

Thailand experiences on challenges faced when developing NAMA

By

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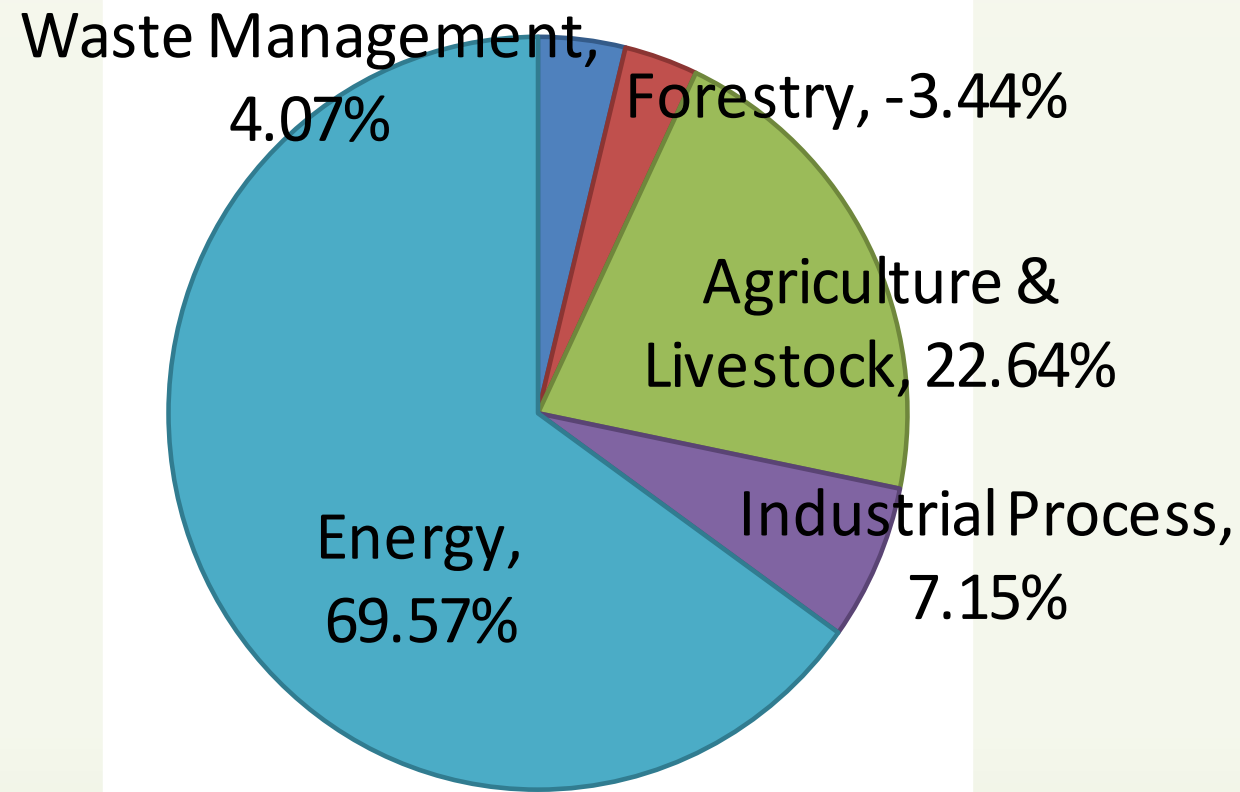
Office of Natural resources and environmental Policy and Planning



