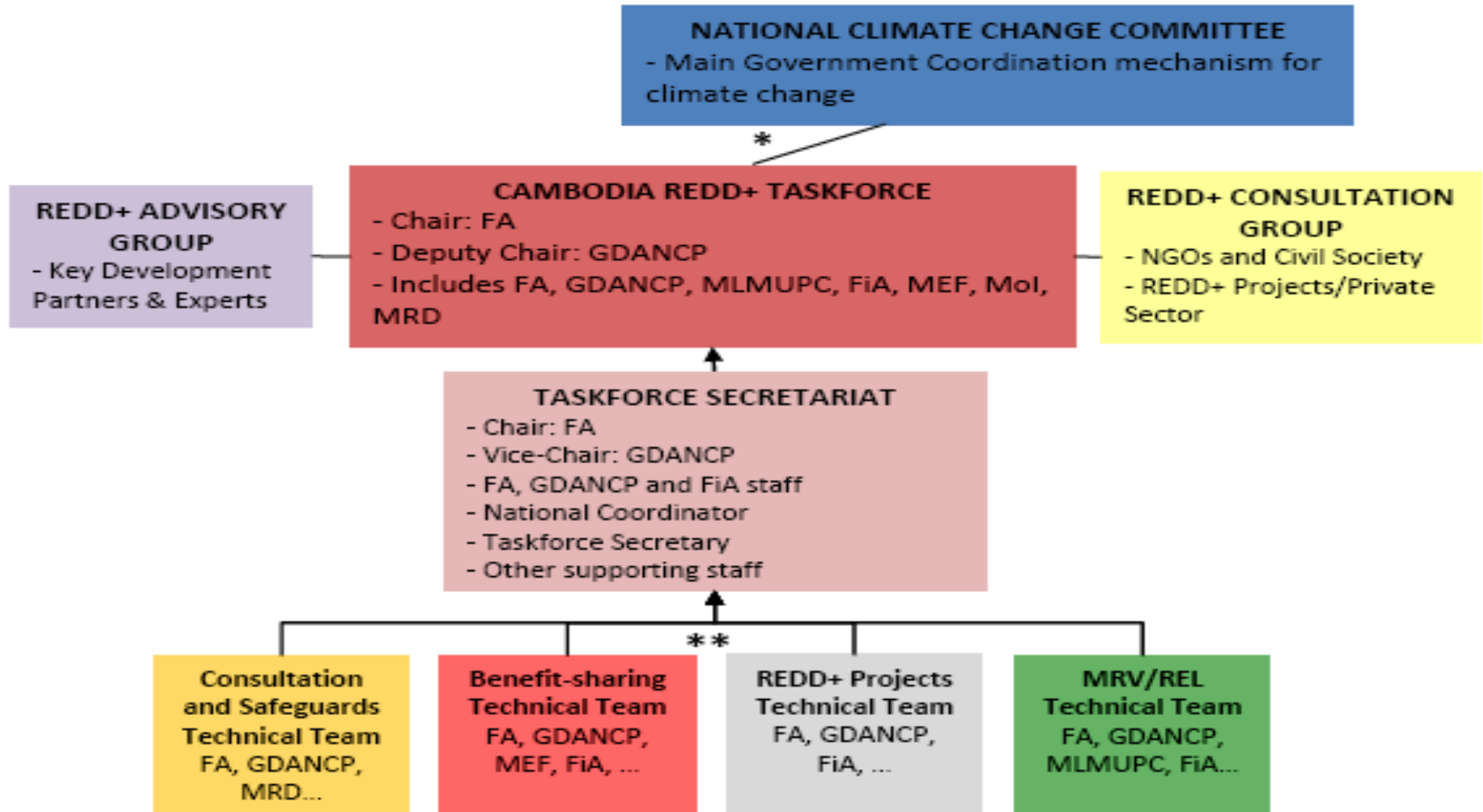
Current Activities

- REDD+



Current Activities

Current REDD+ Management Structure



* Represents reports from the Taskforce sent to the NCCC

** Taskforce Technical Teams will include Government and non-Government representatives as appropriate

Current Activities

Green Growth Development

National Strategy Plan on Green Growth 2013-2030 was adopted by RGC on 1 March 2013.

The strategy needs to improve green growth by focusing strategic direction includes:

- 1-Green Investment and Green Jobs Creation
- 2-Green Economy Management in balance with Environment
- 3-Blue Economy Development with Sustainability
- 4-Green Environment and Natural Resources Management
- 5-Human Resources Development and Green Education
- 6-Effective Green Technology Management
- 7-Promotion of a Green Social Safety System
- 8-Uphold and Protection of Green Cultural Heritage and National Identity
- 9-Good Governance on Green Growth



Current Activities

Energy and Environment Partnership Program with the Mekong Region

EEP/Mekong Phase 1 (2009-2012): **EEP Mekong** is funded by the Ministry for Foreign Affairs of Finland and the Nordic Development Fund. It aims at supporting wider provision and use of renewable energy and combating climate change. This is done by providing funding for projects, studies, capacity development and information-sharing related to the issues. EEP is a demand-driven programme and promotes public-private partnership.

➤ There are 8 projects have been granted for implementation. The projects work with Solar, Biomass, Energy Efficiency and Waste to Energy.

