

# **Potential of CO<sub>2</sub> Mitigation in NAMAs**

(แผนแม่บทฯ สนข คมนาคม)

## **Environmental Sustainable Transportation by Office of Transport and Traffic Policy Planning**

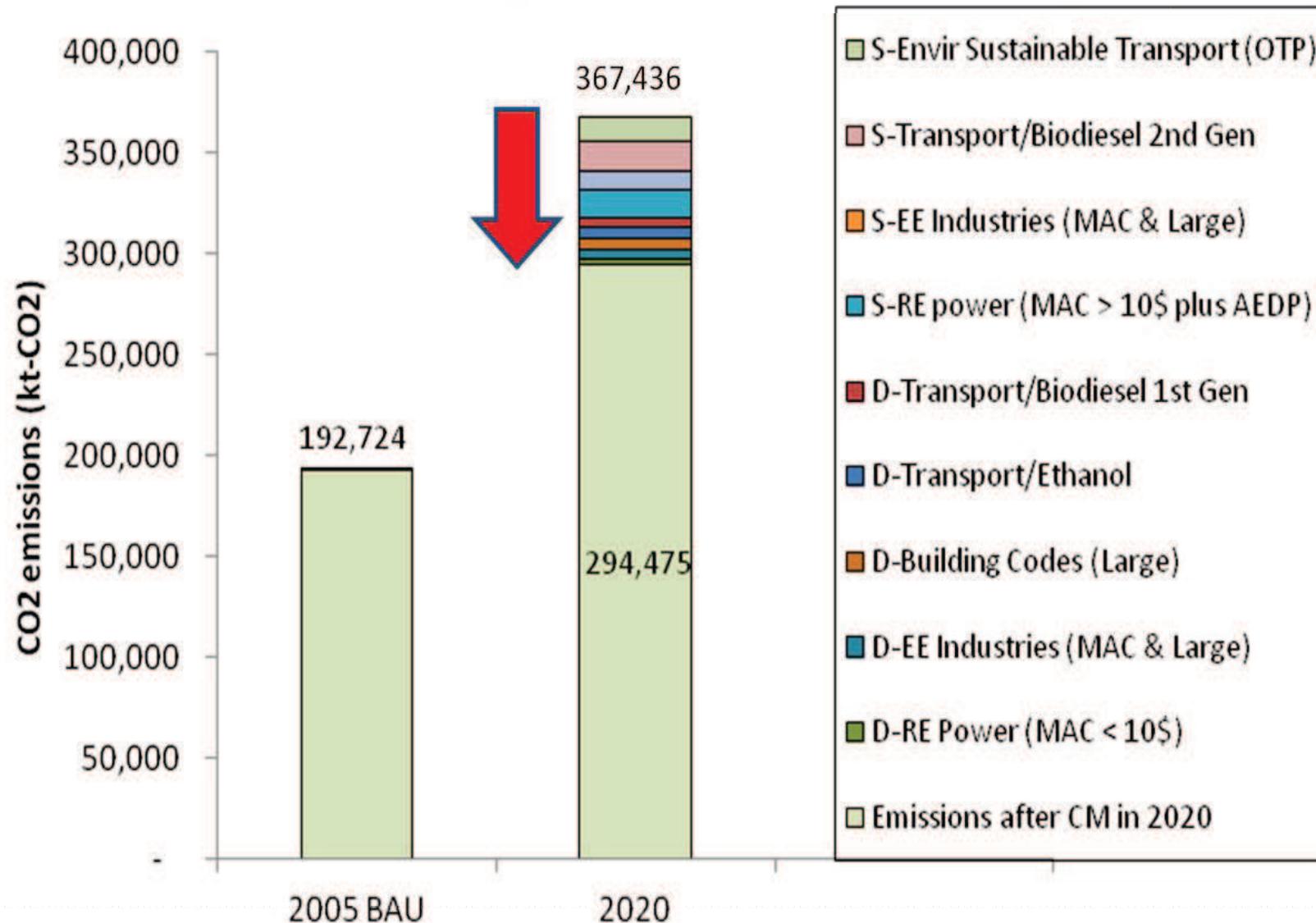
- Modal shift
- Fuel economy improvement
- Sustainable transport system
- etc

## Potential of CO<sub>2</sub> mitigation in 2020 Transport sector

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

# Scenarios of CO<sub>2</sub> Mitigation in Thailand NAMAs

success rates: 100% D-NAMA & 100% S-NAMA



# Next Step

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## Q: NAMAs/Pledge ?

