



**Designing and Establishing
Cambodian Low Carbon Development Plan**

**GHG Inventory and Mitigation
in Cambodia**

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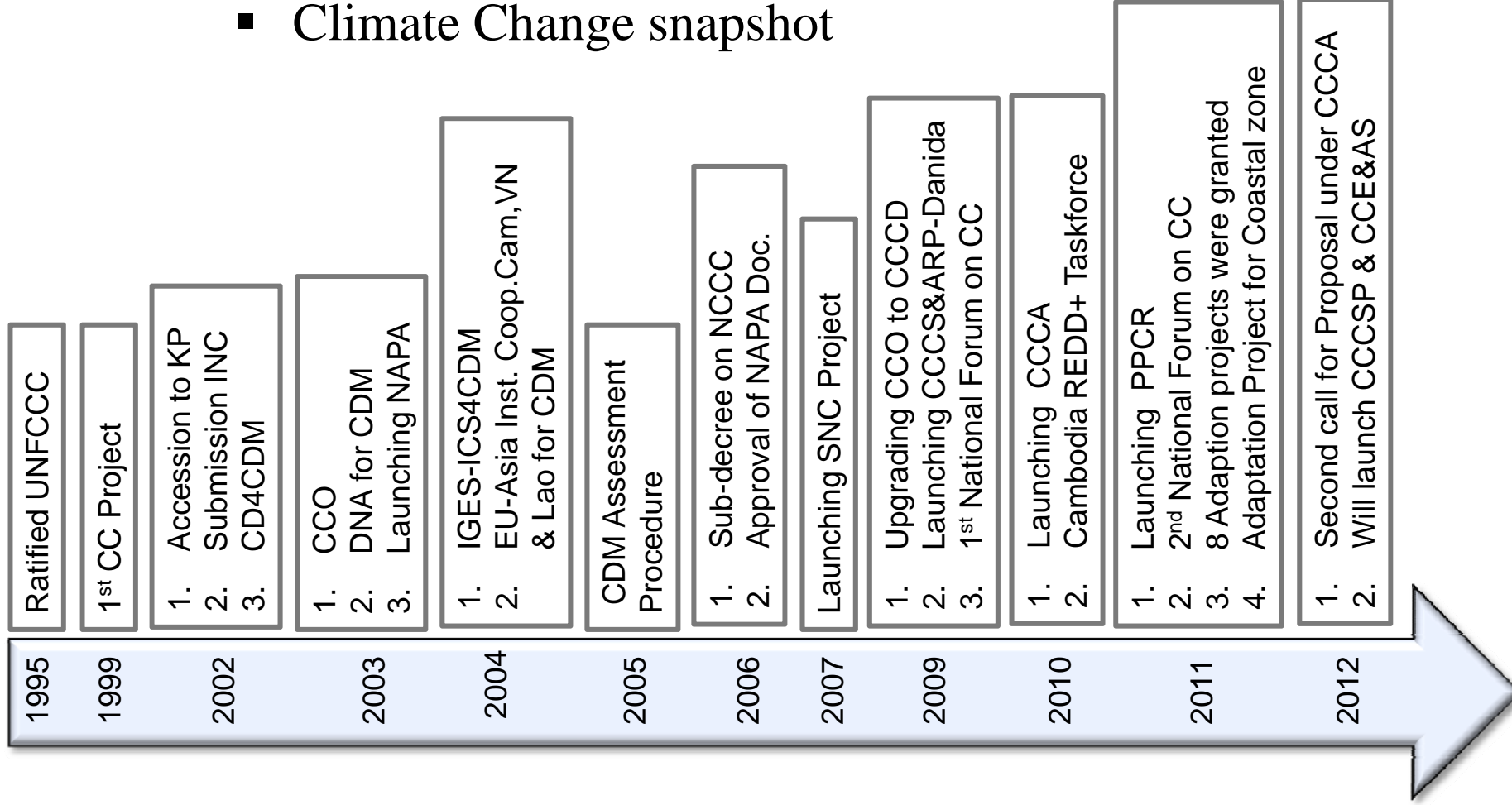
HIMAWARI Hotel, Phnom Penh

