

**The 9th Workshop on GHG Inventories in ASIA
(WGIA9)**

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**VIETNAM – NATIONAL
COMMUNICATION REPORT**

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Outline

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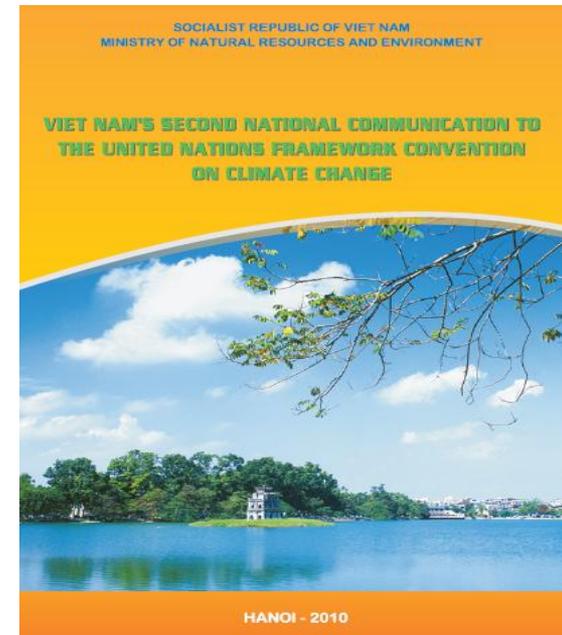
1. Introduction

- ▣ Viet Nam ratified UNFCCC on 11 June 1992, KP on 25 September 2002.
- ▣ MONRE is a National Focal Authority for implementation of the UNFCCC & KP.
- ▣ Completed National GHG Inventories as one of component of projects as bellows:

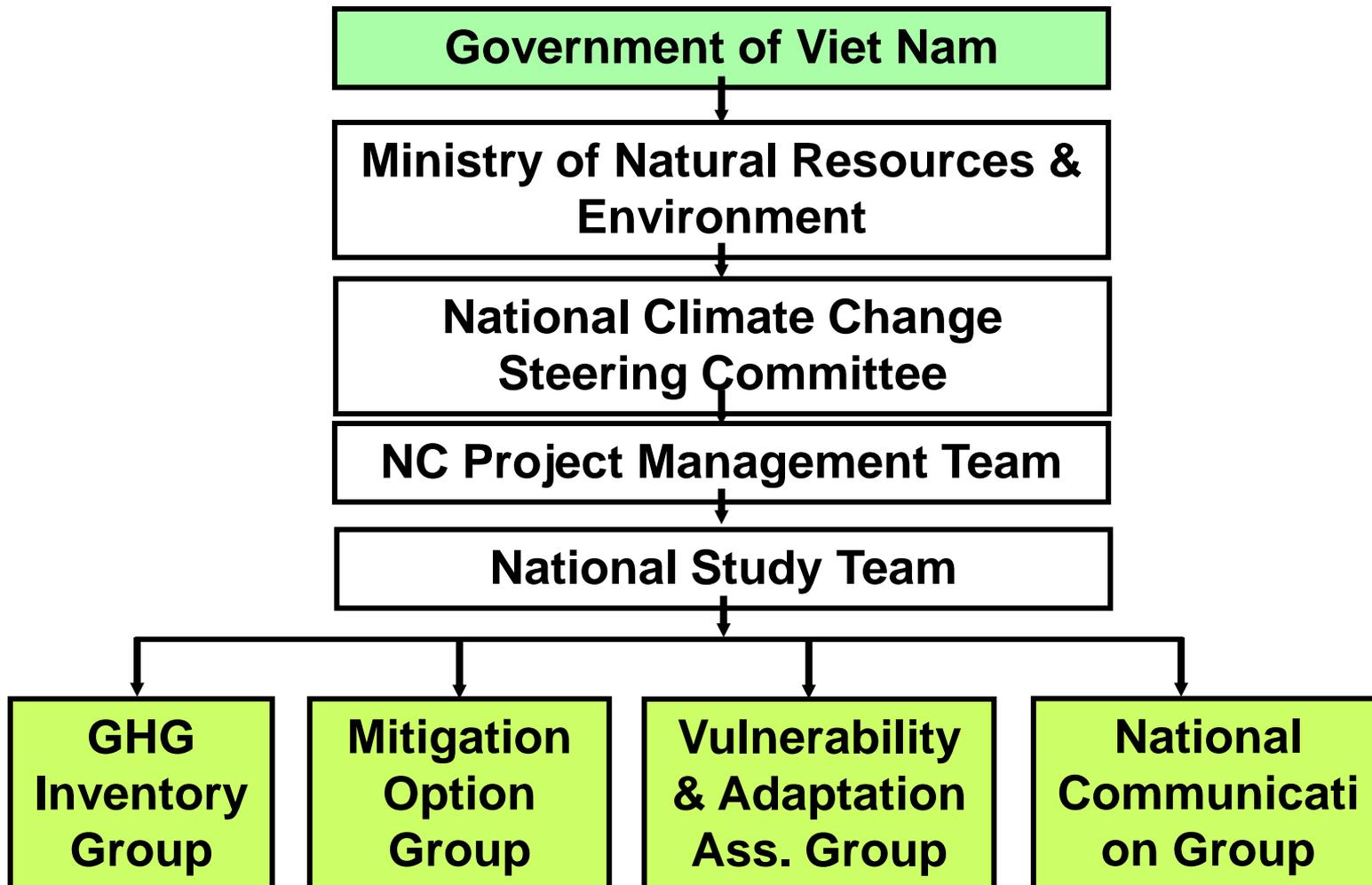
Project	Base year	Notes
ADB: <i>Climate Change in Asia: Vietnam, 1994</i>	1990	Compiled by National Technical Experts (NTE). 1994 (informal)
ADB: <i>ALGAS , 1997</i>	1993	Compiled by NTE. 1997 (informal)
GEF/UNEP/MONRE: <i>INC to UNFCCC, 2003</i>	1994	Compiled by GHG Inventory Group. 2002
<i>Country Program on Climate Change, 2004</i>	1998	Compiled by NTE. 2003 (informal)
GEF/UNEP/MONRE: <i>SNC to UNFCCC,2010</i>	2000	Compiled by GHG Inventory Group. 2009