- ▶ Pledge/NAMAs
  - ▶ Economy-wide (across all sectors) eq. China, India
  - ▶ Sector-based; National-programme-based eq. Indonesia, Brazil
  - ▶ Hybrid

## Q: NAMAs/Pledge benefits?

- ▶ Financial, Technological, and Capacity Building Supports including creating market opportunity for CDM projects

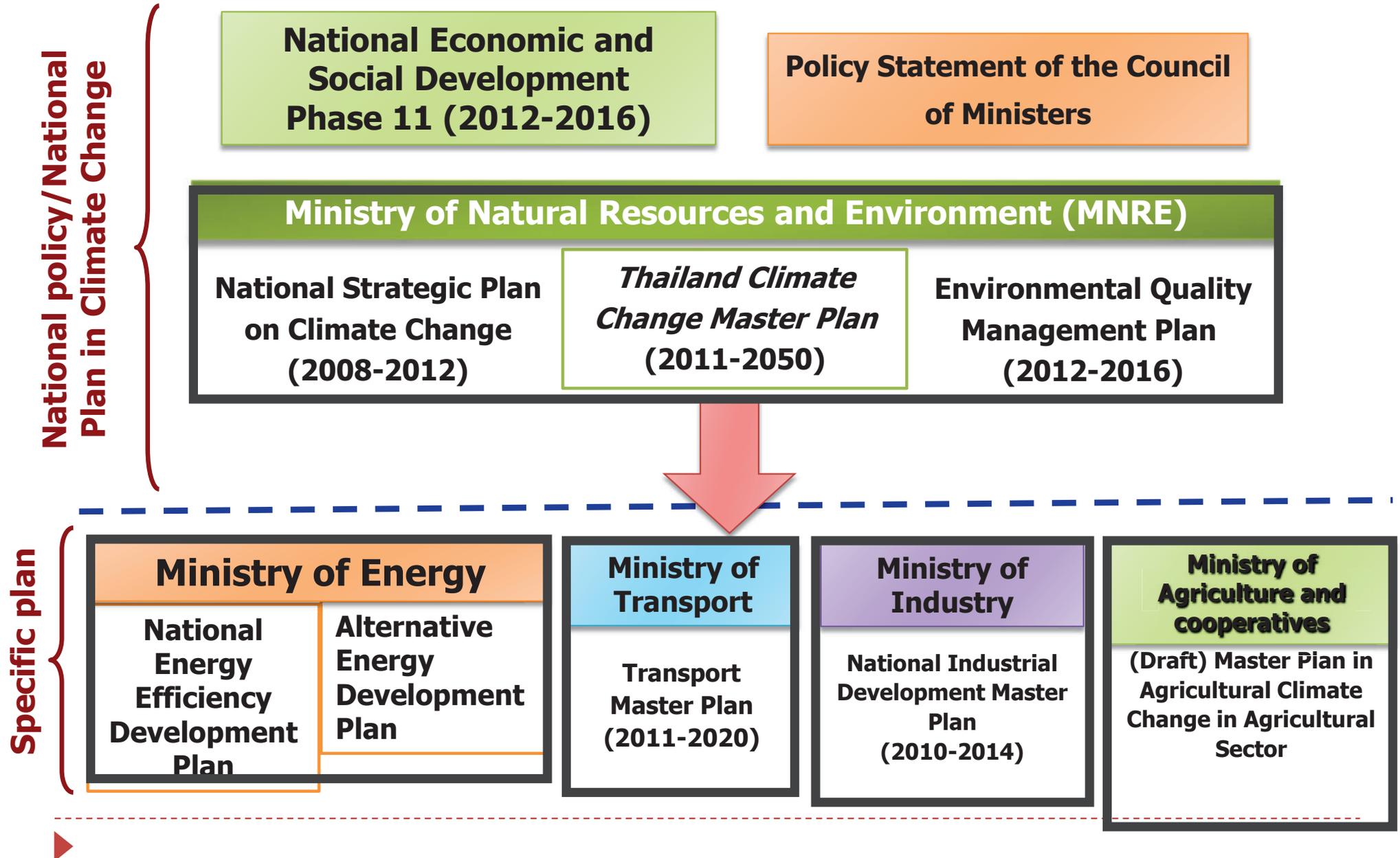
# VI : BUR Preparation

## ▶ GHG Reporting :

- ▶ National Inventory on (2014)
- ▶ Information on Mitigation actions
- ▶ Support needs & received



