

The 3rd Workshop on GHG Inventories in Asia Region

China's News on the Development of GHG Inventories

Xu Huaqing

Energy Research Institute, NDRC, China

Feb. 23, 2006, Manila, the Philippines

The key new activities under SNC

- China is required to prepare its SNC based on the revised Guidelines for the Preparation of National Communications from Parties not Included in Annex I to the Convention.
- The Revised Guidelines call for a national GHG emissions inventory for 2000, and encourage the provision of information on anthropogenic emissions by sources of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆).

The key new activities under SNC

- Quality control of databases that are relevant to the accounting of GHG emissions;
- System for collection, processing, and periodic measurement of energy activity and emissions factors data;
- CH₄MOD and IAP-N agricultural models;
- Remote sensing of data to continuously monitor the changes in forestry area and land use;
- Research on the soil carbon change for different land categories.

Energy sector: Gaps

- Higher tier methods will be adopted under the SNC, where applicable, to estimate GHG emissions in this sector, and compared with results estimated by other methods;
- Through the use of larger sample sizes and improved measurement techniques, emissions factors for methane from small and medium coal mines and cook stoves will be improved;
- Activity data on transportation, building materials, and other sectors will be collected through sample surveys;
- Activity data will be collected for transportation in the industrial sector through separate surveys so as to be able to distinguish energy use in industrial production from ancillary activities.

Industrial Processes: Gaps

- The coverage of source categories will be improved, and, where applicable, GHG emissions in this sector will be estimated at the provincial level;
- Additional sectors, nitric acid, non-ferrous metals, and building materials will be included and additional industrial gases (HFCs, PFCs and SF6) will be added;
- Uncertainties noted in the estimation of activity data and emissions factors will be calculated, and those contributing to the largest error in GHG emissions will be targeted for improvement through either increased sampling of activity data, and measurements of appropriate emissions factors.

Agriculture sector: Gaps

- Adopt higher tier methods to estimate GHG emissions from the agricultural and compare the estimated results from different methods;
- Indirect emissions of nitrous oxide from croplands and residue burning will be measured for use as substitutes for IPCC default factors;
- Model used for the calculation of emissions factors from rice paddy fields will be modified and improved to accommodate different types of rice, and application regimes;
- IAP-N model will be converted to a process model to provide greater spatial resolution and allow temperature and precipitation impacts to be modeled;
- Actual observations will be used to estimate activity data and emissions factors for methane and nitrous oxide emissions from enteric fermentation.

Land-use change and forestry: Gaps

- SNC will seek to apply new methods contained in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories to estimate GHG emissions;
- Rather than use national average values for activity data and emissions factors, values will be measured and/or estimated by province, tree species, and/or forest type;
- SNC will use purchased remote sensed Landsat TM images. These will be combined with the National Land Use pattern Monitoring System to develop a tool for accounting of changes in forests and land use.

Waste treatment: Gaps

- The SNC project will seek to adopt Tier 2 approach and estimate GHG emissions at the provincial level;
- Uncertainties will be reduced through use of measured data on degradable organic carbon and methane release for municipal solid waste and the former for wastewater treatment.



Thanks!