

Cooperative MRV as a foundation for a potential regional carbon market within ASEAN

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Ariel Yu

UNFCCC/ IGES Regional Collaboration Center for Asia and the Pacific

MRV and carbon pricing in ASEAN – an assessment

Rationale

- Multiple **benefits** from harmonized MRV
- If MRV systems are designed in incompatible ways, more difficult to harness **collaborative opportunities** in the scope of Articles 6.2 and 6.4 of the Paris Agreement (especially at the regional level)



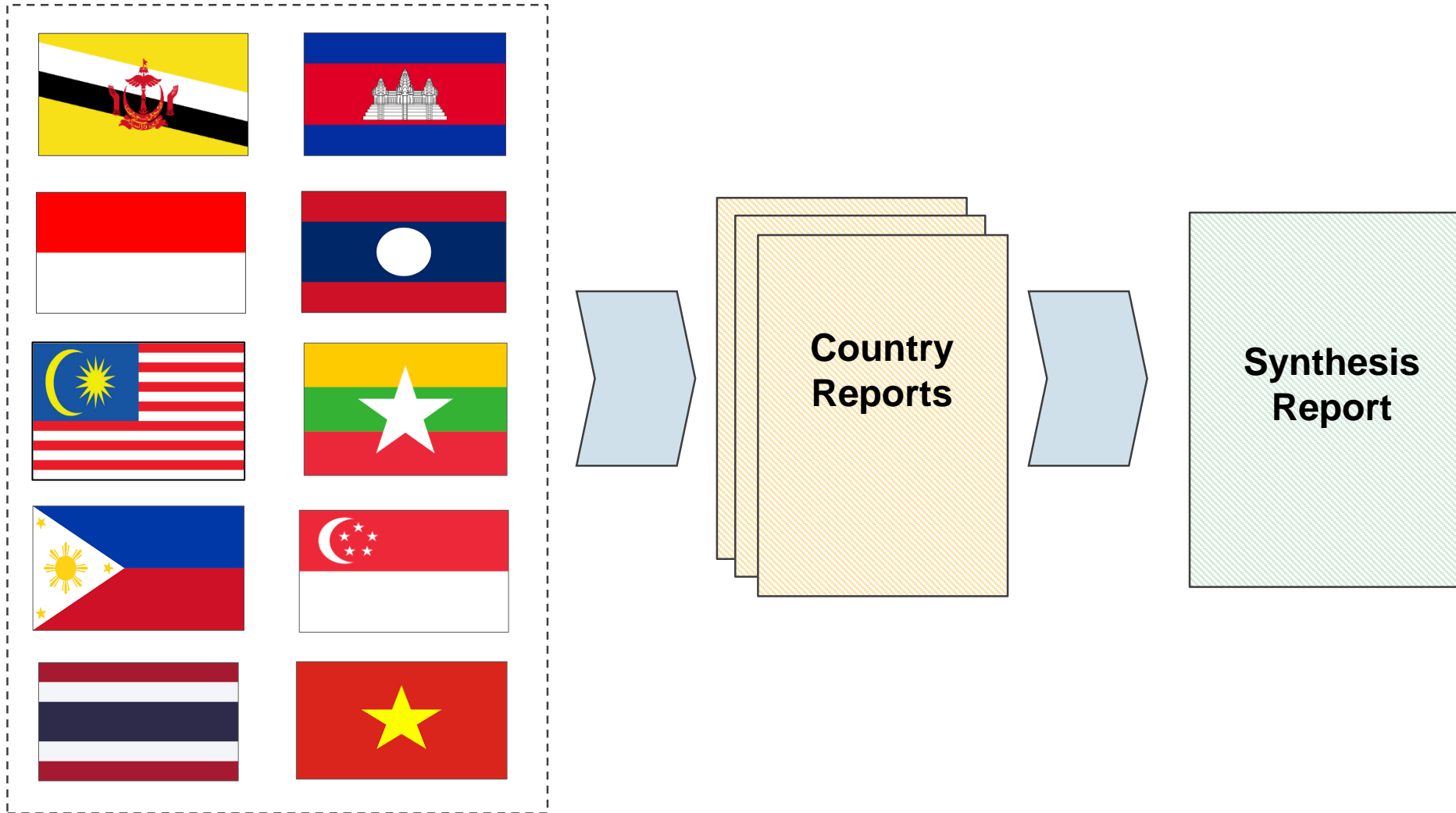
The study does not represent a commitment to cooperative action but sets the foundation for this option (e.g. linked ETS)