# V: MRV institutional arrangement



# Elements and governance of MRV

Authorization of Ministry of Natural Resources and Environment (MNRE)



Ministry of Natural Resources and Environment



**Office of Natural Resources and Environmental Policy and Planning (ONEP)**

Office of Climate Change Coordination

- ONEP has been appointed as the national focal point for UNFCCC and the Kyoto Protocol

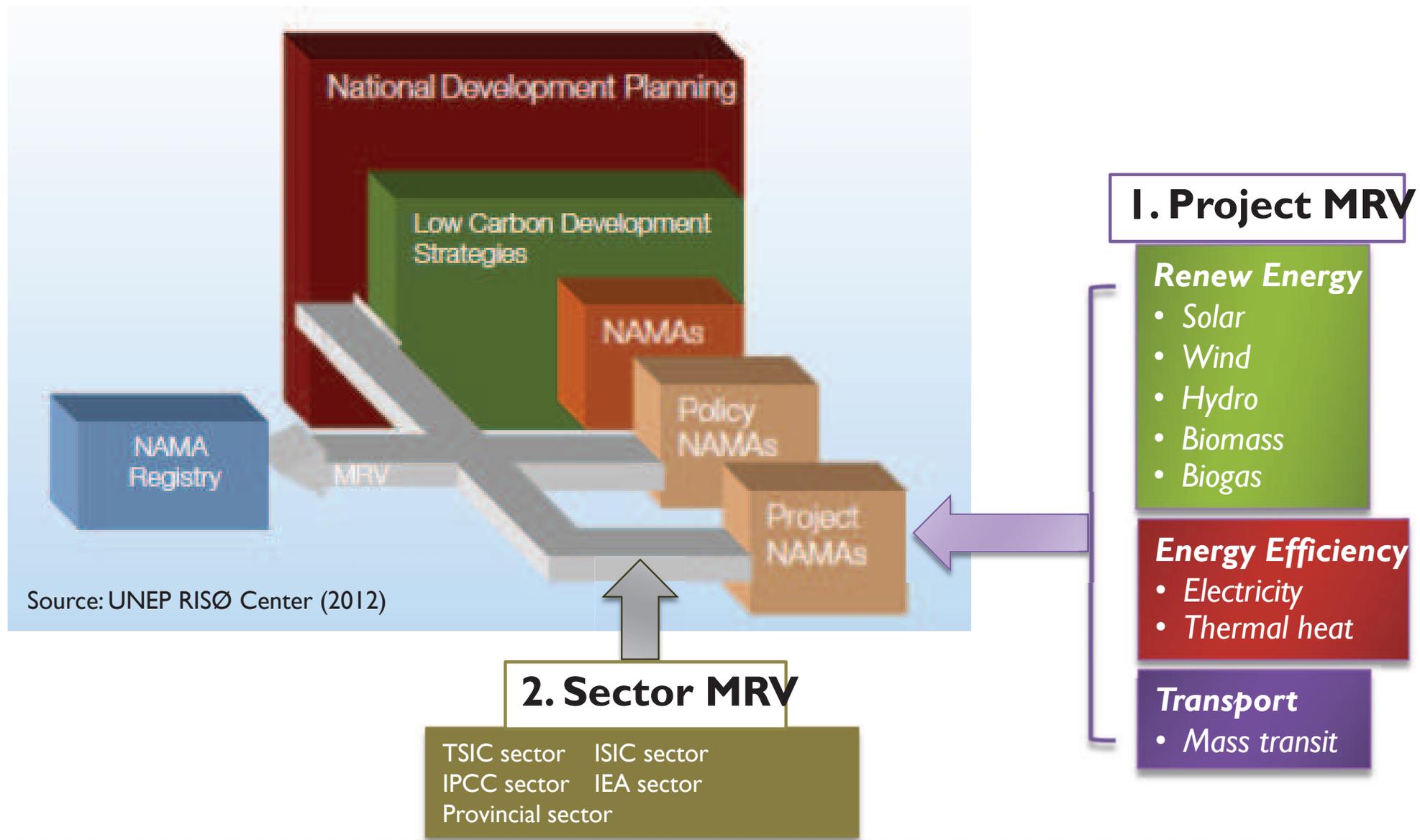


**Thailand Greenhouse Gas Management Organization (Public organization) (TGO)**  
**DNA-CDM office**

- Analyzing and screening the CDM projects for issuance of the Letter of Approval and monitoring the projects;
- Promoting CDM projects and the CER Market;
- Greenhouse Gas Information Centre;
- Managing information regarding the approved CDM projects;