Thailand's NAMAs toward 2020

Thailand's GHG Inventory

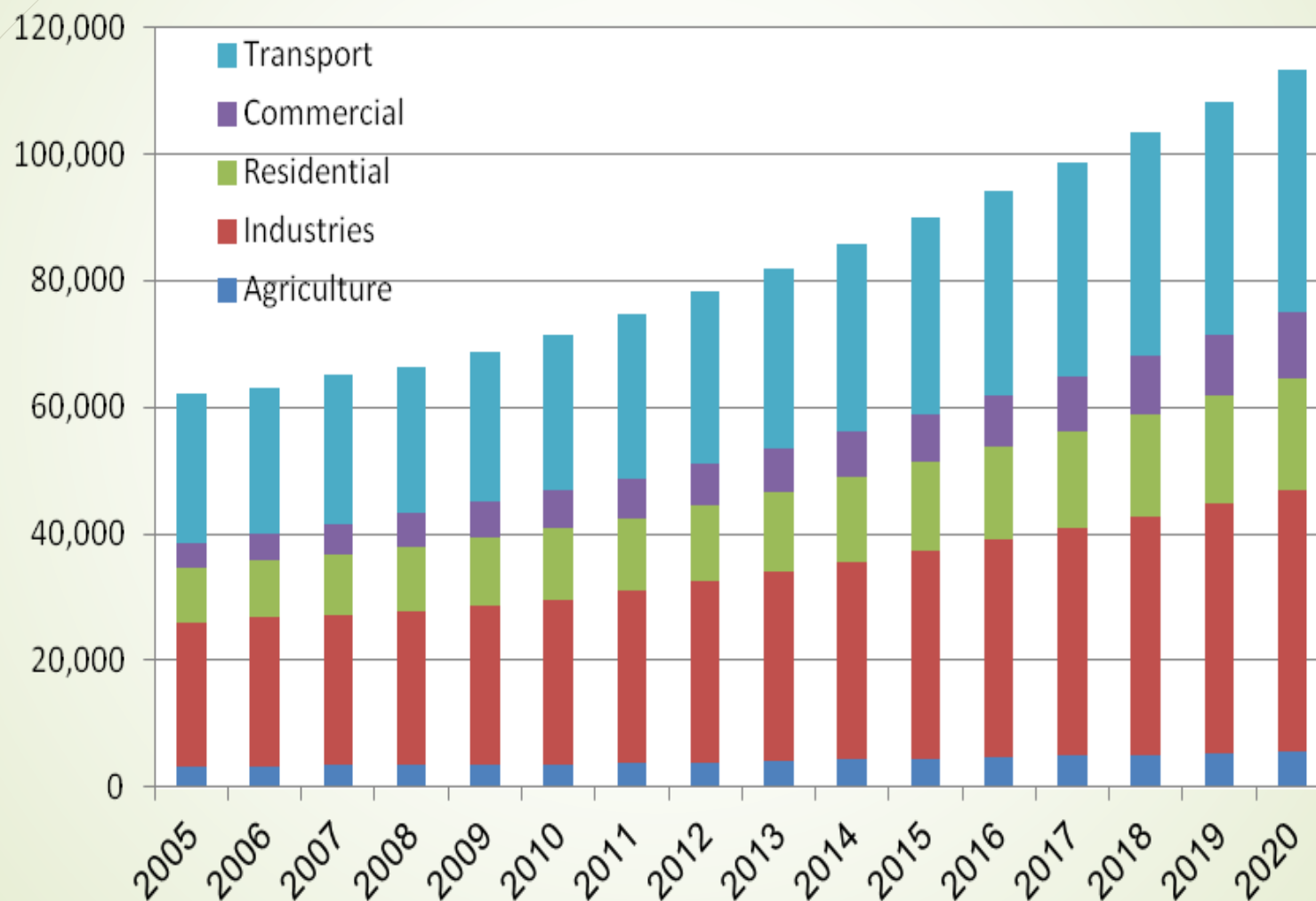
Thailand CO₂ emissions by sector



