

Country Name	<b>Project for Capacity Building for National Greenhouse Gas Inventory</b>
Socialist Republic of Viet Nam	

**I. Project Outline**

Background	<p>Vietnamese government ratified United Nations Framework Convention on Climate Change (UNFCCC) in 1994 and Kyoto Protocol in 2002. Preparation of national Greenhouse Gas (GHG) inventory enables the viewer to have a good understanding of the emission conditions, and national GHG inventory is an indispensable tool to develop policies and measures for GHG emission reduction and to track their progress. Vietnamese government prepared GHG inventories twice based on UNFCCC. However, it lacked an institutional framework, an organization system, and capable people with technical expertise to prepare national GHG inventory because inventory preparation was not mandatory for Viet Nam<sup>1</sup>. There were also some technical problems such as inconsistent data sources and estimation methods because the national GHG inventory preparation teams were formed at an ad-hoc basis.</p>												
Objectives of the Project	<p>The project aimed to strengthen capacity to prepare accurate, reliable and periodical national GHG inventories in Viet Nam through enhancement of capacity to periodically and systematically collect and compile necessary data for national GHG inventories, to promote understanding of national GHG inventories among relevant parties, and to manage quality assurance/quality control (QA/QC) of GHG inventories for each sector (energy; industrial processes; agriculture; land use, land-use change and forestry (LULUCF); and waste), thereby having accurate and reliable national GHG inventories prepared periodically.</p> <ol style="list-style-type: none"> <li>Overall Goal: Accurate and reliable national GHG inventories are prepared periodically.</li> <li>Project Purpose: Capacity to prepare accurate, reliable and periodical national GHG inventories is strengthened.</li> </ol>												
Activities of the Project	<ol style="list-style-type: none"> <li>Project Site: Hanoi</li> <li>Main Activities: (i) Preparation of a roadmap for improving the national system for preparation of GHG inventories, development of a manual for institutional arrangement, collection of data from relevant parties, development of a database, compilation of national GHG inventories, planning and implementation of QA/QC activities, development of manuals for procedures of inventory compilation and QA/QC activities (e.g. national GHG inventory report (NIR)), development of a national GHG inventory improvement plan; (ii) Organization of workshops on preparation and improvement of national GHG inventories, and on methodological study on accuracy and reliability; (iii) Study of methods for preparing activity data and emission factors<sup>2</sup> and for implementing data compilation and QA/QC for each sector of the national GHG inventories, key category<sup>3</sup> analysis and identification of priority categories, investigation of measures for reducing uncertainties for prioritized key categories, collection and compilation of information and identification of emission factors, etc. that better reflect national or regional circumstances, and preparation of time series of activity data for each sector.</li> <li>Inputs (to carry out above activities)</li> </ol> <table border="0"> <tr> <td>Japanese Side (as of project completion)</td> <td>Vietnamese Side (as of Terminal Evaluation in February 2014)</td> </tr> <tr> <td>1) Experts: (Long-term) 2 persons; (Short-term) 8 persons</td> <td>1) Staff Allocated: 25 persons (9 from Department of Meteorology, Hydrology and Climate Change (DMHCC), 3 from Institute of Strategy and Policy on Natural Resources and Environment (ISPONRE), 9 from Institute of Meteorology, Hydrology and Environment (IMHEN), and 4 from Vietnamese Environment Association (VEA))</td> </tr> <tr> <td>2) Trainees Received (Japan) 4 persons; (Third country) 13 persons</td> <td>2) Land and Facilities: An office room for experts at the former building of DMHCC</td> </tr> <tr> <td>3) Equipment: Printer, personal computers, etc.</td> <td>3) Operation Costs</td> </tr> <tr> <td>4) Local Costs: Cost for travel, hiring local assistants and local consultants, etc.</td> <td></td> </tr> </table>			Japanese Side (as of project completion)	Vietnamese Side (as of Terminal Evaluation in February 2014)	1) Experts: (Long-term) 2 persons; (Short-term) 8 persons	1) Staff Allocated: 25 persons (9 from Department of Meteorology, Hydrology and Climate Change (DMHCC), 3 from Institute of Strategy and Policy on Natural Resources and Environment (ISPONRE), 9 from Institute of Meteorology, Hydrology and Environment (IMHEN), and 4 from Vietnamese Environment Association (VEA))	2) Trainees Received (Japan) 4 persons; (Third country) 13 persons	2) Land and Facilities: An office room for experts at the former building of DMHCC	3) Equipment: Printer, personal computers, etc.	3) Operation Costs	4) Local Costs: Cost for travel, hiring local assistants and local consultants, etc.	
Japanese Side (as of project completion)	Vietnamese Side (as of Terminal Evaluation in February 2014)												
1) Experts: (Long-term) 2 persons; (Short-term) 8 persons	1) Staff Allocated: 25 persons (9 from Department of Meteorology, Hydrology and Climate Change (DMHCC), 3 from Institute of Strategy and Policy on Natural Resources and Environment (ISPONRE), 9 from Institute of Meteorology, Hydrology and Environment (IMHEN), and 4 from Vietnamese Environment Association (VEA))												
2) Trainees Received (Japan) 4 persons; (Third country) 13 persons	2) Land and Facilities: An office room for experts at the former building of DMHCC												
3) Equipment: Printer, personal computers, etc.	3) Operation Costs												
4) Local Costs: Cost for travel, hiring local assistants and local consultants, etc.													
Project Period	September 2010 - October 2014 (Extended Period) September 2013- October 2014	Project Cost	(ex-ante) 280 million yen, (actual) 268 million yen										
Implementing Agency	Department of Meteorology, Hydrology and Climate Change (DMHCC) <sup>4</sup> , Ministry of Natural Resources and Environment (MONRE)												
Cooperation Agency	Greenhouse Gas Inventory Office of Japan, Center for Global Environmental Research, National Institute for												