- Providing capacity building for government and private sectors on GHG management;
- Promoting and supporting all activities related to climate change mitigation.

# Level of MRV

TGO is now developing 2 levels of MRV :  
1. Project level; and  
2. Sector level



# Level of MRV

## - MRV at National Level

MRV to the GHG Inventory, or MRV to the national plan (e.g. National energy efficiency plan) which may directly impact to legal and institutional framework structure.

## - MRV at Sector level (Sector-based MRV)

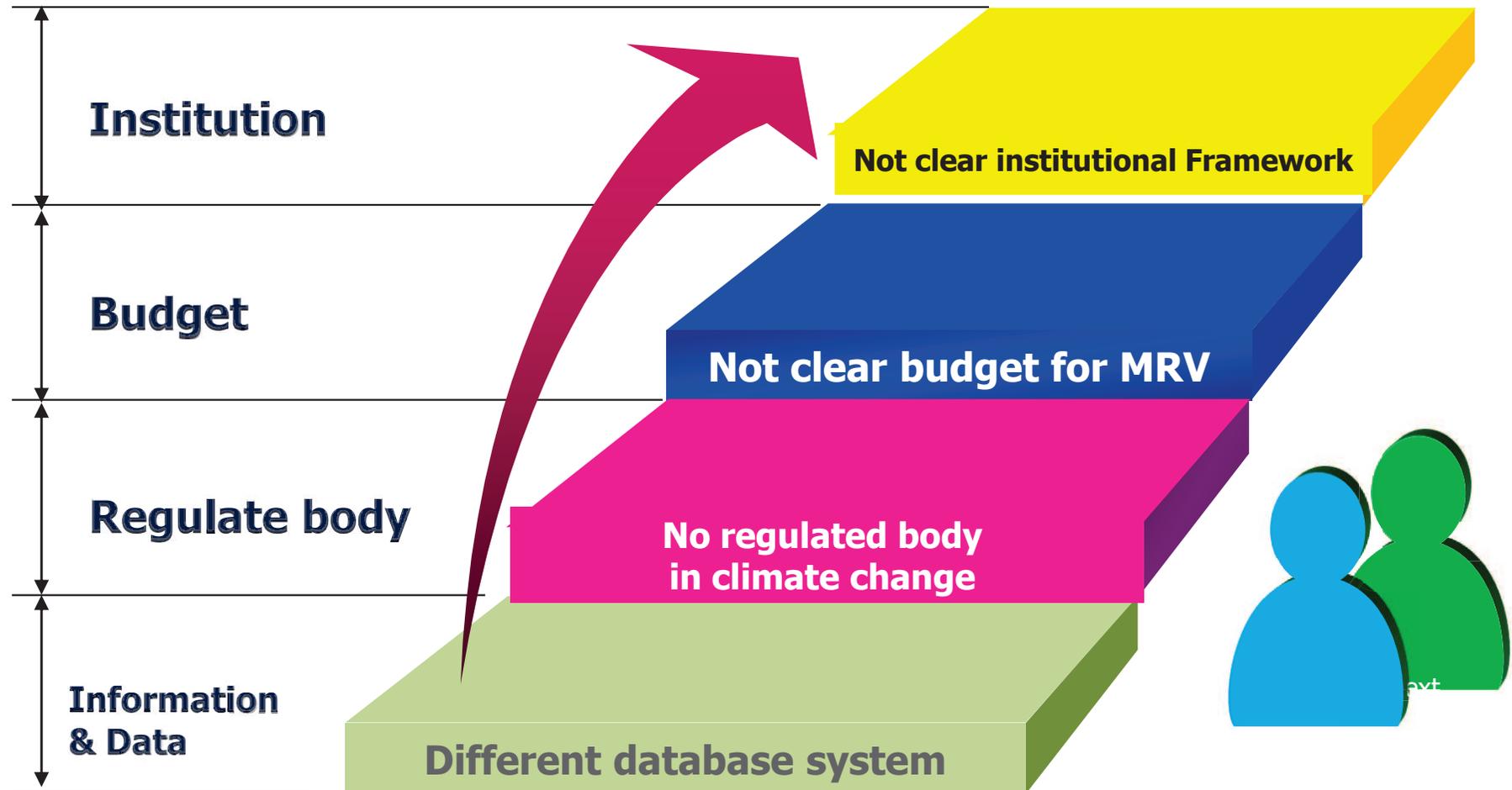
Sector based MRV is very important and directly related to GHG emission reduction in sector. Baseline and sectoral data gathering would be key issue in sectoral level (e.g. MRV in cement industry sector, transport sector)