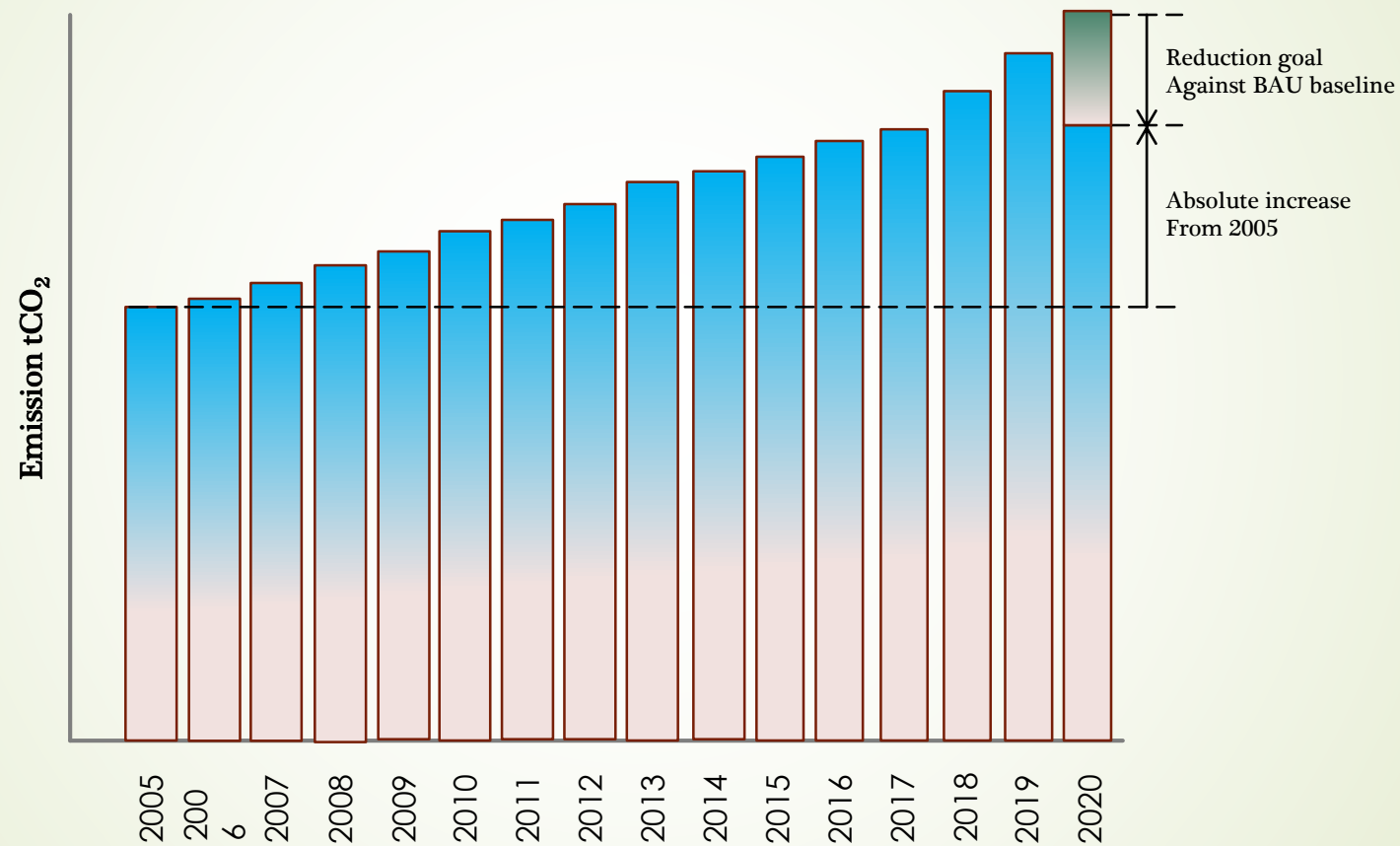
Source: Thailand's Second National Communication, (ONEP, 2011)