<sup>1</sup> The Copenhagen Accord, which was taken note of during the Conference of the Parties (COP) 15 in 2009, included content that the developing countries (i.e. non-Annex I countries) may prepare and submit their national GHG inventory every 2 years.

<sup>2</sup> "Activity data" is defined as the data on the magnitude of human activity resulting in emissions or removals taking place during a given period of time, and "emission factor" is defined as the average emission rate of a given GHG for a given source, relative to units of activity.

<sup>3</sup> "Category" is a subdivision of sector.

<sup>4</sup> After DMHCC was divided into two departments in 2017, Department of Climate Change (DCC) took over the role of managing climate change matters including national GHG inventory.

## II. Result of the Evaluation

<Special Perspective Considered in the Ex-Post Evaluation>

- Target year for the Overall Goal is not specified in the PDM, but in the Ex-ante Evaluation Sheet, it is defined to be around 5 years after completion of the project. In view of the above, in the ex-post evaluation, the target year shall be set to be 2019 (i.e. 5 years after completion of the project).
- Since the existing Indicator for the Overall Goal (“A national GHG inventory is prepared every 2 years”) does not cover accuracy and reliability of the inventories prepared, whether or not the inventories prepared are considered as “accurate and reliable” shall be confirmed with grounds as Supplementary Information.

### 1 Relevance

<Consistency with the Development Policy of Viet Nam at the Time of Ex-Ante Evaluation and Project Completion>

At the time of ex-ante evaluation and project completion, the project was consistent with a Vietnamese development policy of development of statistical data on GHG emissions and strengthening of the capacity of national GHG inventories as set forth in the “Action Plan for the Implementation of the Kyoto Protocol” (2007-2010) and “Plan of greenhouse gas emission management; management of carbon trading activities to the world market” (2012-2020).

< Consistency with the development Needs of Viet Nam at the Time of Ex-Ante Evaluation and Project Completion >

The project was consistent with development needs of Viet Nam for preparation of accurate, reliable and periodical national GHG inventories at the time of ex-ante evaluation. The needs were greater at the time of project completion because it became mandatory for non-Annex I countries of the UNFCCC to prepare biennial update reports (BUR) containing updated national GHG inventory.

