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Preparation of National GHG Inventory for the year 2000 in Viet Nam under Viet Nam Second National Communication to UNFCCC

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A. Previous activities in the National GHG Inventory for the year 1994 in Viet Nam under Viet Nam INC to UNFCCC

- The results of 1994 National GHG Inventory in Viet Nam were presented at the Workshop of GHG Inventories in Asia Region, 13-14 November 2003, Phuket, Thailand
- The methodology of Inventory: IPCC 1996 revised Guidelines for National GHG Inventories
- In the INC, Viet Nam has undertaken a National GHG Inventory for direct GHGs carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O) and indirect GHGs nitrogen oxides (NO_x), carbon monoxide (CO) and non-methane volatile organic compound (NMVOC) and sulphur dioxide (SO₂) for the base year 1994 in 5 source categories: Energy, Industrial processes, Agriculture, Land-use Change and Forestry and Waste
- Based on this inventory, projections of national GHGs emissions to 2020 had been made and the options for mitigation of GHGs emissions have been identified and developed for the energy, land-use change and forestry and agriculture sectors




➤ **Major gaps:**

- ✓ CO₂, CH₄ and N₂O, NO_x, CO, NMVOC and SO₂ data in the 5 source categories need to be updated and extended based on the COP8 Guidelines and to be stored in the existing GHG database;
- ✓ Inventory was not extensive and comprehensive due to the lack of data or poor data quality in certain source categories (e.g., not all industries and industrial processes were considered; data quality in agriculture and forestry sectors are not as good as those in fuel combustion sector);
- ✓ Emissions from energy consumption in different sectors are calculated using the reference approach only and there is a need for the sectoral or bottom-up approach for emission estimation;

- ✓ The role of savannas and abandonment lands in CO₂ uptake needs to be studied;
- ✓ Activity data for solvent and other product use sector have not been collected and hence emission from this sector was not estimated;
- ✓ Lack of country-specific emission factors (e.g., coal, gas, and mining, soils, etc);
- ✓ Uncertainties for sources and sinks were not estimated;
- ✓ User-friendly software for GHG emission projection is needed;
- ✓ Capacity-building in IPCC methodologies for GHG inventory is still very much needed.

B. Proposed activities in the National GHG Inventory for the year 2000 in Viet Nam under Viet Nam SNC to UNFCCC

- With the financial and technical support from UNEP/GEF, Viet Nam have been implementing the stocktaking and stakeholder consultations for the preparation of SNC to UNFCCC
- A national workshop for stocktaking and stakeholder consultations was organized by Ministry of Natural Resources and Environment (MONRE) of Viet Nam, 18-19 January 2006, Ha Noi, Viet Nam before the preparation of this project proposal. This workshop identified the above-mentioned gaps in the National GHG Inventory in Viet Nam for the year 1994
- In March 2006, the proposal of Viet Nam SNC project will be submitted to UNEP/GEF for approval. This project will start in May 2006 with a duration of 3 years
- Proposed activities:
 - ✓ A national inventory for CO₂, CH₄, N₂O, CO, NO_x, NMVOC and SO₂ will be undertaken for the year 2000 in 5 source categories: energy (fuel combustion, energy industries, transport, commerce, residence, solid fuels, etc), industrial processes, agriculture (enteric fermentation from domestic livestock, manure management, rice cultivation, agricultural soils and field burning of agricultural residues, etc), land-use change and forestry (changes in forest and other woody biomass stock, forest and grassland conversion, abandonment of managed lands, etc) and waste (solid waste disposal on land, wastewater handling, human sewage, etc);

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- ✓ Emissions of CH₄ and N₂O from international bunkers and aviation will also be estimated for the year 2000;
 - ✓ The activity data of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆) will also be collected for the same base year where available;
 - ✓ Appropriate national or regional emission/sink factors will be used to estimate GHG emissions/sinks where available;
 - ✓ The database for CO₂, CH₄, N₂O, NO_x, CO, NMVOC and SO₂ will be updated and improved. New inventory data for HFCs, PFCs, SF₆ for the year 2000 will be established and used as a basis for assessment and selection of mitigation options;
 - ✓ The COP8 Guidelines will be used for reporting the National GHG Inventory;

- ✓ 2006 IPCC guidelines for National GHG Inventories will be used when it becomes available in 2006;
- ✓ Top-down and bottom-up approaches will be used;
- ✓ New emission factors for specific activities will be applied;
- ✓ All concerned data will be collected, analysed and managed;
- ✓ The GHG inventory team based on the INC project will be reconstituted;
- ✓ A long-term programme on the improvement of future GHG inventories will be developed.

C. Conclusions

- A National GHG Inventory in Viet Nam for the year 2000 is an important component of Viet Nam SNC to UNFCCC, as it forms the basis for mitigation measures
- A reliable and accurate GHG inventory would also be very useful for the formulation of any projects
- Viet Nam hope to receive the assistance from other International organizations and countries in carrying out a National GHG Inventory for the year 2000 in Viet Nam under Viet Nam SNC for the period 2006-2009

**Thank you very much
for your attention**