The BAU Energy Consumption of Thailand from 2005-2020

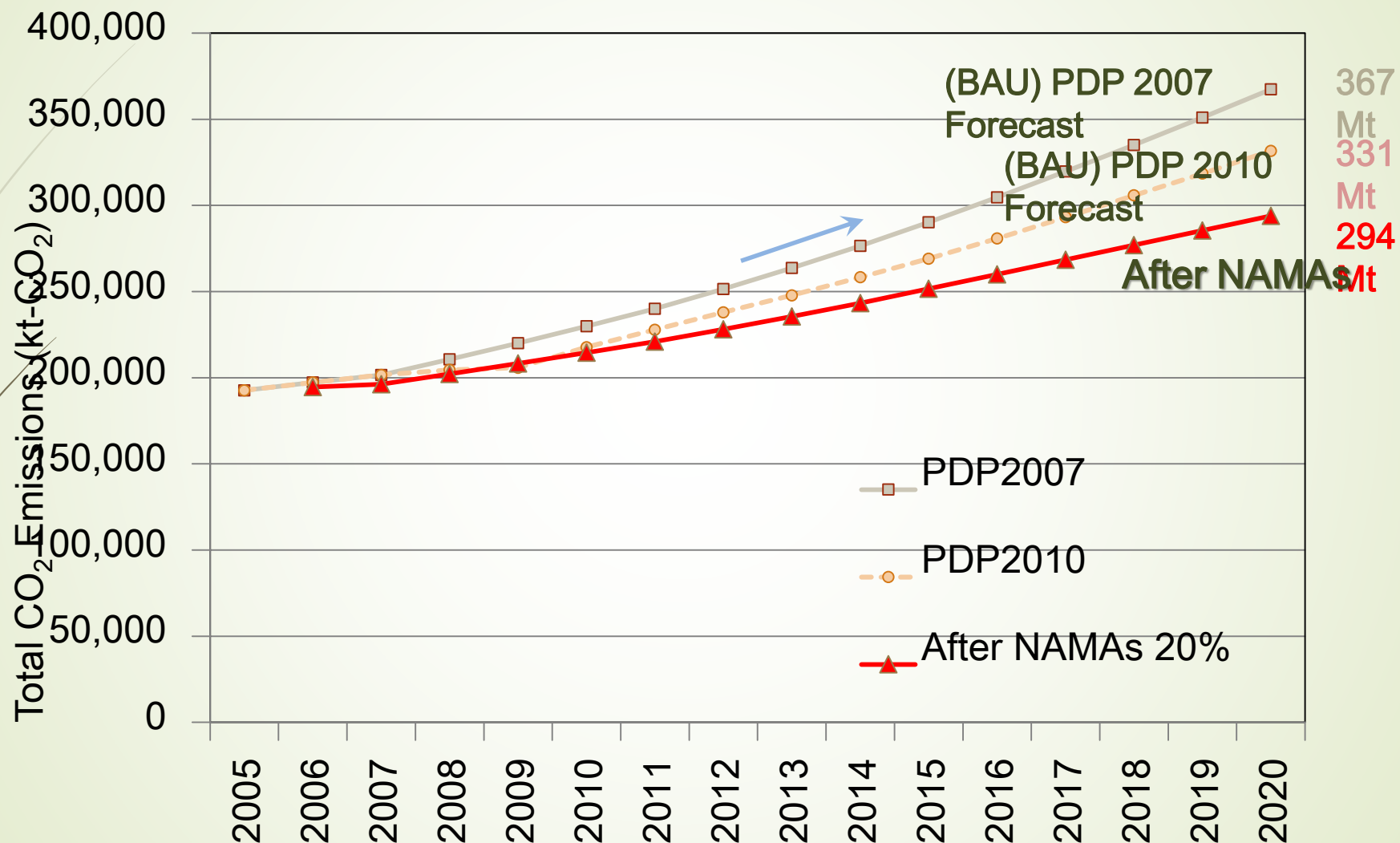
Final Energy Consumption (ktoe)



- Thai Baseline, BAU level of GHG emissions & Reduction Goal



CO₂ EMISSION OF THAILAND FROM BAU





THAILAND NAMAs

Completely in-line with Thailand's Energy & Transport Policies/Plans

- 1 10-year Alternative Energy Development Plan 2012-2021 (AEDP): 25% targeted, including Bio-fuels for transportation**
- 2 Energy Efficiency Development Plan 2011-2030 (Energy Efficiency in Buildings & Industries)**
- 3 Environmental Sustainable Transport System Plan**