OUTLINE

- 1. Background**
- 2. National GHG Inventory 2000**
- 3. GHG Mitigation in SNC**
- 4. On-going Programs/activities**
- 5. Next activities**

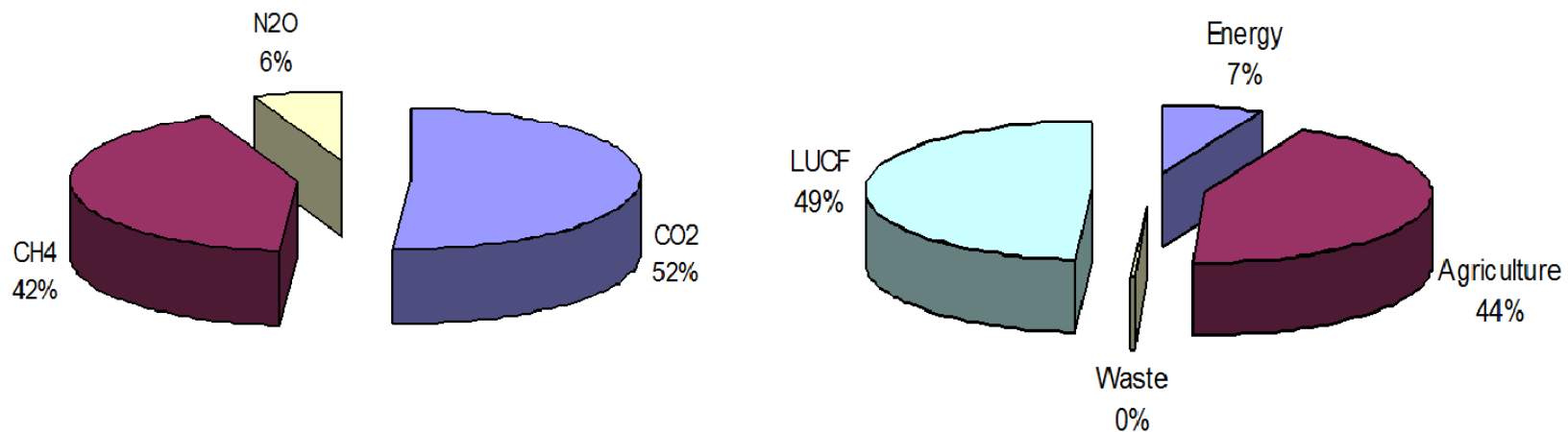
1. Background (1)

■ Climate Change snapshot



2. National GHG Inventory 2000

GHG Source and Sink Categories	CO ₂ Emissions	CO ₂ Removals	CH ₄	N ₂ O	Total , Gg CO ₂ e.
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

