



Mission Report - Singapore

Minutes of the meeting in Singapore for PaSTI- JAIF phase 1 project on development of facility/company level measurement, reporting and verification (MRV) to support carbon pricing in ASEAN member states (AMS)

01. Project Description

Project Type	Development and implementation of facility/company level Monitoring, Reporting and Verification (MRV) systems for Greenhouse Gas (GHG) emissions in ASEAN Member States (AMS)
Objectives of the mission	<ol style="list-style-type: none"> 1. To collect and validate the information on facility level GHG measurement and reporting (M&R) 2. To identify the priority sector to develop regional facility level M&R guideline for ASEAN.
Location	National Environment Agency, Singapore
Dates	15-16 October 2019
Project Participants	<p><u>OECC (Implementation Agency of PaSTI-JAIF)</u></p> <p>Yusuke Matsufuji (Principal Researcher), Aya Marabini (Researcher), Riki Nakajima (Researcher)</p> <p><u>ClimateSI (International Consultant of PaSTI-JAIF Phase 1)</u></p> <p>H.M.Buddika Hemashantha (International MRV expert), Himesh Hansamal (MRV Engineer)</p>



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02.Participating Organizations

1.	Overseas Environmental Cooperation Centre (OECC)
2.	National Environment Agency (NEA) - Singapore
3.	Climate Smart Initiatives (Pvt) Ltd (ClimateSI)

03.Participants

(Omitted)

04.Matters Discussed with the National Environment Agency

Agenda Item	Matters Discussed	Remarks
01.	Objective of the missions	PaSTI JAIF team provided a brief overview on the PaSTI JAIF project, the objectives of the project (to explore the experience of facility level M&R guideline in state and non-state level; to identify the legal gaps; and to identify a sector to develop facility level M&R guideline).
02.	Legal status for facility level M&R in Singapore	NEA indicated that there is a national carbon tax covering most of major emitting sector. The carbon tax has been legally enforced from 2019. As such, the major GHG emitting facilities have to measure and report their GHG emissions to NEA. The carbon tax covers power sector, IPPU, etc while it does not include the transport sector given the implicit carbon tax that has already been put in place for the transport sector. Since 2013, major energy consuming entities were submitting their energy related data to the government under Energy conservation Act (ECA) using template introduced by the government. Carbon pricing act was passed in Singapore parliament on 20th March 2018, and it was enforced from January 2019.



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03	Existing and proposed facility level M&R system	<p>Along with the carbon tax, the government also introduced M&R guideline to be followed by the facilities who are supposed to submit their GHG emission data annually. As such, Singapore has a facility level M&R guideline.</p> <p>Singapore has applied IPCC methodology while developing its M&R guidelines. However, each facility can propose their own GHG measurement methodology, and process related emission factors. Once the monitoring plan with the proposed methodologies and the emission factors is submitted to NEA, they will assess it & approve.</p>
04.	Preferred sectors for developing regional facility level M&R guideline	Option 1: Power
05.	Capacity building	NEA Suggested that it will be good to have capacity building for the staff members who involved in measuring and reporting the GHG emissions at the facilities.
06	Finalizing road map for M&R guideline	PaSTI JAIF team indicated that they will be able to finalize the draft roadmap by end of January 2020 after completing all country visits.
07	PaSTI JAIF Phase 2	NEA proposed to have the draft proposal for PaSTI JAIF phase 2 ready by February 2020.



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05. Additional information collected

- As per ECA, the facilities with consume over 54 TJ need to measure and report their energy consumption data.
- When carbon tax was introduced in 2015, major GHG emitters (emissions above 25,000 tCO₂e per year) start measuring and reporting their emissions to NEA.
- Larger emitters during the industry consultation held in 2016 realized the importance of having a proper M&R system to report.
- After determining the M&R requirement, legislations on carbon tax came into effect in 2018 and facilities that exceed 25,000 tCO₂e/year limit have to get registered under ECA.
- The facilities with the GHG emissions between 2,000 – 25,000 tCO₂e are reportable facilities, who have to report its GHG emissions to NEA. Facilities with GHG emissions above 25,000 tCO₂e should report to NEA about their emissions and get it verified by the NEA accredited third party. These are considered as taxable facilities.
- While NEA has introduced 4 tiers for the emission factors for each category, the facilities are supposed to go for higher tier unless they have justification to use the lower tier. NEA always check whether the facility is reporting in the correct tier.
- Since 2013, IPPU has been measuring and reporting its GHG emissions using IPCC guidelines and the templates issued by the government in pre-carbon tax
- Capacity building of the staff who are engaged in measuring and reporting GHG emissions at the facility level need to be done.

4. Actions to be taken

No	Action	Responsible organization/person	Deadline
1	Collect excel based templates used by the facilities to measure the GHG emissions before and after 2015	NEA	05/11/2019
2	Collect the presentation with the process of developing facility level M&R system	NEA	05/11/2019
3	Share Concept Note for PaSTI-JAIF Phase2	OECC	01/11/2019



Mission Report – Viet Nam

Viet Nam Mission report for PaSTI- JAIF phase 1 on development of facility/company level measurement, reporting and verification (MRV) to support carbon pricing in ASEAN member states (AMS)

01. Project Description

Project Type	Development and implementation of facility/company level Monitoring, Reporting and Verification (MRV) systems for Greenhouse Gas (GHG) emissions in ASEAN Member States (AMS)
Objectives of the mission	<ol style="list-style-type: none"> 1. To collect and validate the information on facility level GHG measurement and reporting (M&R). 2. To identify the priority sector to develop facility level M&R guideline for ASEAN.
Location	Hanoi, Vietnam
Dates	17-18 October 2019
Project Participants	<p>OECC (Implementation Agency of PaSTI-JAIF)</p> <p>Yusuke Matsufuji (Principal Researcher), Riki Nakajima (Researcher)</p> <p>ClimateSI (International Consultant of PaSTI-JAIF)</p> <p>H.M.Buddika Hemashantha (International MRV expert), Pavithra Dissanayake (MRV Officer)</p>



Mission Report – Viet Nam

02. Participating Organizations

1.	Overseas Environmental Cooperation Center (OECC)
2.	Japanese Agency for International Cooperation (JICA)
3.	Ministry of Natural Resources and Environment of Vietnam (MONRE)
4.	Ministry of Industry and Trade of Vietnam (MOIT)
5.	Climate Smart Initiatives (Pvt) Ltd (ClimateSI)

03. List of Participants

(Omitted)



Mission Report – Viet Nam

04. Meeting with Ministry of Industry and Trade of Vietnam (MOIT)

Agenda Item	Matters Discussed	Remarks
01.	Objective of the missions	PaSTI JAIF team provided a brief overview on the PaSTI JAIF project, the objectives of the project (to explore the experience of facility level M&R guideline in state and non-state level; to identify the legal gaps; and to identify a sector to develop facility level M&R guideline).
02.	Legal status for facility level M&R in Viet Nam	MOIT indicated that their department mainly focuses on Energy efficiency, Sustainable energy consumption and cleaner production. MOIT indicated that there is no law on GHG M&R at facility level in Viet Nam though there is a law that requires the certain industries (which consume more than 1000 ToE per year) to report their energy consumption every three years to local authorities using a template introduced under the same law by Department of Energy (DOE).
03.	Existing and proposed facility level M&R system	MOIT further indicated that while there is no existing facility level M&R system in the country, M&R system are being developed for steel and energy sectors with the support from the World Bank.
04.	Preferred sectors for developing regional facility level M&R guideline	Option 1: Garment and textile sector Option 2: Pulp and paper Option Option 3: Plastic Option 4: Cement Option 5: Power
05	Capacity building	MOIT requests to build capacities of organizations and GHG verifiers on applying M&R methodologies.