Potential of Domestically and Internationally Supported NAMAs by 2020

NAMAs	CO ₂ Countermeasures	CO ₂ reduction in 2020 (kt-CO ₂)
Domestically Supported NAMAs	RE Power (MAC)	2,568
	EE Large Industries (MAC < 10\$/t-CO ₂)	4,762
	Building Codes (Large buildings)	5,909
	Transport/Ethanol (AEDP 2012)	5,069
	Transport/Biodiesel 1st Gen (AEDP 2012)	5,022
	Sub-total	23,330 kt-CO₂ (7%)
Internationally Supported NAMAs	RE Power (MAC > 10\$/t-CO ₂ AEDP)	13,456
	EE Large Industries (MAC > 10\$/t-CO ₂)	9,743
	Transport/Biodiesel 2nd Gen (AEDP)	14,459
	Environmental Sustainable Transport (AEDP)	12,000
	Sub-total	49,658 kt-CO₂ (13%)

Sources: DEDE, EPPOT, TGO, ONEP, OTP (2012)

Potential of CO₂ Mitigation by 2020

AEDP 2012 - RE power

NAMAs	CO ₂ Countermeasures	CO ₂ reduction in 2020 (kt-CO ₂)
Domestic NAMAs	RE Power (Low MAC)	2,568
	<i>Sub-total</i>	<i>2.6 Mt-CO₂</i>
Internationally supported NAMAs	RE Power (High MAC)	13,456
	<i>Sub-total</i>	<i>13.5 Mt-CO₂</i>
Total Domestic and Supported NAMAs		16.0 Mt-CO₂

Potential of CO₂ Mitigation by 2020 Renewable Power Generation

NAMAs	CO ₂ Counter measure	Abatement cost (\$/t-CO ₂)	Potential of CO ₂ mitigation in 2020 (kt-CO ₂)
Domestic NAMAs	Biogas	0.02	51.7
	Small Hydro	0.69	237.0
	Biomass	2.67	2,340.0
Supported NAMAs	Wind	51.88	4.1
	Solar	102.81	41.5
			Total 2,674

Potential of CO₂ Mitigation by 2020

Large Buildings and Industries

NAMAs	CO ₂ Countermeasures	CO ₂ reduction in 2020 (kt-CO ₂)
Domestic NAMAs	EE Industries (Low MAC)	4,762
	EE Building Codes	5,909
	<i>Sub-total</i>	<i>8.3 Mt-CO₂</i>
Supported NAMAs	EE Industries (High MAC)	9,743
	<i>Sub-total</i>	<i>9.7 Mt-CO₂</i>
Total Domestic and Supported NAMAs		20.4 Mt-CO₂

Potential of CO₂ Mitigation by 2020

Waste to Energy

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NAMAs	CO ₂ Counter measure	Abatement cost (\$/t-CO ₂)	Potential of CO ₂ mitigation in 2020 (kt-CO ₂)
Internationally Supported NAMAs	Local Landfill	32.8	42.6
	Incinerator	140.6	6.3
	Biogas Digester	164.7	11.6
	Controlled Landfill	395.3	0.3
			Total 60.8

Potential of CO₂ mitigation by 2020

Transport sector

NAMAs	CO ₂ Countermeasures	CO ₂ reduction in 2020 (kt-CO ₂)
Domestic NAMAs	Transport/Ethanol (AEDP)	5,069
	Transport/Biodiesel 1 st Gen	5,022
	<i>Sub-total</i>	<i>10.0 Mt-CO₂</i>
supported NAMAs	Transport/Biodiesel 2 nd Gen	14,459
	<i>Sub-total</i>	<i>14.5 Mt-CO₂</i>
Total Domestic and Supported NAMAs		24.5 Mt-CO₂

Potential of CO₂ mitigation in 2020 Transport sector

NAMAs	CO ₂ Countermeasures	CO ₂ reduction in 2020 (kt-CO ₂)
Supported NAMAs	Envir Sustainable Transport	12,000
	<i>Sub-total</i>	<i>12.0 Mt-CO₂</i>
Total Supported NAMAs		12.0 Mt-CO₂



On going NAMA Projects Development

- Renewable energy
 - Wind, Solar, Hydro
 - Biomass
 - Biogas
 - Waste
- Energy efficiency
 - Refrigeration and Air Conditioning NAMA
(submit for internationally supported NAMA)
 - Building
- Transportation



Experiences on challenges faced when developing NAMAs



Experiences on developing NAMAs

Experiences on developing domestic supported NAMAs

Who are the stakeholders?