## - MRV at project level (Project-Based MRV)

To measure, report and verify the GHG emission reduction in each individual project;

- Renewable energy project; e.g. biomass power plant
- Energy efficiency improvement project; e.g. retrofit the lighting system.

# Problems for Sector-based MRV





## *MRV– Project based*

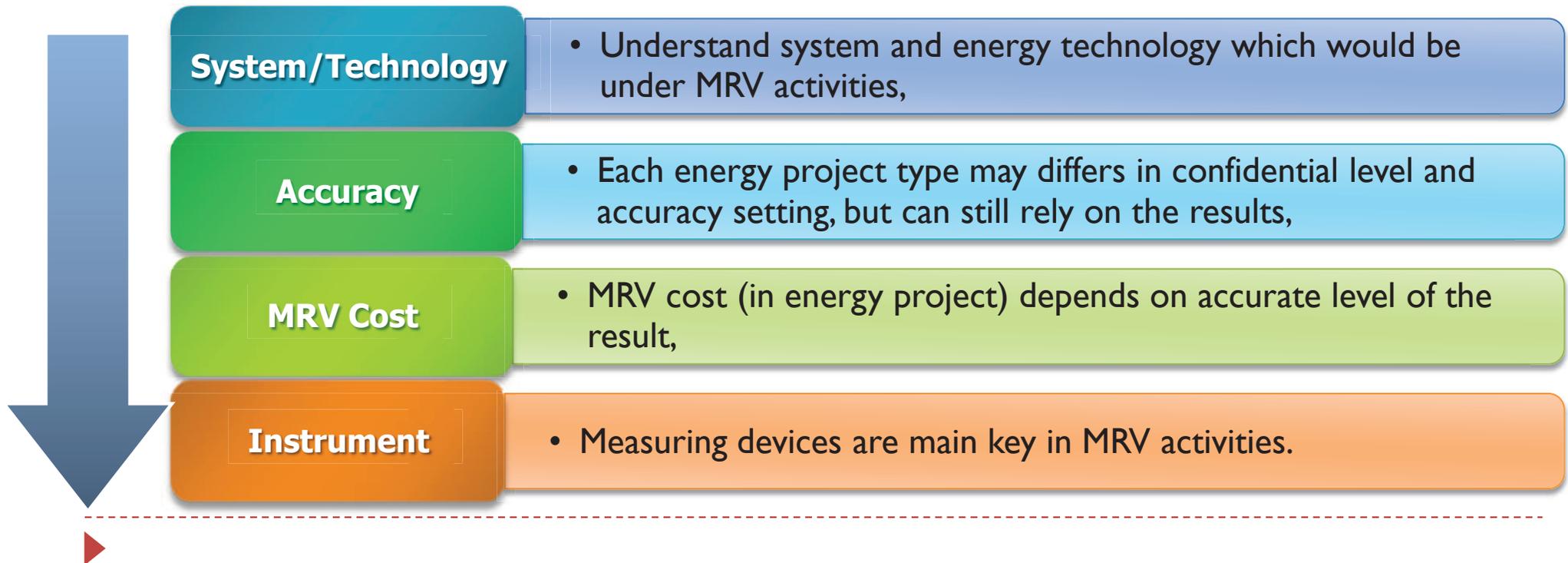
- **Principles**
- **Comparison of International Standards**
- **Guidelines for MRV**
  - **Renewable energy projects**
  - **Energy efficiency project**
  - **Transport project**