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05. Second meeting with the Ministry of Natural Resources and Environment (MONRE)

Agenda Item	Matters Discussed	Remarks
01.	Objective of the missions	PaSTI team briefed the objectives of PaSTI (to promote the engagement of non-state actors such as private companies and local governments with incentive mechanism; to enhance the capacities and institutional structure in each country under their national development strategies; and to strengthen and streamline the transparency action at subnational, national and regional level). Further they indicated that there are multilateral (PaSTI JAIF) and bilateral projects (with Indonesia, Viet Nam and the Philippines). While the team explained that the objective of PaSTI JAIF phase 1 is the develop a roadmap for developing facility level M&R guideline for ASEAN member states, scope for bilateral PaSTI projects can be agreed mutually between OECC and the state.
02.	Legal status for facility level M&R in Viet Nam	MONRE indicated that there is no legal requirement for GHG M&R at national or facility level. There is draft Decree on the regulation of GHG emission reduction, which will be approved near future.
03.	Existing and proposed facility level M&R system	MONRE also confirmed that there is no facility level M&R system being developed in the country despite the fact there are couple of project level M&R system being developed in Viet Nam with the support from the World Bank. In addition to reporting the energy consumption of certain private sector facilities in order to comply with EE standard, some facilities also measure the GHG emissions in order to improve their system. MONRE is interested to collect the information on these GHG quantification data and help them to access carbon finance under UNFCCC led mechanism under article 6 while avoiding these mitigation projects being



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04.	Preferred sectors for developing regional facility level M&R guideline	<p>registered under voluntary scheme such as Gold Standard and VERRA.</p> <p>For PaSTI JAIF Option 1: Construction Option 2: Energy & Transport Option 3: Textile</p> <p>MONRE also indicated that assessing common M&R gaps in all countries covering all sectors will assist to find an appropriate sector for ASEAN.</p>
05.	Capacity building	<p>MONRE indicated that it is important: to build the knowledge on the GHG M&R in both public and private sector; and to provide training for the line ministries and organizations.</p>

06. Work on Provincial level GHG M&R - Third meeting with MONRE & JICA

Agenda Item	Matters Discussed	Remarks
01.	Existing provincial level MRV	<p>With the support from OECC and JICA, Ho Chi Minh City has developed a GHG inventory Manual and a MRV manual.</p> <p>A decision has also been developed under this project making the GHG M&R mandatory for the facilities within the city.</p>

07. Follow up actions

No	Action	Responsible organization/person	Deadline
01	Collect the templates used to provide energy consumption data by the larger industries.	MOIT/Mr. Tam	15/11/2019

The Philippines Mission Report

PaSTI- JAIF phase 1 project on development of facility/company level measurement, reporting and verification (MRV) to support carbon pricing in ASEAN member states (AMS)



01. Project Description

Project Type	Development and implementation of facility/company level Monitoring, Reporting and Verification (MRV) systems for Greenhouse Gas (GHG) emissions in ASEAN Member States (AMS)
Objectives of the mission	<ul style="list-style-type: none"> To collect and validate the information on facility level GHG measurement and reporting (M&R) To identify the priority sector to develop regional facility level M&R guideline for ASEAN.
Location	<p>1st and 2nd Meetings: Park inn by Radisson, Philippines</p> <p>3rd Meeting: Climate Change Commissions, Philippines</p>
Dates	08 November 2019
Project Participants	<p>1st meeting:</p> <p><i>Climate Change Office (EMB-Dept of Environment and Natural Resources)</i></p> <p><i>Mr. Albert A. Magalang (Head)</i></p> <p><i>OECC (Implementation Agency of PaSTI-JAIF)</i></p> <p>Riki Nakajima (Researcher)</p> <p><i>ClimateSI (International Consultant of PaSTI-JAIF Phase 1)</i></p> <p>H.M.Buddika Hemashantha (International MRV expert), H.M. Wasundara Sashenka (MRV Engineer)</p> <p>2nd meeting:</p> <p><i>Climate Change Office (EMB-Dept of Environment and Natural Resources)</i></p> <p><i>Mr. Albert A. Magalang (Head)</i></p> <p><i>Energy Development Corporation</i></p> <p><i>Mr. Paulo M. Goooc (Air quality specialist)</i></p> <p><i>OECC (Implementation Agency of PaSTI-JAIF)</i></p>

Aya Marabini (Researcher)

ClimateSI (International Consultant of PaSTI-JAIF Phase 1)

H.M.Buddika Hemashantha (International MRV expert), H.M. Wasundara Sashenka (MRV Engineer)

3rd meeting:

Climate Change Commission (Implementation Oversight Division)

Ms. Sandee G. Recabar (Planning Officer)

OECC (Implementation Agency of PaSTI-JAIF)

Riki Nakajima (Researcher)

ClimateSI (International Consultant of PaSTI-JAIF Phase 1)

H.M.Buddika Hemashantha (International MRV expert), H.M. Wasundara Sashenka (MRV Engineer)

02. Participating Organizations

- Partnership to Strengthen Transparency for Co-Innovation-Japan-ASEAN Integration Fund (PaSTI-JAIF)
- Overseas Environmental Cooperation Centre (OECC)
- Climate Change Commission (CCC) – Philippines
- Energy Development Corporation - Philippines
- Climate Smart Initiatives (Pvt) Ltd (ClimateSI)

03. Participants

(Omitted)