Objectives of the study

- To assess the current status of **MRV systems** in ASEAN Member States (including at facility-level)
- To review country progress and future prospects for the adoption of **carbon pricing instruments**
- To identify commonalities and differences among ASEAN Member States on MRV and carbon pricing, with a view of exploring opportunities for **alignment** and **harmonization**

Scope of the analysis and approach

Country assessment



Note: In this phase of the project, Malaysia only participated in information sharing/consultation workshops

Scope of MRV assessment

Analysis of MRV considered at three levels:

National GHG inventory

- Systems and processes associated with estimating, reporting, and verifying emissions over a defined period of time at the national level
- Corresponds to the highest aggregated level of GHG emissions in a country

Sectoral/ Policy

- MRV of mitigation actions, either at the sectoral or policy level
- Sectoral programmes such as NAMAs, low-emission development strategies, targets proposed under NDCs, etc.

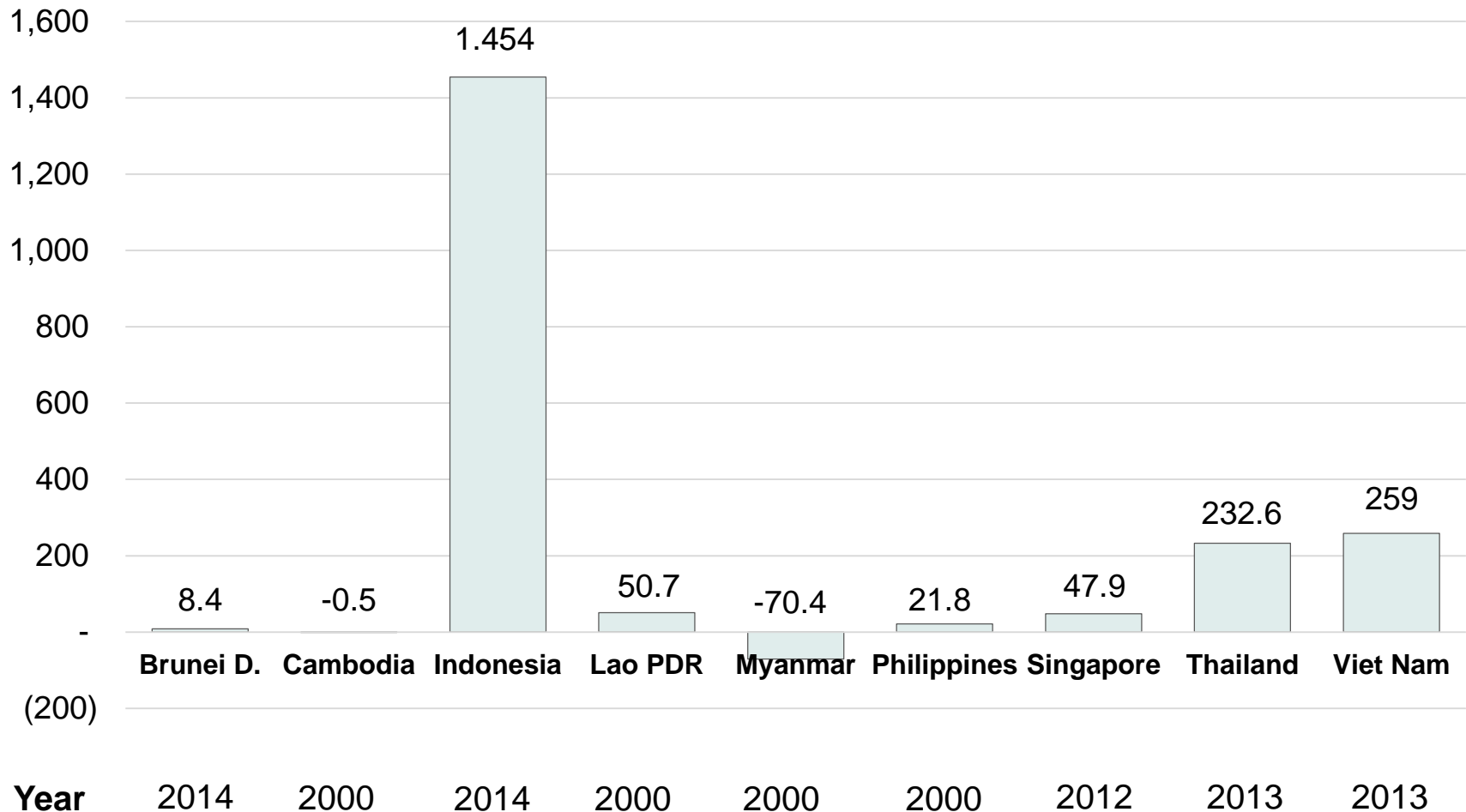
Facility/ Installation

- MRV at the level of individual emitters
- Key enabler for the introduction of carbon pricing instruments

ASEAN at a glance: GHG emissions profile

Net GHG Emissions in ASEAN Member States

MtCO₂e



MRV at the level of national GHG inventories

Assessment of national GHG emission inventory MRV in ASEAN

Country	Inventory preparation	Reliance on external support	Measurement of emissions		Reporting & Verification	
			Activity data col. processes	IPCC Tier	Reporting System	QA/QC
Brunei Darussalam	<i>Ad-hoc</i>	NO	<i>Ad-hoc</i>	1	N/A	Limited
Cambodia	<i>Ad-hoc</i>	YES	<i>Ad-hoc</i>	1	N/A	Limited
Indonesia	Regular	NO	Institutionalized	1 & 2	Reporting platform	Institutionalized
Lao PDR	<i>Ad-hoc</i>	YES	<i>Ad-hoc</i>	1	N/A	Limited
Myanmar	<i>Ad-hoc</i>	YES	<i>Ad-hoc</i>	1	N/A	Limited
Philippines	Regular	NO	Institutionalized	1 & 2	Under develop.	Limited
Singapore	Regular	NO	Institutionalized	1 & 2	Reporting platform	Institutionalized
Thailand	Regular	NO	Institutionalized	1 & 2	Reporting platform	Institutionalized
Vietnam	Regular	NO	Institutionalized	1 & 2	Reporting platform	Institutionalized

MRV at the level of national GHG inventories (cont.)

Summary of findings:

- GHG inventory preparation is a regular process in the majority of ASEAN Member States
- Potential for regional collaboration in the areas of knowledge transfer, capacity building and best practice sharing
- The set up of a regional knowledge centre that could serve as “one-stop-shop” for countries to develop their capacities and knowledge on this dimension of MRV (recommendation of the assessment)

Summary of initiatives that can be linked with MRV of GHG emissions

Country	Energy, industry and transport	AFOLU	Waste
Brunei Darussalam	➤ Energy management policy framework (piloting of ISO 50001)	N/A	N/A
Cambodia	➤ Energy Efficiency NAMA in the Garment Industry	➤ REDD+ Programme	➤ Waste water NAMA
Indonesia	➤ NAMA on Sustainable Urban Transport (SUTRI NAMA)	➤ REDD+ Programme	N/A
Lao PDR	➤ NAMAs on renewable energy and transport ➤ National policy on energy efficiency and conservation	➤ REDD+ Programme	N/A
Myanmar	➤ GEF project on the improvement of Industrial Energy Efficiency in Myanmar	➤ REDD+ Programme	N/A
Philippines	➤ NAMAs on solar power, energy efficiency, waste to energy and transport	➤ NAMA on adaptation and mitigation on rice cultivation	N/A
Singapore	➤ Excise duties on transport fuels	N/A	N/A
Thailand	➤ NAMAs on refrigeration and air conditioning, on energy efficiency in the industrial sector and on urban mobility	➤ REDD+ Programme ➤ Thai Rice NAMA	N/A
Vietnam	➤ NAMAs in the steel, cement, chemical fertilizer production and wind power	➤ REDD+ Programme	➤ Solid waste NAMA

MRV at the facility/installation level – quick snapshot

- The development of facility-level MRV in ASEAN Member States has gone hand-in-hand with the interest of the countries in the introduction of carbon pricing instruments
- Only four countries of ASEAN are developing MRV at the facility level: Indonesia, Singapore, Thailand and Vietnam
- Some experience exists in most ASEAN Member States on MRV at this level, particularly:
 - For project activities In the scope of the Clean Development Mechanism (CDM) and/or voluntary standards
 - As part of voluntary GHG emission reporting by companies
- Among the countries that have taken steps to develop MRV at this level, more progress is observed in monitoring (M) and reporting (R) than in verification (V) protocols/procedures

MRV at the facility/installation level (cont.)