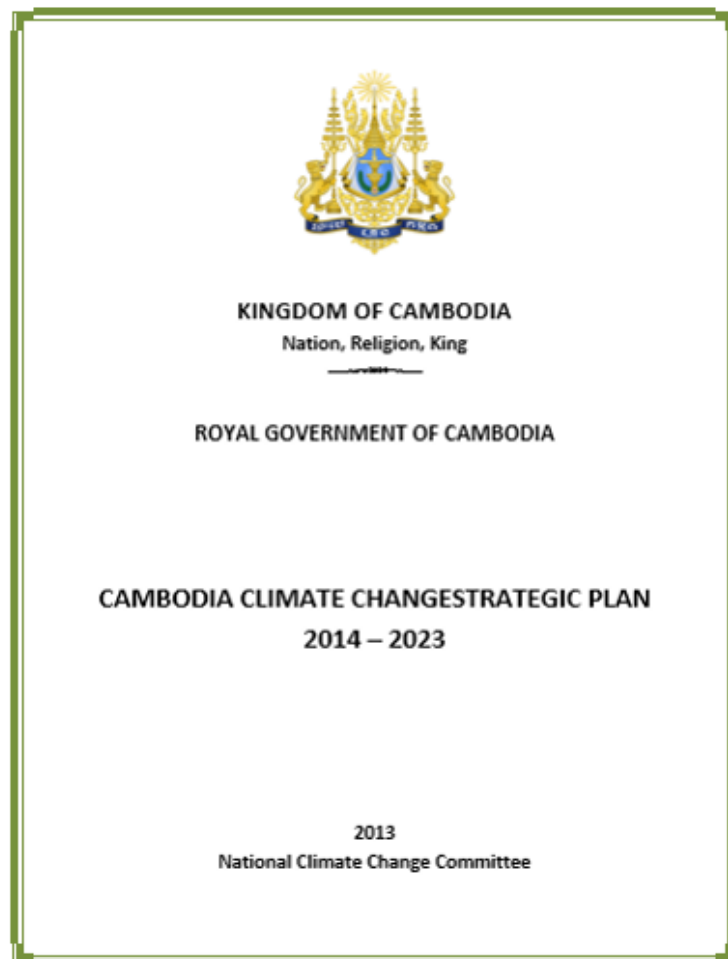
EEP/Mekong Phase 2 (2014-20??): the 4th Call for proposal is ended recently. Potential project proposal from Mekong Region including Myanmar are being evaluated for selection.

Way Forward

Follow Up Activities/Plans

Disseminate CCCSP & Keep developing CCAP

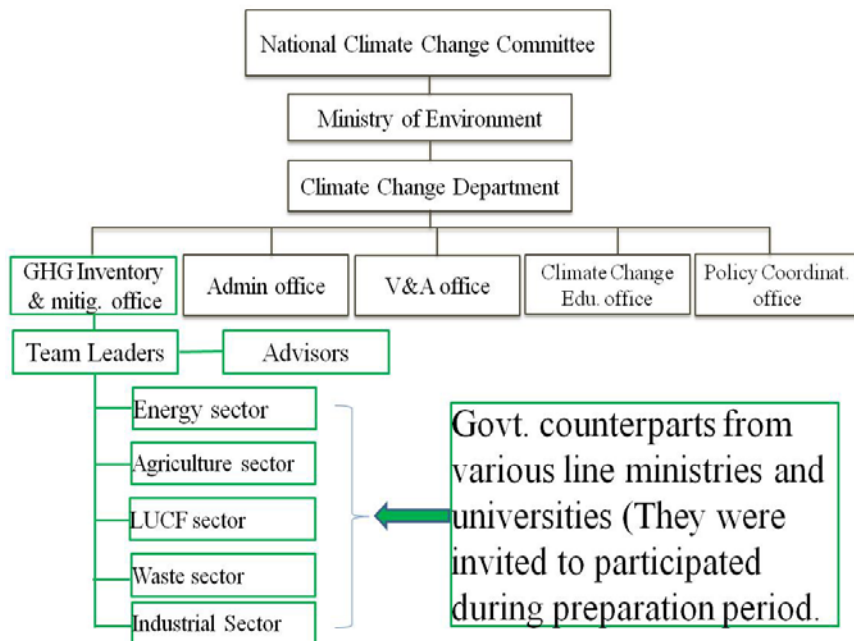
- Publish and disseminate CCCSP to all stakeholders
- Continue to coordinate all line ministries to preparation sectoral climate change action plans and finally, the national climate change action plan
- Engage stakeholders including private sector to implement those sectoral and national strategic Plan and Action Plans.



Follow Up Activities/Plans

Updating GHG inventory team- Moving from Project Base to Institutional Base Approach

- 1: Development of of plans/strategies for GHG inventory institutional arrangement
- 2: Capacity building for inventory compilation for GHG Inventory team
- 3: Implementing plans/strategies for a National Inventory System



MoE-USAID
Signing ceremony
on May 31, 2013



Follow Up Activities/Plans

Follow up international GHG emission reduction mechanisms/initiatives

In following with government position on Climate Change:

- Keep continue to find further opportunity with CDM and CDM PoA,
- Take consideration and adaption of new market mechanisms, i.e. JCM, and programmes like sectoral NAMA, REDD+, tec., that it could provide both economical and environmental benefits for Cambodia
- Encourage/coordinate capacity building and promote appropriate technology transfer

Follow Up Activities/Plans

Scale up existing potential emission reduction projects/activities

- Review existing pilot project activities under various mitigation mechanisms, such as CDM, EEP for potential and scale up
- Finding new potential projects within potential sectors as stated in SNC particularly energy and transport, agriculture, forestry and land use, and waste
- Engage public and private sectors into mitigation activities,

Strengthening existing and Finding cooperation partners

IGES, OECC, NEXUS, EEP, UNDP and other potential direct financial partners, i.e. WB, ADB, KfW, etc.,

A greener Cambodia!

Thank You !

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: kamaluy@hotmail.com

www.camclimate.gov.kh

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