04. Matters Discussed with the National Environment Agency

Agenda Item	Matters Discussed	Remarks
01.	Objective of the missions	<ul style="list-style-type: none"> To explore the experience of facility level M&R guideline in state and non-state level; To identify the legal gaps; and to identify a sector to develop facility level M&R guideline
02.	Legal status for facility level M&R in the Philippines	<p>The Philippine currently does not have any legislations to mandate the measurement and reporting (M&R) at facility level. Executive order 174 (2014) is mainly for national level M&R, which does not cover facility level M&R.</p> <p>Security Exchange Commission (SEC) of the Philippine has issued a resolution No. 4 mandating publicly listed companies to report their emissions, and it has also produced a guideline to be followed by the companies.</p>
03.	Existing and proposed facility level M&R system	<p>There is M & R guideline established for energy sector based on UNFCCC CDM methodologies. However, this has not been used due to its complexities.</p> <p>Though there is no voluntary M&R system for any sector in the country, Cement Manufacturers Association of the Philippine collects GHG data from their members.</p> <p>The country has developed MRV templates for mitigation actions at national level while it is also developing climate change statistics database.</p> <p>It is observed that Santa Rosa City (economic zone) has a system to calculate the facility level GHG emissions, which has been developed with the assistance from USAID.</p>
04.	Preferred sectors for developing regional facility level M&R guideline	<p>The Philippine suggested industry, energy and transport sectors should be considered while developing regional facility level M & R guideline.</p>

		<p>However, the country indicated that cement sub sector under Industry will be priority for now.</p> <p>But the Philippine also highlighted that they can align the priority sector with other ASEAN countries while they will also have an internal discussion to prioritize sub sectors internally and share with the PaSTI JAIF.</p>
05.	Capacity building	<p>Capacity building programs are conducted for the national agencies in the Philippines. Climate Change Commission (CCC) provides the training for the agencies</p> <p>The Philippines conduct training for the private sector and develop GHG M & R module. DENR has already started developing these modules.</p> <p>However, the Philippines need the experts to train the private sector. They also would like to have module developed via PaSTI project. Further, the Philippines may also need the support to develop executive order or an act relevant to facility level M & R.</p>
06.	Finalizing road map for M&R guideline	<p>PaSTI JAIF team indicated that they will be able to finalize the draft roadmap by end of January 2020 after completing all country visits.</p>

05. Additional information collected

- 1st submission of the Public Listed Company (PLC) reports will be in April 2020 and then submission will be annually.
- CCC also issues the voluntary protocol, which are developed based on WRI GHG protocol. Listed companies mostly use WRI Scope 1 & 2, and GHG protocol.
- The Philippines has GHG measuring and reporting protocol for the government as well as for the businesses. (National level guideline uses IPCC and Business level guideline uses GHG Protocol)
- The two guidelines that the CCC has developed will be revised again.
- Training will be designed for the PLC to report sustainability report.

- There were 68 findings for the 2010 GHG inventory by UNFCCC. The most of the findings related to lack of information from the private sector, mainly from IPPU and Waste.
- Online platform for the private sector was suggested during the workshop conducted for the private sector. Since Securities and Exchange Commission has the institutional arrangement and mandate to collect the GHG data from the listed companies, they can now start the digital platform to collect the data.
- Department of Information and Communication Technology will house the server of online platform.
- Ms. Sandee suggested that signing a MoU with the facilities will help Environmental Management Bureau to get the data. EMB can also work with Department of Trade and Association (DTA).
- First Philippines Holdings (FPH)
They use Global Reporting Initiatives (GRI) as their platform and GHG protocol to quantify the GHG emissions. They set internal target to reduce CO₂, 5% target by 2021. FPH have difficulties in setting boundaries. With their experience they think it would be better to use financial boundaries for big corporations and operational boundaries for small companies. According to the FPH, private companies attract to GHG measurement and reporting due to satisfy the customers, investors and company policies.
- According to Mr. Albert, there will be an incentive system for organization who measure and report GHG emissions in the future.

Thailand Mission Report

PaSTI- JAIF phase 1 project on development of facility/company level measurement, reporting and verification (MRV) to support carbon pricing in ASEAN member states (AMS)



01. Project Description

Project Type	Development and implementation of facility/company level Monitoring, Reporting and Verification (MRV) systems for Greenhouse Gas (GHG) emissions in ASEAN Member States (AMS)
Objectives of the mission	<ul style="list-style-type: none"> To collect and validate the information on facility level GHG measurement and reporting (M&R) To identify the priority sector to develop regional facility level M&R guideline for ASEAN.
Location	UNFCCC Regional Collaboration centres-Thailand Office of Natural resources and Environmental Policy and Planning
Dates	21-22 November 2019
Project Participants	<p><i>OECC (Implementation Agency of PaSTI-JAIF)</i></p> <p>Aya Marabini (Researcher) – (by conference call)</p> <p><i>ClimateSI (International Consultant of PaSTI-JAIF Phase 1)</i></p> <p>H.M.Buddika Hemashantha (International MRV expert), Nilni Malsha (MRV Officer)</p>

02. Participating Organizations

- Partnership to Strengthen Transparency for Co-Innovation-Japan-ASEAN Integration Fund (PaSTI-JAIF)
- Overseas Environmental Cooperation Center (OECC)
- Office of Natural resources and Environmental Policy and Planning (ONEP)- Thailand
- UNFCCC Regional Collaboration centre (RCC) -Thailand
- Climate Smart Initiatives (Pvt) Ltd (ClimateSI)

03. Participants

(Omitted)

04. Matters Discussed with the UNFCCC Regional Collaboration Centre (RCC) - Thailand

Agenda Item	Matters Discussed	Remarks
01.	Objective of the PaSTI phase II Project and its progress	PaSTI JAIF team provided a brief introduction to RCC about the PaSTI JAIF phase I and phase II, the objectives of the project and time lines. Potential collaboration with CBIT, global support program by UNEP and UNDP were also discussed.
02.	Basic information about the CIACA Phase II	<p>CIACA phase II will start from 2020 and run until end of 2021 (2 years). Under CIACA phase II, RCC is planning to work on:</p> <ol style="list-style-type: none"> 1. Common “verification” approach for all ASM countries. 2. Capacity building on article 06 based on the outcome on CoP25 3. MRV guideline

03	Selection of one specific sector to develop the M & R guideline	RCC briefed the different specific sectors in different countries as the examples. PaSTI JAIF team said that they have not yet decided to develop the guideline for one or two to three sectors. However, PaSTI JAIF focuses on countries which do not have much transparency activities like Myanmar, Cambodia, Laos and Brunei. Also it will be a voluntary guideline and it can be adopted by the countries if they feel it is better. Upon completing the consultation of all 10 countries, the interest sector/sectors will be decided.
04	Time line of projects	OECC will share the outcome of the PaSTI phase 1 by February 2020. UNFCCC RCC will submit a proposal of CIACA phase II in March 2020.
05	Discussion on MRV network	MRV network can still be under UNFCCC RCC but not under CIACA. This point will be discussed in Tokyo in April 2020 as part of CBIT workshop jointly organized by MOEJ, UNDP and GEF.