<Consistency with Japan’s ODA Policy at the Time of Ex-Ante Evaluation>

At the time of ex-ante evaluation, the project was consistent with the Country Assistance Program for Viet Nam (2009), which includes “Environmental Conservation” in one of the priority areas and “Climate Change Countermeasures” in one of the points to be considered in cooperation.

<Evaluation Result>

In light of the above, the relevance of the project is high.

### 2 Effectiveness/Impact

<Status of Achievement of the Project Purpose at the time of Project Completion>

The Project Purpose was achieved by the time of project completion. Through activities of the project, a NIR was produced for 2005 and 2010 (Indicator 1). Estimation methods for the National GHG Inventory for 2005 and 2010 were improved in comparison with the one for 2000 (Indicator 2).

<Continuation Status of Project Effects at the time of Ex-post Evaluation>

The project effects were continuing. According to MONRE, the estimation methods improved by the project were continuously being utilized (e.g. for development of the 2013 and 2014 National GHG Inventories) because these methods were based on the guidelines of Intergovernmental Panel on Climate Change (IPCC) and had been improved through the project in response to the availability of data in Viet Nam.

<Status of Achievement for Overall Goal at the time of Ex-post Evaluation>

The Overall Goal was achieved by the time of ex-post evaluation. A national GHG inventory were being prepared almost every 2 years. Through the project, the 2010 Inventory was prepared in 2014 as part of BUR1. After the project completion, the 2013 Inventory was prepared in 2017 as part of BUR2<sup>5</sup>. At the time of ex-post evaluation, preparation of the 2014 Inventory was ongoing as part of National Communication (NC) 3, which was expected to be completed in 2018 (Indicator 1). According to MONRE, the 2013 and 2014 Inventories are more “accurate” and “reliable” compared with the 2010 Inventory because (i) methodologies to calculate necessary data for the 2013 and 2014 Inventories have been improved; (ii) all of the activity data were updated for the 2013 and 2014 Inventories and recalculated for the 2010 Inventory<sup>6</sup>; and (iii) QA/QC procedures have been improved. It is noted the collection/processing of the activity data has not followed the formal one regulated in the Prime Minister (PM) Decision No 2359/ QĐ-TTg on establishment of the National GHG Inventory System (NIS) issued in 2015 because line ministries (LMs), the assumed data providers, have faced difficulties to provide the required data mainly due to lack of budget for data collection and inappropriate forms for data collection.<sup>7</sup> Therefore, MONRE has collected the data (Supplementary Information).

The achievement level is likely to be sustained or enhanced by the target year (i.e. 2019). Vietnamese government plans to prepare the 2016 Inventory in 2019 as part of BUR3 (Indicator 1). According to MONRE, a Circular for detailed guidance on the NIS will be prepared by reviewing and revising the current content of the PM Decision<sup>8</sup>, and the budget for LMs is likely to be secured by issuance of the Roadmap Decree to reduce GHG emission, including NIS. The Decree is expected to be issued in the second quarter of 2019 after MONRE

<sup>5</sup> Initially, the 2012 Inventory was supposed to be prepared in 2016 as part of BUR2. However, preparation of BUR2 was postponed until 2017 due to delay of disbursement of the fund from Global Environment Fund (GEF). Preparation of the 2012 Inventory was changed into the 2013 Inventory according to the IPCC guidelines, which state the base year should be within 4 years from the submission year.

<sup>6</sup> MONRE collected the national data such as social economic data. The data officially announced by General Statistics Office (GSO) were selected first. Next, data reported by local governments were additionally collected. When necessary, MONRE requested some specific data required for calculation for GHG inventory in each sector from research institutes under LMs.