- Several groups of stakeholders and responsibilities: government technical team, government decision maker, private sector, donors, civil society.
- Engaging different stakeholders and getting them to agree on Thailand's NAMAs agenda was a very difficult task.
 - Engage key national stakeholders, promoters and implementers in a transparent consultation process:
 - Ensure active stakeholder support, and encourage their public endorsement of the NAMA.
 - Engage policy makers, and secure the necessary support for carrying out implementation of the NAMA.



Experiences on developing NAMAs

- Developing NAMAs project, based on the national policies and plans, and linked to other national priorities (such as energy, environment), describing and quantifying as accurately as possible
 - Estimated base line greenhouse gas emission
 - Estimated greenhouse gas emission reductions that will be reduced by mitigation actions.
 - Selected existing policies and plans targeting the co-benefits
 - National (finance) budget if not enough may be seeking for international support

Experiences on developing NAMAs

Experiences on developing NAMA's proposal for international support

- Step 1: Identify and score are challenging because different stakeholders have different aspects.
 - Identify opportunities for mitigation actions that can be packaged as potential NAMAs
 - making a first assessment of costs and benefits, and feasibility of implementation.
 - Scoring by using main criteria for NAMAs such as;
 - Development benefit: health improvements, access to energy services, reduction of time spent on the road, reduction of pollution
 - Mitigation potential: what is the direct emission impact? If the action is of a more indirect nature, then what are the transformational impacts? Is the action replicable?
 - Estimating cost : what are the estimated costs associated with the action? What is the technical and financial risk profile of the action?

Experiences on developing NAMAs

- Step 2: Prioritize and select: this step is also time consuming
 - This step is essentially a political choice and thus requires the involvement of high level government/political decision makers.
 - In Thailand, we have NAMA sub-committee to screen first and then submit to National climate change policy committee and the final decision will be approved by the cabinet.
- Step 3: Prepare concept note: This step involve outing the conceptual picture of what the NAMA could look like, but not in comprehensive detail. This step needed to be include main stakeholders. In order to have a consultation and define role for each stakeholder.
- Step 4: Detailing a NAMA Proposal: Thailand has not done yet.