05. Matters Discussed with the Office of Natural resources and Environmental Policy and Planning (ONEP)- Thailand

Agenda Item	Matters Discussed	Remarks
01	Objective of the missions	PaSTI JAIF team provided a brief overview on the PaSTI JAIF project, the objectives of the project (to explore the experience of facility level M&R guideline in state and non-state level; to identify the legal gaps; and to identify a sector to develop facility level M&R guideline).
02	Reasons of developing the common M & R	PaSTI JAIF team discussed the importance of having harmonized system by considering the activity data collection, emission factor selection, emission sources identification and guideline selection in details with

03	guideline for all countries Incentives of the private sector for implementing the M & R system	indicating the examples of existing M & R systems of other AMS member countries. ONEP team indicated that they already have sector level and facility level M & R guidelines under V-ETS and they are confused what guideline should be used. Further, they said that there are difficulties to fill the gap between government and private sector.
04	Identification of priority sector to develop M & R system	ONEP requested more time to decide the prioritized sector and further they indicated that they need to discuss whether these guideline is necessary for Thailand.
05	Presence of Thailand for PaSTI – JAIF phase I	Thailand will collect more information on PaSTI JAIF and will discuss the possible partnership.

06. Actions to be taken

No	Action	Responsible organization/person	Deadline
1	Share the outcome of the PaSTI phase I with RCC	OECC & ClimateSI	02/2020
2	Share the concept note of phase II of PaSTI with RCC	OECC	
3	Share the concept note of phase II of CIACA with OECC	RCC	
4	Send the e-mail indicating involvement of Thailand for PaSTI phase I	ONEP	

The Brunei Darussalam Mission Report



PaSTI- JAIF phase 1 project on development of facility/company level measurement, reporting and verification (MRV) to support carbon pricing in ASEAN member states (AMS)

01. Project Description

Project Type	<p>Development and implementation of facility/company level Monitoring, Reporting and Verification (MRV) systems for Greenhouse Gas (GHG) emissions in ASEAN Member States (AMS)</p> <p>Objective of this assignment under Phase I of the project is to provide technical assistance for the development of a pilot project plan and preparation of a road map for regional facility level measurement and reporting guideline.</p>
Objectives of the mission	<ul style="list-style-type: none"> • To collect and validate the information on facility level GHG measurement and reporting (M&R) • To identify the priority sector to develop regional facility level M&R guideline for ASEAN
Locations	<ul style="list-style-type: none"> • Land Transport Department, Ministry of Transport and Info communications • Hengyi Industries at Ministry of Development • Department of Electrical Services • Petroleum Authority • Brunei Shell Petroleum • Brunei LNG • Ministry of Development
Dates	5 th -6 th February 2020

02. Participating Organizations

- Ministry of Transport and Info communications
- Hengyi Industries at Ministry of Development
- Department of Electrical Services
- Ministry of Energy and Manpower
- Brunei Shell Petroleum
- Brunei LNG
- Ministry of Development



- *Participants*

(Omitted)

03. Matters Discussed with Hengyi Industries at Ministry of Development

Agenda Item	Matters Discussed	Remarks
1.	Objective of the missions	<ul style="list-style-type: none"> • To explore the experience of facility level M&R guideline in state and non-state levels
		<ul style="list-style-type: none"> • To identify National requirement to develop the facility level M&R guideline
		<ul style="list-style-type: none"> • To identify the priority sector to develop facility level M&R guideline
2.	Key benefits for private sector companies while implementing facility level M&R for GHG emissions	Improvement of capacity building in M&R systems
		Capability to improve plant efficiency and estimation of GHG emissions through proper and simple methods
		Share the experience in calculation of GHG emissions from other countries like Singapore and Malaysia.
3.	Emission factors used to estimate GHG emissions in common facility level M&R	Emission factors published by API compendium are used for facility level GHG emissions calculations. Application of facility level or inbuilt emission factors developed by the company is more accurate than basic emission factors published by IPPU.
4.	Verification process	PaSTI phase I is only considered with Monitoring and Reporting, not focusing on verification. Verification can be done by state a sector agency or a third-party agency.
3.	Emission reduction targets	There are no internal emission reduction targets, but national strategies such as BNCP (Brunei National Climate Policy) are followed.
4.	Reporting information to government ministries	Air emission data should be reported to government agencies, according to the WHO air quality guideline & government regulations. Further, petrochemical and power plants should follow IFC EHS guideline. However, there is no voluntary requirement to quantify GHG emissions.



5.	Preferred sectors for developing regional facility level M&R guideline	Petrochemical industry
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04. Matters Discussed with Department of Electrical Services (DES)

Agenda Item	Matters Discussed	Remarks
1.	Objective of the missions	<ul style="list-style-type: none"> To explore the experience of facility level M&R guideline
		<ul style="list-style-type: none"> To identify National requirement to develop the facility level M&R guideline
		<ul style="list-style-type: none"> To identify the priority sector to develop facility level M&R guideline
2.	Key benefits for the country by implementing facility level M&R guideline	<ul style="list-style-type: none"> Improve capacity building for M & R in different stages
3.	Data collection templates	<ul style="list-style-type: none"> DES has data collection templates for electricity consumption.



05. Matters Discussed with Ministry of Energy and Manpower (BCCS)

Agenda Item	Matters Discussed	Remarks
1.	Objective of the missions	<ul style="list-style-type: none"> To explore the experience of facility level M&R guideline in state and non-state levels To identify National requirement to develop the facility level M&R guideline To identify a sector to develop facility level M&R guideline
2.	Data collection from industries	<ul style="list-style-type: none"> Only electricity data is collected, but diesel, petrol, coal or other fuel consumption data are not reported. There is no regulation to report. Fugitive emissions in energy sector are collected at facility level under tier 3 approach. However, data in other sub sectors are collected at national level. There is no legal mandate for industries to submit data.
3.	Preferred sectors for developing regional facility level M&R guideline	<ul style="list-style-type: none"> Energy and AFOLU are the preferred main sectors. Energy industry, Forest and Petro chemical are the preferred sub sectors.
4.	Improve capacity building in M & R	<ul style="list-style-type: none"> They Proposed to have capacity building for Company staff, Local expert and Staff of BCCS at all the levels on common facility level GHG M&R development.
5.	Actions taken by Brunei	<ul style="list-style-type: none"> A new climate change policy target for 2025 is being drafted. It will be published in 2020. A climate change governance including private sectors was developed for 1.5 years ago. Development of a strong connection between Brunei Government and Industries.