Second National Communication

- (1) UNEP/GEF Project “ Viet Nam: Preparation of Second National Communication under UNFCCC”.**
Duration: 2007-2010.
- (2) Project Executing Agency:**
Department of Meteorology Hydrology and Climate Change under MONRE
- (3) Vietnam submitted SNC to the UNFCCC Secretariat at the COP 16 (Dec. 2010).**
- (4) SNC included 8 Chapters, 04 Annexes, 71 tables, 18 Figures with total of 152 pages.**



Institution arrangement for implementation of SNC



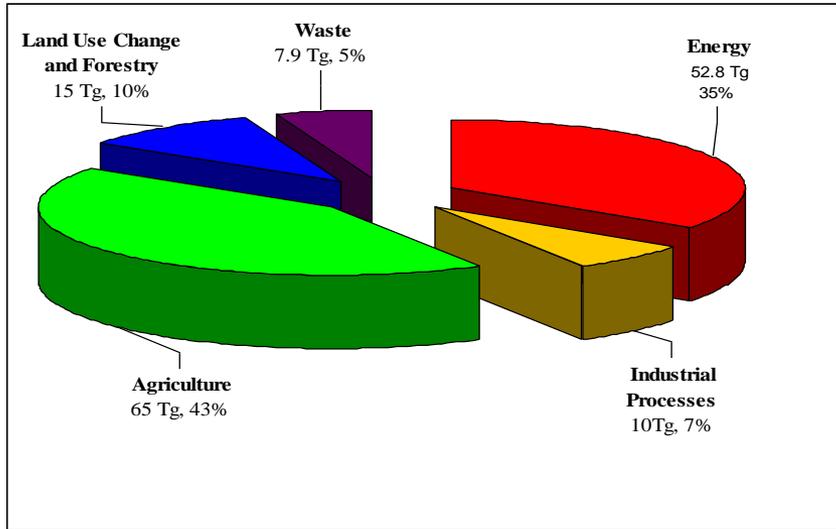
2. GHG Emissions inventories for 2000

- ✓ The GHG inventories are compiled in accordance with the methodology recommended by the IPCC in its *Guidelines for National Greenhouse Gas Inventories 1996 Revised*
- ✓ The Standard Data Worksheets for 5 sectors (Energy, Industrial Processes, Agriculture, Land Use Change & Forestry and Waste)
- ✓ Most of emission factors used are IPCC default values while some of emission factors (used for the Agriculture, Land-Use Changes and Forestry sector) are country specific factors.
- ✓ The top-down method used for collecting activity data from main sectors has been applied.

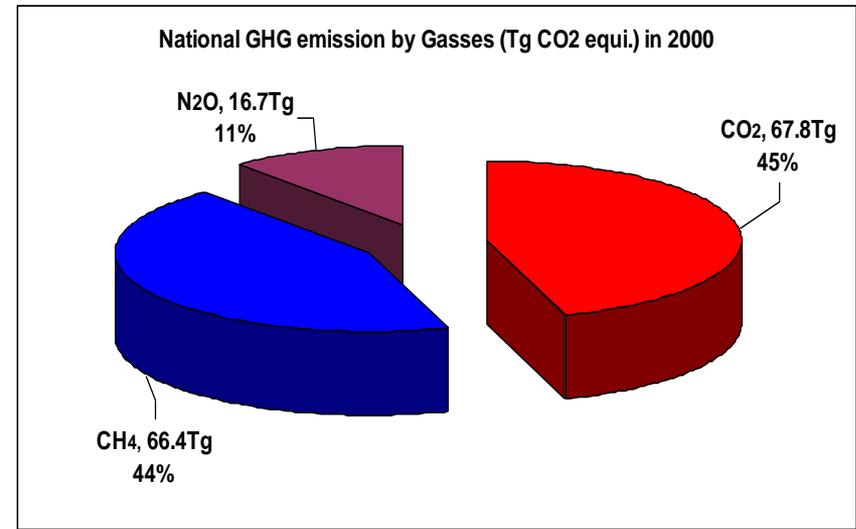
Results of GHG emission by Sectors in 2000

Sector	CO₂ (Gg)	CH₄ (Gg)	N₂O (Gg)	Total CO₂ eq.(Gg)	Percent (%)
Energy	45,900	308.56	1.27	52,773	35.0
Industry Process	10,006			10,006	6.6
Agriculture		2,383.	48.49	65,091	43.1
LULUCF	11,869	140.33	0.96	15,105	10.0
Waste		331.48	3.11	7,925	5.3
TOTAL	67,766	3,164	53.83	150,900	100