# Basic Concept of Project based MRV

**Developing the project based MRV has main steps as follows:**

1. Review and analyze Thailand and International experiences in MRV system in energy sector,
2. Study and compare major international measuring and verification standard,
3. Define the principles and draft the national MRV guidelines, consists of two main parts as follows; (i) Measuring and Reporting part, and (ii) Verification part

**Developing Project based MRV must considers in these following issues.**



# Guidelines to Project based MRV

In this study, five main principles/concept of MRV was implemented

## Transparency

- Adequate and appropriate information,
- Ensures sufficient and clear documentation of the methods, and others data used in the project

## Accuracy

- Reduce the uncertainty during the MRV processes
- Maintain high accuracy.

## Comparability

- Estimate of project is reported in such a way that it allows to be compared with estimate of other countries
- Reflects the amount of GHG sources.

## Consistency

- Consistency is essential if the estimates for different years, gases and categories reflect the real differences in emissions.

## Completeness

- All sources in the boundary with complete information
- Estimates of emissions and removals are reported for all relevant categories of sources and sinks, and gases

## Conclusions on developing MRV

- TGO is now studying on the MRV in energy sector, in both sector based and project based,
- Renewable energy technologies and energy efficiency projects would be considered,
- There still have many unclear issues in internationally supported MRV and still have no “General MRV Guidelines”,
- The sector based MRV in energy context are now in developing phase,
- MRV finance for energy activities in Thailand is still in question.

# VI. Barriers/Challenge & Opportunity on NAMAs and MRV and Expectations for International Supports

## 1. Identify barriers/challenges

**Lack of clarity and common procedure for developing NAMA and its MRV** makes developing countries struggling in learning to design NAMA and MRV system from scratch - under limited resources, data and knowledge.

**Lack of clarity on financial/technology/capacity building supports available and its deployment rule for implementation**, in conjunction with the missing of MRV Guidelines, have placed a limitation to the progress in NAMA development & Supporting figure in developing countries.

**Developing MRV system for Sectoral MA** requires strong cooperation and supportive data supply from private sector – who highly concerns on the confidentiality and business sensitivity of the their information given.

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## 1. Identify barriers/challenges (continued)

In most developing countries, **the majority of GHG-related data scatters among relevant authorities, while a GHG reporting system may not exist within those authorities**

**Knowledge and understanding** of stakeholders on NAMA, MRV and Reporting **are limited.**

## 2. Identify opportunities

**Missing of a common procedure leaves rooms for developing countries to design NAMA that enhances the context of their national circumstances** (however the process may be time consuming regarding many constraints).

It is an opportunity for **developing countries to seek cooperation and support from developed country Parties** in order to enhance needed capacities assisting them to design, develop, prepare and implement NAMA & MRV.

Significant rooms are available for **advancing in knowledge and experience on GHG reporting system and institutional arrangement.**

NAMA does its part in stimulating developing countries to **focus on developing a Roadmap of mitigation actions** more thoroughly.

### 3. Expectations for International Supports

**International supports on technology and financing** – These supports should lead to an increase in investment, development and transfer of low carbon technology in developing countries, and result in the technology becoming common practice due to reduced abatement costs which allows wide domestic investment by private sector with less government subsidies.

**International supports on capacity building** – Capacity building can enhance performance in many areas including (1) Preparation & implementation of NAMA; (2) Development of MRV system; and (3) Biennial Update Report.

**Flexibility in the process** – Supports to be provided for developing countries should be flexible, less complicated and delivered within reasonable timeline, while maintaining transparency and equality.

# Thank you

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