06. Matters Discussed with Brunei Shell Petroleum

Agenda Item	Matters Discussed	Remarks
1.	Objective of the missions	<ul style="list-style-type: none"> To explore the experience of facility level M&R guideline in state and non-state level; To identify National requirement to develop the facility level M&R guideline To identify a sector to develop facility level M&R guideline
2.	Environment activities following by Brunei shell petroleum	<ul style="list-style-type: none"> BSP is pursuing reduced flaring, venting, fuel gas use and power consumption due to operation and maintenance. BSP has an internal CH₄ reduction target (Annual target is to achieve less than 1%) BSP has targets related to GHG emissions on reducing flare and vent intensity to less than 1%. BSP has ASEAN level GHG reduction targets but not have facility level (BSP)
3.	Tools, guidelines and methodologies which are familiarized when quantifying GHG emissions	<ul style="list-style-type: none"> BSP follows shell's control framework, which requires the use of a tiered approach aligned with IPCC methodologies and API compendium of GHG emissions methodologies for M&R. Data collection is conducted very comprehensively using excel sheets.
4.	Laws and Regulations	<ul style="list-style-type: none"> There is no law or regulation to report GHG emissions to the government but flare performance has to be reported.

07. Matters Discussed with Brunei LNG SENDIRIAN BERHAD

Agenda Item	Matters Discussed	Remarks
1.	Objective of the missions	<ul style="list-style-type: none"> To explore the experience of facility level M&R guideline in state and non-state levels To identify National requirement to develop the facility level M&R guideline To identify a sector to develop facility level M&R guideline
2.	Environment activities following by Brunei LNG	<ul style="list-style-type: none"> Brunei LNG is continually working to improve and reduce their emissions from flaring, fuel consumption and unmeasured loss.
3.	Reporting and measuring of GHG emissions	<ul style="list-style-type: none"> GHG emission data are reported to Brunei LNG stakeholders as part of Management Information Report (MIR). Reporting is done monthly /quarterly.
4.	Improve capacity building in M & R	<ul style="list-style-type: none"> They Proposed to have capacity building for Company staff, Local expert and Staff of BCCS at all the levels on common facility level GHG M&R development. Also, Brunei LNG requested to conduct technical trainings and workshops regarding the facility level M&R
5.	Preferred sectors for developing regional facility level M&R guideline	<ul style="list-style-type: none"> Energy industry and forestry are the preferred sectors to develop common facility level M&R.

08. Matters Discussed with Brunei Petroleum Authority

Agenda Item	Matters Discussed	Remarks
1.	Objective of the missions	<ul style="list-style-type: none"> To explore the experience of facility level M&R guideline in state and non-state level; To identify National requirement to develop the facility level M&R guideline To identify a sector to develop facility level M&R guideline
2.	Role of petroleum authority in Brunei	<ul style="list-style-type: none"> PA has been established in 2019 PA regulates upstream and downstream petroleum operators. Petroleum Brunei regulator and ministry of energy were the regulators before establishing petroleum authority.
3.	Reporting and measuring of GHG emissions	<ul style="list-style-type: none"> PA not measure and report GHG related data but they measure production data and daily price of petroleum products. Current data collection is mainly focused on health and safety.
4.	Improve capacity building in M & R	<ul style="list-style-type: none"> PA needs capacity building for petroleum industry operators to train them on GHG related data collections
5.	Preferred sectors for developing regional facility level M&R guideline	<ul style="list-style-type: none"> Petrochemical industry is the preferred sector to develop common facility level M&R.



01. Actions to be taken

No	Action	Responsible organization/person
1	Share the questionnaire for development of facility level M&R	Department of Electrical Services
2	Provide capacity building to Ministry of Energy and Manpower	OECC, ClimateSI
3	Provide capacity building for facilities in Brunei	OECC, ClimateSI
4	Share the data collection templates	Brunei LNG SENDIRIAN BERHAD Brunei Shell Petroleum Brunei Petroleum authority

The Royal Government of Cambodia

Mission Report



PaSTI- JAIF phase 1 project on development of facility/company level measurement, reporting and verification (MRV) to support carbon pricing in ASEAN member states (AMS)

01. Project Description

Project Type	<p>Development and implementation of facility/company level Monitoring, Reporting and Verification (MRV) systems for Greenhouse Gas (GHG) emissions in ASEAN Member States (AMS)</p> <p>Objective of this assignment under Phase I of the project is to provide technical assistance for the development of a pilot project plan and preparation of a road map for regional facility level measurement and reporting guideline.</p>
Objectives of the mission	<ul style="list-style-type: none"> • To collect and validate the information on facility level GHG measurement and reporting (M&R) • To identify the priority sector to develop regional facility level M&R guideline for ASEAN.
Locations	<p>Ministry of Environment</p> <p>EAC- Electricity Authority of Cambodia</p> <p>EDC- Electricité du Cambodge</p> <p>Ministry of Industry and Handicraft</p>
Dates	28 th -29 th January 2020

02. Participating Organizations

- Ministry of Environment
- EAC- Electricity Authority of Cambodia
- EDC- Electricité du Cambodge
- Ministry of Industry and handicraft

03. Participants

(Omitted)



04. Matters Discussed with Ministry of Environment

Agenda Item	Matters Discussed	Remarks
1.	Objective of the missions	<ul style="list-style-type: none"> To explore the experience of facility level M&R guideline in state and non-state levels
		<ul style="list-style-type: none"> To identify National requirement to develop the facility level M&R guideline
		<ul style="list-style-type: none"> To identify the priority sector to develop facility level M&R guideline
2.	Legal status for facility level M&R in the Cambodia	Cambodia currently does not have any legislation to mandate the measurement and reporting (M&R) at facility level.
3.	Existing and proposed M&R system	1. NC1 and NC2 have been developed and submitted. BUR1 and NC3 are also being developed in order to comply with UNFCCC requirements
		2. Cambodia has developed an MRV system for REDD program
		3. Policy MRV for renewable energy sector in Cambodia is being developed with the support from ICAT and UNEP DTU Partnership
		4. NAMA on Energy Efficiency in the Garment Industry in Cambodia was completed by The Ministry of Industry and Handicraft and UNDP MDG Carbon
		5. A Study on establishing MRV for the development of Nationally Appropriate Mitigation Action (NAMA) in wastewater sector was conducted by the Institute for Global Environmental Strategies (IGES).
4.	Preferred sectors for developing regional facility level M&R guideline	Energy Industry (Power sector)
		Cement Industry
		Garment Industry



05. Matters Discussed with Electricity Authority of Cambodia (EAC)

Agenda Item	Matters Discussed	Remarks
1.	Objective of the missions	<ul style="list-style-type: none"> To explore the experience of facility level M&R guideline To identify National requirement to develop the facility level M&R guideline
2.	Mandate of EAC	EAC issues and manages the energy licenses to power operators. EDC provides monthly electricity production data to EAC. They have no mandate for GHG measurement and reporting. As per the Electricity law, individual power producing facilities have to report some information to EDC and EDC has to report to EAC. The existing data collection templates are available online.
3.	Feed in tariff	A committee decides the tariff and EAC approves it. Tariff is calculated based on capital investment and time.