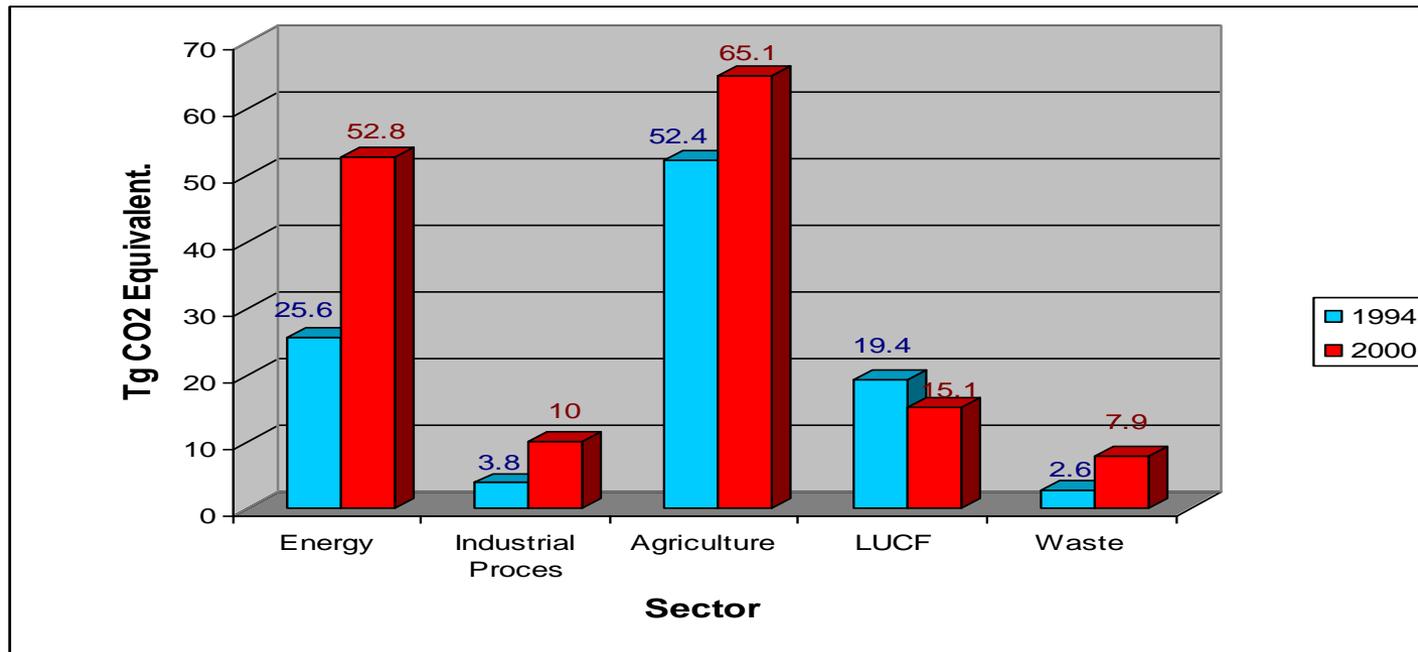
GHG emissions by sectors expressed in CO2 equivalent in 2000



GHG emission by gasses in 2000



Comparison GHG emission by Sectors in 1994 and 2000



3.The improvements of SNC Inventories comparison with INC

- 1/ Database (AD &EF) has been improved and archived in DMHCC (MONRE).**
- 2/ Analyzed the key sources categories**
- 3/ Uncertainty estimates were carried out. (14.9%)**
- 4/ Documentation of SBS for Agricultural sector has been prepared.**
- 5/ Organized some surveys to development of local EF (Rice cultivation, coal mine methane fugitive emissions...).**
- 6/ Compiled the Technical report on GHG inventories for 2000.**

7. GHG Group included Energy, IP, LULUCF, Agriculture, Waste Sub-groups. Each sub-group is combined several experts on data collection and checking, uncertainty analysis, GHG estimation.



8. Organized several expert meetings for reviewing SNC included GHG Inventory chapter.

Key Category Analysis

- a) **14 key source categories in terms of both Level and Trend assessments.** They are as bellows:
- + **Energy: 4 source categories** including CO₂ emissions from Manufacturing Industries & Construction, Transport, Energy Industries and CH₄ emissions from Oil & gas fugitive;
 - + **Industry process : 2 source categories** including CO₂ emissions from Cement and Metal production;
 - + **Agriculture: 3 source** categories including CH₄ emissions from Rice Cultivation, Enteric Fermentation and N₂O emission from Agricultural soil ;
 - + **Forestry and Land use change: 4 source categories** including CO₂ sequestration from Change in Forest and Other Woody Biomass Stocks, CO₂ emissions from soils, CO₂ removal from Abandonment of Managed Lands and CH₄ emissions from Forest and Grassland Conversion;
 - + **Waste: 01 source category** including CH₄ emissions from Solid waste disposal.

Key Category Analysis (cont')

b) **In addition, Four (4) source categories** (CO₂ Energy sector Emissions from Commercial /Institutional, and from resident, CH₄ emission from Manure Manage and CO₂ emissions from Forest and Grassland Conversion) are key only in terms of the Level assessment.