<sup>7</sup> LMs have not been able to provide the required data because they possess and manage a variety of data required in each sector but only data for socioeconomic planning. LMs cannot process specific detailed data which is necessary for the GHG emission estimation. LMs need some amount of the budget allocation for collection/processing of data to serve the role of GHG emission estimation. In addition, according to LMs, the forms for data collection attached in the annexes of the PM Decision are not appropriate and they cannot fill in the forms. Consequently, they have not been involved in the estimation process of the national GHG inventory as regulated by the PM Decision.

<sup>8</sup> For example, according to MONRE, there are some gaps and conflicts between the PM Decision on the NIS and the current Statistics Law and official reporting system at LMs, which need to be improved. In fact, Ministry of Transport plans to integrate indicators for GHG emission calculation into their statistical reporting system. It would reduce the cost and increase efficiency of the NIS. MOIT and MARD affirmed that LMs should be more involved in QA/QC of GHG emission estimation for relevant sectors as they have sectoral expertise.

justifies the content of the Decree based on the agreement on Paris Agreement Work Plan (including Transparency Framework) of COP24 (December 2018) and resubmits the draft Decree to Office of Government. With the required data provided by the LMs, accuracy and reliability of the 2016 Inventory are likely to be further improved. (Supplementary Information).

<Other Impacts at the time of Ex-post Evaluation>

No negative impacts of the project have been observed. As to other positive impacts, the experiences and deliverables of this project have been widely utilized by the relevant projects supported by other development partners (DPs) i.e. British Embassy, GIZ and German Ministry of Environment (BMU). For example, the reports developed by this project were referred to during the implementation of “Training and Support Services for the Development of a National Greenhouse Gas Inventory System and National Measurement, Reporting and Verification Methodology in Viet Nam” (2014-2017), supported by British Embassy. According to MONRE, the project deliverables (e.g. a series of reports) have contributed to enhancing the better understanding among stakeholders such as LMs on development of national GHG inventory.

<Evaluation Result>

Therefore, the effectiveness/impact of the project is high.

#### Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results
(Project Purpose) Capacity to prepare accurate, reliable and periodical national GHG inventories is strengthened	1. A National GHG Inventory Report is produced for 2005 and 2010.	Status of the Achievement: achieved (Project Completion) -A NIR was produced for 2005 and 2010.
	2. Estimation methods in the GHG inventory are improved (e.g. from lower tier <sup>9</sup> to higher tier, improvement of notation keys <sup>10</sup> , etc.)	Status of the Achievement: achieved (continued) (Project Completion) -Estimation methods for the 2005 Inventory and 2010 Inventory were significantly improved in comparison with the 2000 Inventory. For example, higher tier methodology and more appropriate notation keys were applied. In addition to what had already been accomplished in the 2005 Inventory, the project made a pre-review of data and information for local circumstances to be better reflected in the 2010 Inventory.  (Ex-post Evaluation) -Estimation methods improved through the project were continuously being utilized in preparing national GHG inventories.
(Overall Goal) Accurate and reliable national GHG inventories are prepared periodically.	1. A national GHG inventory is prepared every 2 years.	(Ex-post Evaluation) mostly achieved <List of national GHG inventories prepared/being prepared after the project completion>

Source: Terminal Evaluation Report; presentations of energy consultants for IMHEN at a consultation workshop for the 2014 Inventory; interview with a national consultant for development of the 2014 Inventory and Deputy Director of DCC (formerly DMHCC).

### 3 Efficiency

Although the project cost was within the plan (ratio against the plan: 96%), the project period exceeded the plan (ratio against the plan: 136%). The project was initially extended by 8 months due to delay of formal approval of the project by the Vietnamese side (including securing budget and formulation of Project Management Unit) and was further extended by 5 months to support finalization of NIR 2010, which had been decided by the Vietnamese government to be included in BUR 1 to be submitted by the end of 2014.