06. Matters Discussed with Electricity Du Cambodia (EDC)

Agenda Item	Matters Discussed	Remarks
1	Objective of the missions	<ul style="list-style-type: none"> To explore the experience of facility level M&R guideline in state and non-state levels To identify National requirement to develop the facility level M&R guideline
2	EDC Mandate	EDC is responsible for implementing policies, and generating, distributing and transmitting electrical energy. Ministry of Mines and Energy (MME) is involved in the development of policy and master plan.
3	Emission Reduction Target	EDC has no internal GHG reduction targets. Rural electrification fund and Social fund administered by MME are the two targets of EDC.



07. Matters Discussed with Ministry of Industry and Handicraft (MIH)

Agenda Item	Matters Discussed	Remarks
1	Objective of the missions	<ul style="list-style-type: none"> To explore the experience of facility level M&R guideline in state and non-state level To identify National requirement to develop the facility level M&R guideline To identify a sector to develop facility level M&R guideline
2	Legal status for facility level M&R	There is no legal mandate to develop the facility level M & R system or GHG reporting.
3	Preferred sectors for developing regional facility level M&R guideline	Garment sector is prioritized by Ministry of Industry and Handicraft. Cement industries are not included in MIH and they belong to Ministry of Mines and Energy.
4	Capacity building	They requested support for building the baseline setup and developing templates for methodology.

08. Actions to be taken

No	Action	Responsible organization/person
1	Share the scope of the CBIT proposal	Ministry of Environment



The Indonesia Mission Report



PaSTI- JAIF phase 1 project on development of facility/company level measurement, reporting and verification (MRV) to support carbon pricing in ASEAN member states (AMS)

01. Project Description

Project Type	Development and implementation of facility/company level Monitoring, Reporting and Verification (MRV) systems for Greenhouse Gas (GHG) emissions in ASEAN Member States (AMS)
Objectives of the mission	<p>Objective of this assignment under Phase I of the project is to provide technical assistance for the development of a pilot project plan and preparation of a road map for regional facility level measurement and reporting guideline.</p> <ul style="list-style-type: none"> • To collect and validate the information on facility level GHG measurement and reporting (M&R) • To identify the priority sector to develop regional facility level M&R guideline for ASEAN.
Location	Conference call via Skype
Dates	19 March 2020

02. Participating Organizations

- Partnership to Strengthen Transparency for Co-Innovation-Japan-ASEAN Integration Fund (PaSTI-JAIF)
- Overseas Environmental Cooperation Center (OECC)
- Deputy Director for Land-Based Sector MRV and Registry - Indonesia
- Climate Smart Initiatives (Pvt) Ltd (ClimateSI)

03. Participants

(Omitted)



04. Matters Discussed with the National Environment Agency

Agenda Item	Matters Discussed	Remarks
01.	Objective of the missions	<p>Objectives:</p> <ul style="list-style-type: none"> - to explore the experience of facility level M&R guideline in state and non-state level - to identify the legal gaps; and - to identify a sector to develop facility level M&R guideline
02.	Legal status for facility level M&R in the Indonesia	<p>Currently there aren't any legal status for facility level M&R in Indonesia.</p> <p>However, there will be legal basis for MRVs in power sector and industry sector in future.</p>
03.	Existing and proposed facility level M&R system	<p>Power generation sector M&R is still voluntary.</p> <p>According to CIACA report, MRV system will only be "complete" with the issuance of regulations that make reporting mandatory. In this regard, two regulations which will establish the legal basis for MRV in power generation are currently being formulated.</p> <p>Industry sector M&R is also voluntary</p> <p>The Industry sector MRV development is based on the SIINAS (Information System for National Industry) platform which has been in operation for several years. A sub-module has been added to SINAS through which industries can submit their emission data. SINAS has more than 8,000 industrial facilities registered. Only 80 units have reported their GHG emissions.</p> <p>Two regulations are under preparation to serve as the legal basis for the implementation of an MRV system in the industry sector.</p> <p>Sectors covered under voluntary requirements are Power generation and Industry (Cement production, Paper & Pulp, Fertilizer Production)</p>

04.	Preferred sectors for developing regional facility level M&R guideline	<p>Cement production</p> <p>Most immediate priority sector is cement sector as it already has specific standards for quantifying GHG emissions. These standards have been developed under the scope of the “Cement Sustainability Initiative”.</p> <p>Paper & pulp industry,</p> <p>The Ministry of Industry has the intention of developing MRV guidelines for paper and pulp industry because they are significant emitters willing to report on emissions.</p> <p>Fertilizer industry,</p> <p>The process of developing guidelines was found to be more feasible for fertilizer industry, as the production processes of all facilities operating in Indonesia are similar and there are just five major emitters.</p>
05.	Capacity building	<p>Proper networking should be established between Ministries including non-state actors. However, it takes a long time for the coordination process between the Ministries.</p> <p>On the other hand, lack of awareness in the private sector regarding the climate change issues hinders their engagement in the process of developing M&R systems. Furthermore, the capacity of the private sector also needs to be improved. (Especially in the small and medium companies)</p>
06.	Finalizing road map for M&R guideline	<p>PaSTI - JAIF team indicated that they will be able to finalize the draft roadmap by the end of March 2020 after completing all country visits.</p>

05. Additional information collected

Laws for national level MRVs

1. Law no. 32/2009 - Environmental Protection and Management
 - To ensure that development is underpinned with the principle of sustainably and environmentally sound development principles
 - Includes the development of environmental monitoring programs and development project impact evaluations

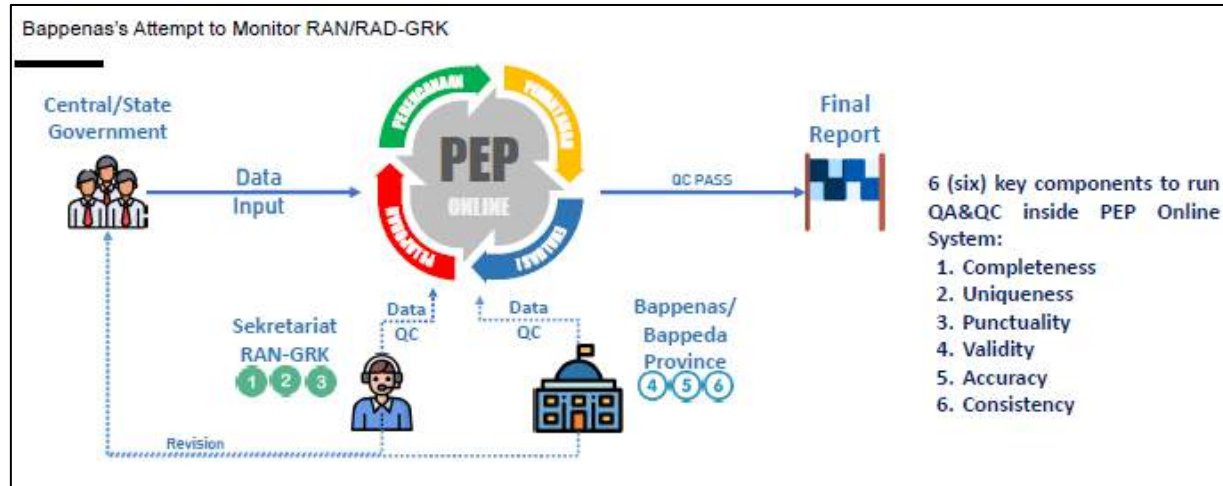
2. Law no. 31/2009 Concerning Meteorology, Climatology and Geophysics
 - Sets out the need to develop a GHG inventory for climate change policy development.