Summary of key category analysis for Vietnam with LULUCF

A	B	C	D	E
IPCC Category Code	IPCC Category	Greenhouse gas	Identification criteria	Comments ^a
1A2	Manufacturing Industries and Construction	CO₂	L1, T1	Aggr
1A3	Transport	CO₂	L1,T1	Aggr
1A1	Energy Industries	CO₂	L1,T1	Aggr
1B2	Oil & gas fugitive	CH₄	L1, T1	-
1A4	Commercial /Institutional	CO₂	L1	-
1A5	Resident	CO₂	L1	-
2A	Cement Production	CO₂	L1, T1	-
2C	Metal production	CO₂	L1, T1	-
4C	Rice Cultivation	CH₄	L1, T1	-
4D	Agriculture soil	N₂O	L1, T1	-
4A	Enteric fermentation	CH₄	L1, T1	-
4B	Manure management	CH₄	L1	-

Summary of key category analysis for Vietnam (Cont')

A	B	C	D	E
IPCC Category Code	IPCC Category	Greenhouse gas	Identification criteria	Comments ^a
5A	Change in Forest and Other Woody Biomass Stocks	CO₂	L1, T1	Aggr
5B1	Forest and Grassland Conversion	CO₂	L1	-
5B2	Forest and Grassland Conversion	CH₄	L1, T1	-
5C	Abandonment of Managed Lands	CO₂	L1, T1	-
5D	Emissions and Removals from Soil	CO₂	L1, T1	-
6A	Solid waste disposal	CH₄	L1, T1	-

4. Limitations and constraints in national GHG inventory

- + Related information and activities data for GHG inventory are inadequate, That GHG Inventory was not extensive and comprehensive.**
- +The data collection process is slow. Data verification and validation are not undertaken on a continuous basis.**
- + The data collection system for GHG inventory is incomplete. A focal agency responsible for the national inventory's data collection, analysis, verification and updating has not been established or designated.**

Limitations and constraints (cont')

- + Research, assessment and verification for certain country-specific emission factors remains incomplete as well as lack of financial and technical support for developing CS EFs.**
- + There is an inadequate pool of greenhouse gas inventory technical experts in the ministries and agencies. Inter-agency coordination remains to be desired.**
- + Difficult to engage full time committed and dedicated team members as the GHG inventory to be done only under CC projects.**

5.Lessons Learned, Problems & Challenges

- + It is necessary to develop a permanent system for National GHG inventory preparation. In the system, various Government agencies, policy makers and scientists should be involved.**
- + A National GHG Inventory Office needs to be established to coordinate the GHG inventory in Vietnam**
- + Lack of Institutional arrangements for data collection, analyzing, verifying and updating AD for GHG inventories.**

5.Lessons Learned, Problems & Challenges (Cont')

- + QA/QC procedures and plan has not setting up, key category analysis has been done but lack of using on improvement of GHG inventories, documentations on methods, AD, and EF (SBS) has not been completed. They are the gaps for improving next GHG Inventories.**
- + The Project “Capacity Building for National Greenhouse Gas Inventory in Viet Nam” funded by Japan (JICA) with its objectives to strengthen the capacity of Vietnam to periodically prepare GHG inventories using accurate and time-series consistent data and estimation methods for GHG emissions/removals. This Project should help to improve the GHG emissions Inventories in Vietnam.**
- + WGIAAs provided the forum on enhancing information flow and experience exchange of ASIA Countries on preparing SNC particularly for GHG Inventory activities. It helps to enhance expertise and knowledge of Vietnam participants on GHG inventory preparation.**

6. Future Inventory

- **Vietnam has started preparing for the Third National Communication (TNC) with some primary works as follows:**
 - + **Contacted with GEF Implementing Agency.**
 - + **Start to implement project “Capacity building for GHG inventory” funded by Japan (JICA).**
- **The activities or plans for the next GHG inventory has not setting up. Below is expert views for the improvement of GHG Inventory:**
 - + **Setting up an institutional framework, an organization system, and capable people with technical expertise to prepare GHG inventories.**

6. Future Inventory (Cont')

- + Develop the Plan for improving GHG inventories. This Plan should be included the Institutional Arrangements for National Inventory Systems as well as Qa/Qc procedure and system**
- +Key category analysis should be used on methodological choice.**
- + Enhance documentation of method, AD, and EF for all categories.**
- + Improving the system for data collection, analyzing, verifying and updating for GHG inventory.**

Thank you !