### 4 Sustainability

<Policy Aspect>

As stated in “Effectiveness/Impact”, the PM Decision on the NIS was issued in 2015. Initially, MONRE planned to implement the NIS as a pilot activity in 2016-2017 and review and revise it in 2018-2019. However, instead of reviewing and revising the NIS in the PM Decision, MONRE decided to include the content of the NIS into the draft Roadmap Decree to reduce GHG emission, which is expected to be issued in the second quarter of 2019. According to MONRE, a Circular for detailed guidance on the NIS will be prepared by reviewing and revising the current content of the PM Decision, once the Roadmap Decree comes into effect. ~~It is expected that formats of excel spreadsheets for data collection will be improved during the development of the Circular on NIS.~~

<Institutional Aspect>

The NIS, established by the PM Decision (2015) stated above, is still in an experimental stage and, therefore, has not been fully operational yet. According to the Decision, MONRE is the leading agency for the NIS, which manages, calculates, and reports the national GHG inventory to UNFCCC, and LMs, such as Ministry of Industry and Trade (MOIT) and Ministry of Agriculture and Rural Development (MARD), are expected to collect/process the activity data required in GHG emission calculation, and provide the collected data via GSO/Ministry of Planning and Investment. However, MONRE has still collected the activity data, which has been done by IMHEN, former VEA staff members trained by the project, and some experts of research institutes through several consultant contracts with DCC (formerly DMHCC), because LMs are not able to assume the role defined in the NIS yet as stated in “Effectiveness/Impact”<sup>11</sup>. It

<sup>9</sup> “Tier” means the level of methodological complexity. Tier 1 is the lowest level and Tier 3 is the highest one.

<sup>10</sup> “Notation keys” (i.e. NO (Not Occurred), NE (Not Estimated), NA (Not Applicable), C (Confidential), IE (Included Elsewhere)) are annotations used to explain the non-estimated items.

<sup>11</sup> According to MOIT and MARD, a focal point (i.e. department) and staff in charge have been assigned for the national GHG inventory (2 persons at MOIT and 1 person at MARD); however, the number of the staff would not be sufficient to manage the data collection activity required by the PM Decision (2015) as the assigned staff have other engagements and do not have special expertise. It would be necessary to hire local consultants who have

is noted that the NIS is expected to be improved and fully operational in 2020 in time for the 2016 Inventory preparation if the Circular for the detailed guidance on the NIS is issued in 2019-2020.

At MONRE, institutional arrangement set up for preparation of the national GHG inventory, including collection/processing of the activity data, is firmly established. DMHCC was reorganized into DCC in 2017, which has continued to be a main focal point at MONRE for development of the national GHG inventory in general and in charge of collecting/processing activity data in sectors such as Agriculture, LULUCF and Waste. IMHEN, a related institution in MONRE, is responsible for collecting/processing activity data and estimation of GHG emission in Energy and Industrial Process sectors while ISPONRE is in charge of doing QA/QC. The number of staff allocated for the national GHG inventory is 19 at DCC, 7 at IMHEN, and 2 at ISPONRE. The number is considered sufficient as the 2013 and 2014 Inventories have been prepared without a serious problem. It is noted that the number of the staff has increased at DCC (formerly DMHCC) since the project completion. At ISPONRE, one of the staff members was retired but still works as a senior advisor on QA/QC process. ISPONRE has a plan for internal training by the senior staff trained by the project to build capacity of 6 additional staff members so that they can take part in QA/AC if needed. VEA has not been involved in the preparation of the national GHG inventory as an institution since the project completion, but 2 of 4 staff members, transferred to DCC (formerly DMHCC) and Vietnam Administration of Seas and Islands have been engaged in preparation of the national GHG inventories (2013 and 2014 GHG Inventories) as key contributors.

<Technical Aspect>

At MONRE, there is established technical level for preparing the national GHG inventory. Most of the staff at DCC (formerly DMHCC), ISPONRE, and IMHEN, trained by the project, remain with the respective organizations and engage in preparation of the national GHG inventory as key persons. Experienced staff members have shared the knowledge and skills to newly joined members. DCC (formerly DMHCC) and IMHEN have accumulated knowledge and skills for data collection/processing and calculation of national GHG inventory in all sectors. ISPONRE has a plan to train their other staff in QA/QC to enhance its capacity. Technical capacity of MONRE is expected to be further enhanced through the learning by doing process and also with support from DPs such as British Embassy, GIZ, Asian Development Bank, and World Bank.