3. Presidential Decrees No. 61/2011
 - The quantified emission reduction target of 26% in 2020 is 0.767 GtCO₂e, and of 41% is 1.189 GtCO₂e. In achieving this target, mitigation actions are allocated to five different sectors, i.e., forestry and peat-land, waste, energy and transport, agriculture, and industry.

4. Presidential Decrees No 71/2011
 - Developing standard and methodology to measure GHG emissions and sequestration from REDD+ programs, projects or activities and consolidation and reporting of data on GHG emissions and sequestration from REDD+ programs, projects or activities
 - Pertains to the implementation of the national GHG inventory, and mandates different bodies of the government to produce national and sub-national GHG inventories on an annual basis

5. Other laws
 - **UU 25/2004**(Regarding SPPN)
 - **PP 17/2017**(Regarding Planning and Budget Allocation)
 - **Perpres65 and 66 / 2015** (Regarding Authority of National Development Planning/Bappenas)

Roles and responsibilities of national and local institutions are clearly defined in the regulations. BAPPENAS leads the implementation of RAN/RAD GRK and coordinates the monitoring, evaluation and reporting (MER) of the implementation of mitigation actions.



06. Actions to be taken

No	Action	Responsible organization/person
1	Collect the filled questionnaires from Mr. Pak Budiharto	Mr. Pak Budiharto Deputy Director for Land-Based Sector MRV and Registry, Ministry of Environment and Forestry

The Lao-PDR

Mission Report



PaSTI- JAIF phase 1 project on development of facility/company level measurement, reporting and verification (MRV) to support carbon pricing in ASEAN member states (AMS)

1. Project Description

Project Type	Development and implementation of facility/company level Monitoring, Reporting and Verification (MRV) systems for Greenhouse Gas (GHG) emissions in ASEAN Member States (AMS)
Objectives of the mission	<p>Objective of this assignment under Phase I of the project is to provide technical assistance for the development of a pilot project plan and preparation of a road map for regional facility level measurement and reporting guideline.</p> <ul style="list-style-type: none"> • To collect and validate the information on facility level GHG measurement and reporting (M&R) • To identify the priority sector to develop regional facility level M&R guideline for ASEAN.
Locations	<p>Ministry of Natural Resources & Environment</p> <p>Ministry of Industry & Commerce</p> <p>Vientiane Local Government</p>
Dates	30 th -31 st January 2020

2. Participating Organizations

- Ministry of Natural Resources & Environment
- Ministry of Industry & Commerce
- Vientiane Local Government
- Ministry of Energy & Mines

3. Participants

(Omitted)



4. Matters Discussed with Ministry of Natural Resources & Environment

Agenda Item	Matters Discussed	Remarks
1.	Objective of the missions	<ul style="list-style-type: none"> To explore the experiences on facility level M&R guidelines at state and non-state levels
		<ul style="list-style-type: none"> To identify National requirements in developing a facility level M&R guideline
		<ul style="list-style-type: none"> To identify a priority sector to develop facility level M&R guideline
2.	Legal status for facility level M&R in Laos	Laos currently does not have any legislations to mandate the measurement and reporting (M&R) at facility level.
		The Climate Change decree which was published in 2019 does not include any provision to collect data from facilities
3.	Proposed M&R system	1. GGGI supports developing an MRV (National Level) for Energy Sector (Solar project)
		2. Developing an MRV for international Aviation using the guidelines from ICAO
		3. CIBIT supports in capacity building on MRV activities in Laos
		4. An M&R system is under development to collect City level data, with support from UN-Habitat
	Other Projects	1. JICA support for MRV on REDD+
4.	Preferred sub sectors for developing regional facility level M&R guideline	1. Cement
		2. Brewery
		3. Thermal Power Generation
5.	Capacity Building	<ol style="list-style-type: none"> Technical support from international experts for knowledge-transfer Capacity building for Staff members Capacity building at local and facility level

5. Matters Discussed with Ministry of Industry and Commerce

Agenda Item	Matters Discussed	Remarks
1.	Objective of the missions	<ul style="list-style-type: none"> To explore the experience on facility level M&R guideline
		<ul style="list-style-type: none"> To identify national requirements to develop facility level M&R guideline
		<ul style="list-style-type: none"> To identify the priority sector to develop facility level M&R guideline
2.	Legal status for facility level M&R in the Laos	1. There is an agreement between the Ministry and facilities to collect data
3.	Existing M&R system	1. An online system is under development to monitor the air pollution from factories which burn fossil fuel.
4.	Preferred sectors for developing facility level M&R guideline	1. Cement
		2. Steel & Iron
		3. Thermal Power Plants
5.	Capacity Building	<ol style="list-style-type: none"> Technical staff of the ministry need capacity building on how to calculate GHG emissions Support is necessary in selecting the parameters to be included in the existing air quality monitoring system Capacity building is required for the staff on the new template and the guideline

6. Matters Discussed with Vientiane Local Authority

Agenda Item	Matters Discussed	Remarks
1	Objective of the missions	<ul style="list-style-type: none"> To explore the experience of facility level M&R guideline at state and non-state levels
		<ul style="list-style-type: none"> To identify a sector to develop facility level M&R guideline
3	Legal status for facility level M&R in the Laos	<ul style="list-style-type: none"> There are three key regulations as legal mandates for the organizations Organizations should develop an Environmental Management plan
4	Existing M&R system	<ul style="list-style-type: none"> There is no specific M&R system but the industries should monitor the air quality according to a general list Industries (Ex: High emitters such as steel, brick facilities etc.) are supposed to submit CO₂ emission (These data are not systematically submitted to the Ministry)
4.	Preferred sectors for developing regional facility level M&R guideline	<ol style="list-style-type: none"> Brick Manufacturing Iron & Steel Brewery
5.	Capacity Building	<ol style="list-style-type: none"> Vientiane local authority, facilities and other local authorities need capacity building with some operating manual