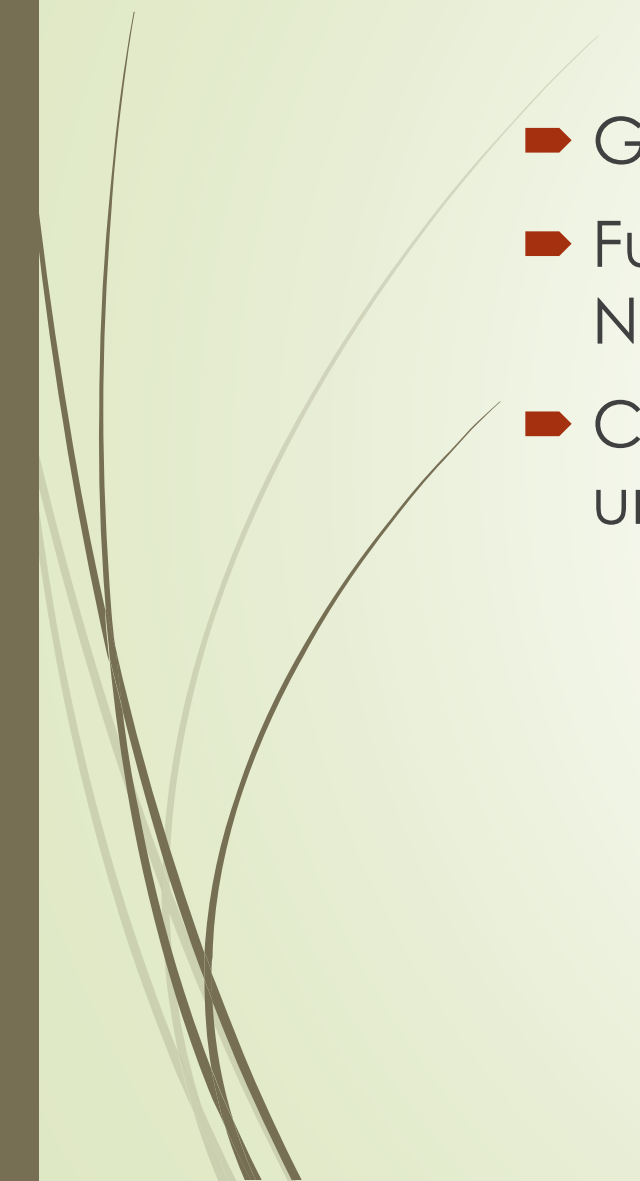


Experiences on developing NAMAs

- Difficulty in developing MRV because the current guideline is too board (especially for domestic one).
- MRV should be separate for 2 levels;
 - National tier: the measuring, reporting and verifying of the voluntary national mitigation actions of the developing countries
 - NAMA tier: the measuring, reporting and verifying of individual MAMAs. This tier supports the national tier and provides the necessary information on NAMAs for countries to prepare their BUR for UNFCCC.

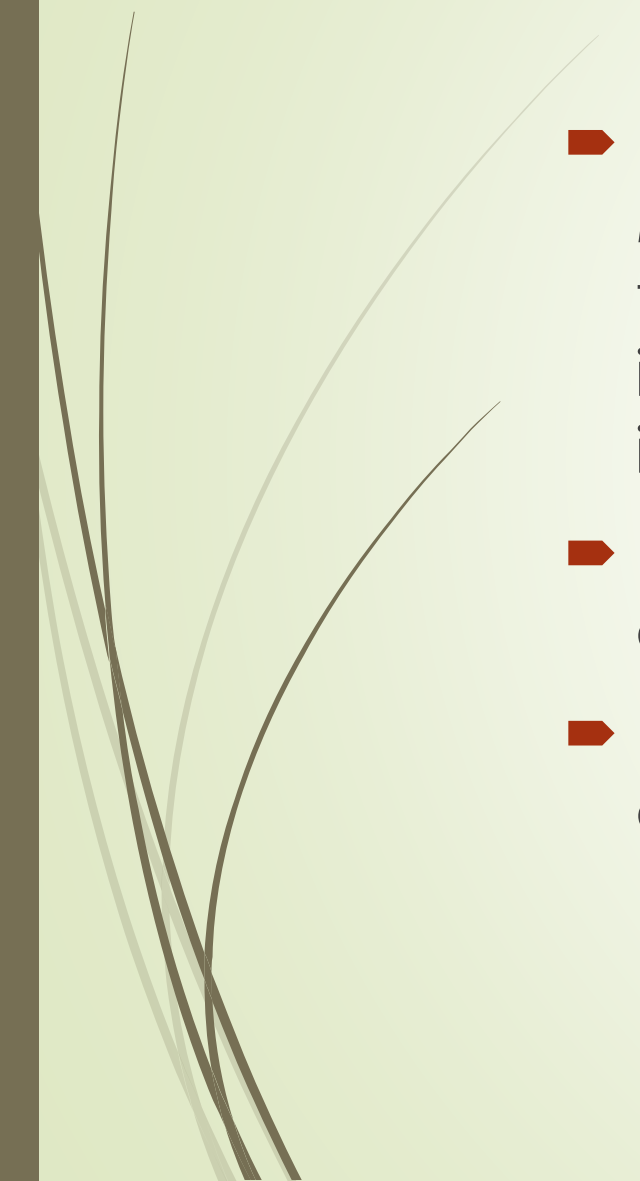


Key challenges

- ▶ Getting high level endorsement for NAMAs
 - ▶ Funding is an important key that could be influence the NAMAs activities
 - ▶ Capacity building for all stakeholder levels to make them understand NAMA clearly.
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Key Challenges

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- Institutionalization of the process for both NAMA and MRV is important to ensure sustainability. These are not traditional government ministries but multi-stakeholder involve. Clearly define institutional structure and making it workable are still big challenges.
 - Important to set up a registry in order to store and archive all information.
 - Difficulty in making sure that there is no overlapping among activities .



Thank you