With the coming Decree on Roadmap for mitigation and Circular for detailed guidance on the NIS under the Roadmap Decree, it is expected that formats of excel spreadsheets for data collection will be improved during the development of the Circular on NIS

<Financial Aspect>

The 2013 National GHG Inventory was prepared as part of BUR2 and the 2014 Inventory is being prepared as part of NC3. Total budget and expenditure specifically for the national GHG inventory preparation is not available. For reference, total budget for BUR2 was more than 385,000 USD, and 650,000 USD for NC3. The overall budget for the 2013 and 2014 Inventories is considered sufficient because the Inventories were prepared without a serious problem and “accuracy” and “reliability” were improved compared with the previous ones.

Budget of MONRE for preparation of BUR2, NC 3, and BUR3 (Unit: USD)

	2016 <sup>12</sup>	2018
Budget approved (Plan)	More than 385,000	1,002,000
<State budget>		
-C/P budget for UNEP/GEF	33,000 for BUR2 (*all in-kind)	150,000 for NC3 (*24,000 in cash and the others in-kind)
-Others	0	352,000 for the 2016 Inventory to be included in BUR3 (*for LULUCF sector only)
<Other sources>		
-UNEP/GEF (including estimation of GHG inventory)	352,000 for BUR2	500,000 for NC3
-GIZ	Some amount for BUR2	N/A
Budget allocated (Actual)	More than 385,000	1,002,000
Expenditure	N/A	N/A

Source: MONRE

Preparation of BUR2 and NC3 has been mainly supported by GEF. Although the PM Decision on the NIS was issued in 2015, state budget allocated for the national GHG inventory is still limited at MONRE. LMs and GSO have not secured budget to collect/process the activity data required by the Decision. According to LMs, they have not secured the budget for GHG inventory in their annual budget planning because they have not been able to implement the Decision (See footnote 7 for details).

For the 2016 Inventory to be included in BUR3, in 2018, MONRE received some amount of the state budget on ad-hoc basis (for LULUCF sector only) and, in 2019, MONRE needs to get more funding from GEF and state budget in order to make the inventory more “accurate” and “reliable”. Continuous support from GEF is expected because GEF is supposed to provide funds to non-Annex I countries for BUR/NC preparation according to the decisions of the COP. Meanwhile, it is not certain if MONRE will continue to secure sustainable financial resource from the state budget for biennial preparation of the national GHG inventory report as required by UNFCCC. However, it is noted, according to MONRE, with the coming Roadmap Decree to reduce GHG emission, budget allocation for national GHG inventory at both MONRE and LMs is likely to be secured from 2020 if the Circular for detailed guidance on the NIS is issued in 2019-2020.

<Evaluation Result>

In light of the above, it has been observed that further improvements are needed in terms of institutional and financial aspects. Therefore, the sustainability of the effect through the project is fair.

## 5 Summary of the Evaluation

special skills to collect and process the activity data. In addition, as necessary data for GHG inventory development is specific, MOIT/MARD need to process the existing data by using special skills. Additionally, there are some specific data required for GHG inventory that MOIT/MARD do not manage and they will have to conduct additional surveys to collect these data. However, they feel they do not have sufficient awareness and capacity.

<sup>12</sup> Budget for BUR2 was approved/allocated in 2016, but preparation of BUR was postponed to 2017 as stated in footnote 5.

The project achieved the Project Purpose (i.e. Capacity to prepare accurate, reliable and periodical national GHG inventories is strengthened). The effect of the project has been continued, and the Overall Goal (i.e. Accurate and reliable national GHG inventories are prepared periodically) has been achieved. Regarding the sustainability, some difficulties have been observed in terms of the institutional aspect (i.e. the NIS has not been fully operationalized yet. It is still in an experimental stage and is planned to be reviewed and improved in 2020) and financial aspect (i.e. state budget for the national GHG inventory preparation is limited at MONRE and the budget for the inventory is not secured in annual budget planning of LMs). As for the efficiency, the project period exceeded the plan.