7. Matters Discussed with Ministry of Energy & Mines

Agenda Item	Matters Discussed	Remarks
1	Objective of the missions	<ul style="list-style-type: none"> To explore the experience of facility level M&R guideline in state and non-state level;
		<ul style="list-style-type: none"> To identify National requirement to develop the facility level M&R guideline
		<ul style="list-style-type: none"> To identify a sector to develop facility level M&R guideline
2	Legal status for facility level M&R	No specific legal mandate is available for the energy and mines sector but there is an environmental standard which the companies should report on.
3	Existing M&R system	Companies report under the Environmental and Social management plan to the Environmental Monitoring Unit
4	Preferred sectors for developing regional facility level M&R guideline	Thermal Power plants
5	Capacity building	Staff members of the Ministry need capacity building

8. Actions to be taken

No	Action	Responsible organization/person	Deadline
1	GGGI Supported energy MRV	MONRE	12.03.2020
2	CIBIT proposal	MONRE	12.03.2020
3	Data Collection Template for the Air pollution	MOIC	12.03.2020
4	Information of the Monitoring System of the Hongsa Power Plant	MOEM	12.03.2020



The Myanmar Mission Report



PaSTI- JAIF phase 1 project on development of facility/company level measurement, reporting and verification (MRV) to support carbon pricing in ASEAN member states (AMS)

01. Project Description

Project Type	<p>Development and implementation of facility/company level Monitoring, Reporting and Verification (MRV) systems for Greenhouse Gas (GHG) emissions in ASEAN Member States (AMS)</p> <p>Objective of this assignment under Phase I of the project is to provide technical assistance for the development of a pilot project plan and preparation of a road map for regional facility level measurement and reporting guideline.</p>
Objectives of the mission	<ul style="list-style-type: none"> • To collect and validate the information on facility level GHG measurement and reporting (M&R) • To identify the priority sector to develop regional facility level M&R guideline for ASEAN.
Locations	<p>Ministry of Natural Resources and Environmental Conservation</p> <p>Ministry of Electricity and Energy</p> <p>Ministry of Planning, Finance and Industry</p> <p>Nay Pyi Taw City Development Committee</p>
Dates	<p>16th -17th January 2020</p>

02. Participating Organizations

- Environmental Conservation Department
- Department of Power Transmission and System Control
- Department of Electric Power Planning
- Directorate of Industrial Collaboration, Ministry of Planning, Finance and Industry
- Nay Pyi Taw City Development Committee

03. Participants

(Omitted)

04. Matters Discussed with Environment Conservation Department

Agenda Item	Matters Discussed	Remarks
1.	Objective of the missions	<ul style="list-style-type: none"> • To explore the experience of facility level M&R guideline in state and non-state levels • To identify the legal and institutional gaps; and • to identify a sector to develop facility level M&R guideline
2.	Legal status for facility level M&R in the Myanmar	<p>Myanmar currently does not have any legislations to mandate the measurement and reporting (M&R) at facility level.</p> <p>There is a decision by central committee to collaborate with MONREC to prepare the SNC.</p>
3.	Existing and proposed facility level M&R system	<ol style="list-style-type: none"> 1. Preparation of the Second National Communication is in progress. <p>Some of the M&R components have being followed to prepare the SNC</p> <ol style="list-style-type: none"> 2. CBIT proposal by UNEP covers MRV of emissions – GHG inventory and MRV of actions – NDC including all the sectors 3. Assessment and recommendations for establishing sectoral MRV systems for the Energy sector is prepared by GGGI 4. Myanmar has experience with seven (7) JCM projects mainly covering energy efficiency in industries, and one (1) CDM project.
4.	Preferred sectors for developing regional facility level M&R guideline	<p>Petro Chemical Production (Oil & Gas)</p> <p>Cement Industry</p> <p>Iron & Steel</p>
5.	Capacity building	Capacity building might be required on Climate Change and its impacts, and MRV of GHG.

05. Matters Discussed with Industrial Corporation

Agenda Item	Matters Discussed	Remarks
1.	Objective of the missions	<ul style="list-style-type: none"> To explore the experience of facility level M&R guideline in state and non-state levels; To identify the legal gaps; and To identify a sector to develop facility level M&R guideline
2.	Legal status for facility level M&R in the Myanmar	Drafting of policy and legislation to streamline the measuring and reporting of energy efficiency is in progress.
3.	Existing and proposed facility level M&R system	<ol style="list-style-type: none"> Currently a policy on energy conservation is being drafted. Once it is implemented, measuring and reporting of energy consumption will be carried out. Currently, textile industries measure and report the energy consumption for their internal purposes.
4.	Preferred sectors for developing regional facility level M&R guideline	Fertilizer Cement Pharmaceuticals Waste and waste treatment in chemical industry
5.	Capacity building	Training programmes are in place to train the energy managers on energy efficiency.

06. Matters Discussed with Naypyidaw committee

Agenda Item	Matters Discussed	Remarks
1	Objective of the missions	<ul style="list-style-type: none"> To explore the experience of facility level M&R guideline in state and non-state levels; To identify the legal gaps; and To identify a sector to develop facility level M&R guideline
2	Legal status for facility level M&R in the Myanmar	Currently, Myanmar does not have any legislations to mandate the measurement and reporting (M&R) at facility level.
3	Preferred sectors for developing regional facility level M&R guideline	Cement Waste
4	Capacity building	Awareness programmes and trainings required on MRV, GHG emissions are to be conducted by ECD and international organizations

07. Additional information collected

Based on the experience of data collection process of the SNC, it can be concluded that most of the data required for the transparency mechanisms are available with the respective agencies. However, these data can't be properly communicated due to the lack of coordination within and among the agencies.

Even though there are no systematically established facility level MRV systems, some institutions already collect energy related data either through own staff or outsourcing.

According to the opinions of local experts consulted during the mission, it is unlikely that private organizations operated by local firms would have any experience with facility level MRV systems. However, it is more likely that international organizations based on Myanmar do have experience regarding facility level MRV systems.

Currently ECD works on nine projects which represent both mitigation and adaptation of climate change. However, those projects do not include MRV components

1. MCCA phase II – adaptation and capacity building for regional activities
2. TNA UNEP DTU

3. National Communication
4. Finalizing the PIP of the BUR
5. NDC revision, supported by UNEP DTU (consultant), WWF (energy and forestry), UNDP and GGGI
6. Asia region project supported by LDC fund (Myanmar, Bhutan, Laos, Cambodia) & UNEP, ECD, UN-Habitat – Eco System Based Approach
7. CTCN supported by Danish Hydrology department – climate resilient project for water, flood and drought
8. Two ozone projects – phasing out HFC , and HPMP
9. CBIT for GHG inventory data management for all sectors – proposals are being prepared with the support from UNE

08. Future plans

- Analyse the data gathered from each institution and agree on a sector to be prioritized
- Agree on the road map developed for the selected sector/s
- Select few organizations from the prioritized sectors to participate in the piloting phase

09. Actions to be taken

No	Action	Responsible organization/person
1	Share the mission report to ECD	OECC