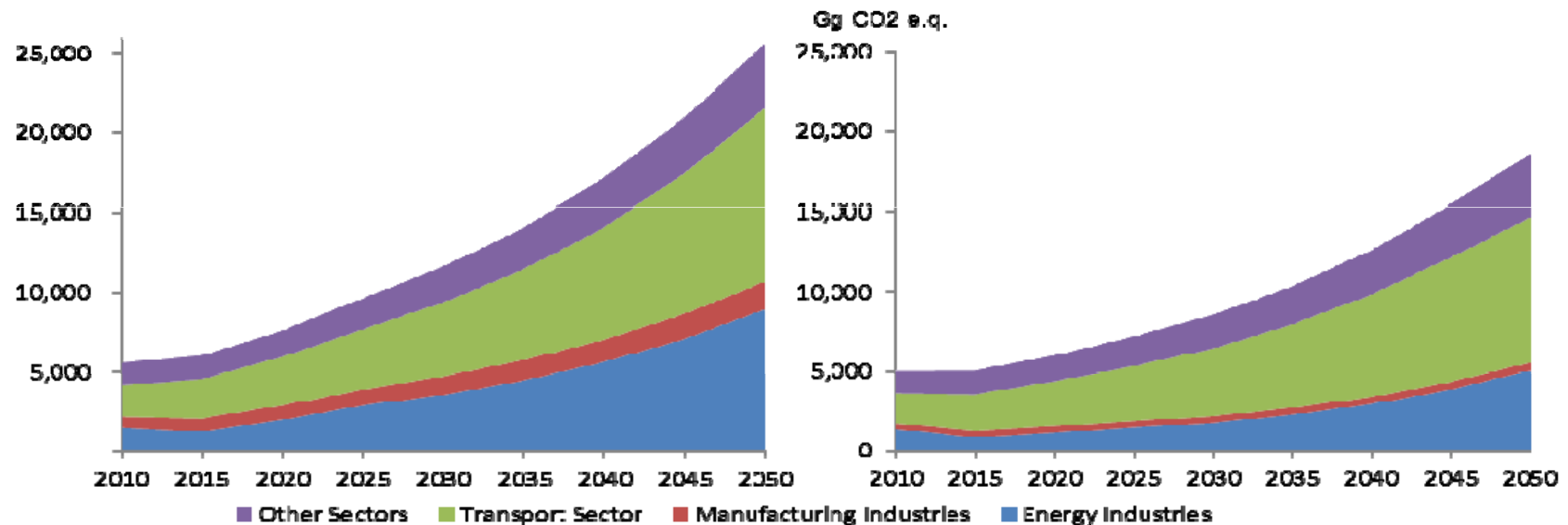


3. GHG Mitigation in SNC

Energy and Transport

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 GgCO₂eq. reduction by 2050.



3. GHG Mitigation in SNC (cont.)

AFOLU

Overall, emissions are projected **to increase** from -8,822 GgCO₂e in 2000 to 34,112 in 2050, and consequently the AFOLU sector becomes a net emitter

➤ 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).



3. GHG Mitigation in SNC (cont.)

AFOLU

The LUCF sector remains a net sink, however the sink capacity falls from -30,421 GgCO₂e in 2000 to -4,836 GgCO₂e in 2050

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.

3. GHG Mitigation in SNC (cont.)

Other activities

- Cambodia supports **technology transfer** and adequate **financing** as a means of addressing adaptation and mitigation
- 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**

4. On-going Programs/activities (1)

CDM Basic Information

Project Status	Num.
CDM projects approved by Cambodia's DNA	10
CDM projects registered at CDM EB	5
CDM Project issued CERs by CDM EB	1
CDM projects at or after the validation stage	4

Approved CDM Projects by 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 utilisation			1					1
Biomass	1							1
Total	1	2	2	1	1	1	2	10

4. On-going Programs/activities (2)

- National REDD+ Program: FA of MAFF, GDANCP of MoE, FAO and UNDP focusing on institutional establishment and implementation of REDD+, MRV,
Pilot Project under FA: Odar Meanchey, Keo Seima, Prey Long,
REDD+ under MoE: 700,000 ha approved for REDD+, and other
300,000 ha is in plan
- Green Growth:
 1. Green Growth Road Map established
 2. Draft Green Growth Master Plan,
 3. Draft Sub-degree on National Green Growth Committee
- Introducing and improving access to low carbon energy technologies by rural households, sustainable forest management, etc. by GERES, NEXUS, National Bio-digester Program (NBP).

5. Next activities

- Improving Greenhouse Gas Inventory,
- Establishing National MRV System,
- Analyzing and finalizing Standardize Baseline for Rice Mill factory sector for CDM PoA,
- Feasibility Studies:
 - *Capacity-Building Cooperation for the development of NAMAs in a MRV manner,*
 - *Small scale biomass power generation technology for Sustainable Remote Community Electrification Program in Cambodia,*
 - *Solid Waste Composting*
 - *Waste water (tentative)*



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