Considering all of the above points, this project is evaluated to be satisfactory.

### III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

-It is recommended that MONRE and LMs take the following actions by the end of 2019 once the Roadmap Decree is issued in the second quarter of 2019 and when the Circular on guidance of NIS is developed to fully operationalize the NIS.

- (1) MONRE should organize awareness-raising workshops for LMs (including GSO) and major emitters in relevant private sector to encourage them to understand the purpose of activity data collection/processing for national GHG inventories, which is based on decisions on GHG Inventory (UNFCCC) and IPCC guidelines. GSO has the capacity of collecting and processing social economic statistic data, but they do not have specific capacity focusing on activity data for GHG inventory. Cooperation from private sector (as major emitters) for data collection is needed.
- (2) MONRE should provide trainings to LMs and major emitters in relevant private sector to build their capacity on data collection/processing such as how to categorize data, how to fill in data input templates etc. It is very important that a sectoral system of data collection and management at each LM will be developed for information sharing and management of their GHG emission reduction activities in the future.
- (3) Cost estimation for preparation of GHG inventory should be incorporated into annual budget planning of MONRE and LMs. MONRE should develop an implementation plan for preparation of the national GHG inventory including capacity building for related agencies within MONRE and other LMs once the Circular on NIS is issued in 2019-2020. Based on this plan, MONRE will be able to request for state budget as a part of their annual budget planning. MONRE will have a sustainable budget to maintain NIS and will not have to depend on supports/funding from others.
- (4) Data collection for national GHG inventories should be aligned with the official reporting system at LMs.
- (5) With sectoral in-depth understanding and expertise, each LM should assign its sectoral experts of each research institute to be involved with MONRE in the review of activity data and also QA/QC in order to validate the result of GHG inventory estimation.  
(In this connection, MONRE should provide capacity building/training to LMs to improve their understanding and experience for inventory development). Or, it will be much better if an independent party can do QA/QC, hence accuracy of and transparency of the national GHG inventory estimation process will be improved. For example, experts such as of a consulting company or academia from universities/professional organizations can act as an independent party for QA/QC.

Lessons Learned for JICA:

-JICA Vietnam Office has continued to follow up the project with C/Ps and other DPs after the project completion because the project proposed National GHG Inventory System in its recommendation of the final report and JICA Vietnam Office followed up to ensure that the recommendation by the project was referred to for the institutionalization of the National GHG Inventory System. Therefore, materials produced by the project such as NIR 2005 and 2010 as well as the proposal on institutional arrangement of NIS were shared timely with other DPs and the outcomes of the project contributed to the establishment of the NIS.

-As the project focused on strengthening the capacity of relevant agencies in MONRE, involvement of LMs was limited. However, at the time of ex-post evaluation, Vietnam already ratified Paris Agreement and the Rule-book of Paris Agreement has been set in the last COP negotiation. With new development of international negotiation and commitment on climate change response, Vietnam has become more committed to promote climate change mitigation measures resulting into better institutional arrangement of MONRE and other LMs. During the last few years without data which are managed by LMs, MONRE has made effort to collect/process and prepared national GHG inventories by contracting with IMHEN and VEA staffs. In the future, outputs of project related to GHG Inventory should be shared and transferred to LMs as well, and involvement of LMs is important. For example, trainings/workshops on methods for data collection/processing should be provided to LMs and major emitters in relevant private sectors to promote their cooperation in the future preparation of national GHG inventories. Therefore, it is very important to ensure that the project outputs should be not only delivered to C/Ps by the project but also should be further disseminated to other stakeholders by C/Ps not only during implementation of the project but also after the project completion, for example, through workshops.



Workshop on Introduction of the second Biennial Updated Report organized by MONRE



Consultation workshop on the 2014 GHG Inventory in Energy and Industrial Process (for the Third National Communication