Summary status of MRV at the facility/installation level of ASEAN Member States that have been developing these systems

Country	Initiative	Sectors covered	Mandatory Scheme?	Coverage		Measurement of emissions	Reporting platform	Verification	
				Gases	Scope			QA/QC	Third-party V.
Indonesia	PMR	Power generation	NO	CO ₂ , CH ₄ , N ₂ O	Scope 1	Calculation approach; through CEMS	Online, through APPLE GATRIK Platform	YES	NO
Singapore	Carbon Pricing Act	All except AFOLU and transport	YES	CO ₂ , CH ₄ , N ₂ O, SF ₆ , PFCs, HFCs	Scope 1	Calculation approach; material balance; through CEMS	Online, through EDMA platform	YES	YES
Thailand	Thailand V-ETS	Several sectors	NO	CO ₂	Scope 1 and 2	Calculation approach; through CEMS	Under development and testing by TGO	YES	YES
Vietnam	PMR	Steel	NO	CO ₂	Scope 1	N/A	N/A	N/A	N/A

MRV at the facility/installation level (cont.)

Identification of opportunities for coordination among ASEAN Member States on monitoring & reporting (M&R) guidelines

Country	Power generation	Industry					
		Cement	Paper & Pulp	Steel & Iron	Fertilizer Production	Petrochemicals	Others
Indonesia	✓	✓	✓		✓	✓	✓
Philippines		✓					
Singapore	✓			✓		✓	
Thailand		✓	✓	✓		✓	✓
Viet Nam		✓		✓			








Sectors where M&R guidelines have been finalized



Sectors where M&R guidelines are under development or consideration

Carbon pricing in ASEAN

Carbon pricing instruments are at different levels of development in ASEAN Member States...

	Status	Development
	UNDER CONSIDERATION	➤ Four market-based instruments assessed: i) domestic ETS, ii) energy efficiency certificate system; iii) cap-and-tax; iv) domestic carbon offsetting scheme
	UNDER CONSIDERATION	➤ Carbon tax and ETS being considered in the national context
	UNDER IMPLEMENTATION	➤ Economy-wide carbon tax from 1 January 2019 ➤ Instrument covers 80% of national emissions
	UNDER CONSIDERATION	➤ Thailand V-ETS being piloted by TGO ➤ Study underway to assess the impacts to the economy of carbon tax and ETS
	UNDER CONSIDERATION	➤ ETS under consideration, with activities underway in the scope of the PMR programme

Concluding remarks and next steps

- Different stages of development in ASEAN Member States on MRV and carbon pricing instruments
- Common points also identified, which suggests that countries can avoid going into divergent pathways and explore opportunities for cooperation
- Opportunities for cooperation, alignment and harmonization:
 - ❑ MRV Hub concept – national GHG emission inventory MRV
 - ❑ On M&R requirements or guidelines
 - ❑ On design elements of carbon pricing instruments
- Potential for the establishment of a regional ETS could be explored in detail

Last but not least...

All reports are available online

Study on cooperative MRV as a foundation for a potential regional carbon market within ASEAN

UN Climate Change's Regional Collaboration Centre in Bangkok, in collaboration with the ASEAN Group on Climate Change, completed and released a report on the potential for developing approaches to the measurement, reporting, and verification of greenhouse gas (GHG) emissions in southeast Asian countries as a possible first step towards further regional cooperation instruments. More details can be found [here](#).

The country and synthesis reports can be found below:



Synthesis Report	Brunei	Cambodia	Indonesia	Laos
Myanmar	Singapore	Thailand	The Philippines	Vietnam

<https://unfccc.int/about-us/regional-collaboration-centres/the-collaborative-instruments-for-ambitious-climate-action-ci-aca-initiative>

Thank you for the attention!
