

Recent trends in preparing NAI national communications

- ✓ Why develop GHG inventories?
- ✓ What's new?
- ✓ GHG inventories of the Asia Region
- ✓ What's next?

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(1) Why develop GHG inventories?

- **Para. 6 of Decision 17CP.8**

Each non-Annex I Party **shall**, in accordance with **Article 4, paragraph 1 (a)**, and **Article 12, paragraph 1(a)** of the Convention, communicate to the Conference of the Parties a national inventory of anthropogenic emissions by sources and removals by sinks of all greenhouse gases (GHGs) not controlled by the Montreal Protocol, to the extent its capacities permit, following the provisions in these guidelines.

- **Linkage with the mitigation analysis**



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(2) What's new?

- Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention (**Decision 17CP.8**)
- **1st half of 2004**: UNFCCC will modify the IPCC GHG inventory software to produce "table 1 and 2"
- **Last minute**: *GPG for LULUCF adopted by the IPCC*
- IPCC Emission Factors database (**EFDB**)
- **GEF Operational Procedures** for the Expedited Financing of National Communications from Non-Annex I Parties

(i) Guidelines for the preparation of national communications (17CP.8)

▪ **Para. 6: Introduction**

National GHG inventory is a **key element** of the national communication.

- ✓ should include information on how you **organized** and **approached** your inventory work.
- ✓ you may want to follow the IPCC diagram containing **various stages** of inventory work.
- ✓ Be sure to describe the stages of the inventory from which the new work was started.



▪ **Para. 7: Inventory years**

- ✓ Second NC, inventory year to be reported is **2000**.
- ✓ **LDC** can choose any year at their discretion.
- ✓ Would be preferable if Parties could report for any of the years from 1994 up to, and including 2000, **if data is available**.
- ✓ **Second GHG inventory**, it is advisable **to revise the data** provided for the first inventory (revision may facilitate the understanding of possible changes to the first inventory).
- ✓ **Parties wishing to report for years other than for 1990 or 1994 and 2000, are welcome to do so**. This applies also to Parties that are preparing their first or the third NC.



A. Methodologies

▪ **Para. 8: Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories**

- ✓ Parties should only use the **latest version** (i.e. **Revised 1996**) of the “IPCC Guidelines for National Greenhouse Gas Inventories” (3 volumes, <http://www.ipcc-nggip.iges.or.jp/public/gl/invs1.htm>).
- ✓ The use of IPCC Guidelines is enhanced by the **inventory software**.
- ✓ These Guidelines are **complemented** by the IPCC **GPG**.
- ✓ The **GPG on LULUCF** was recently adopted by the IPCC and will be distributed to Parties at



▪ **Para. 9: Tiers 1 and 2 or 3 methodologies**

- ✓ The **higher** the number designating the tier, the **more detailed** is the methodology and the more accurate are the emission estimates.
- ✓ **Tier 1** represents the **minimum**, or default, methodology. If sufficient data is available, a Party can also try to apply a higher tier.
- ✓ **Tiers 2 or 3** involve **more elaborate methods** which could be either source category-specific or technology-based. These methods require more detailed data and/or measurements for their application.
- ✓ In the case where a national methodology exists, and is **consistent** with the IPCC Guidelines, it is highly advisable to use the national methodology. The national methodology used should be **fully documented** in order to allow the reader to understand why this particular method is better than the default one proposed by the IPCC.



▪ **Para. 10: Default emission factors and activity data**

- ✓ The default IPCC methodology may not be appropriate for all countries. It is therefore **important to use country-specific or regional emission factors and activity data**, if available, in order to reduce the uncertainty while estimating the emissions and removals.
- ✓ It might be useful to start thinking about the **potential synergies among the countries of the region** and elaborate plans to develop such crucial information, bearing in mind the need to better reflect the national circumstances in terms of emissions and removals.
- ✓ The **formulation of cost-effective national or regional programmes** aiming at the development or improvement of country-specific or regional emission factors and activity data can be a good way of dealing with the problem of the inappropriateness of emission factors and activity data.
- ✓ It is also important to note that in the future some country-specific and regional emission factors may become available on the **Emission Factor database**, which is being developed by the IPCC (<http://www.ipcc-nggip.iges.or.jp/EFDB/main.php>).



▪ **Para. 11: IPCC Good Practice Guidance (GPG)**

- ✓ GPG provides useful guidance for **selecting** methods (tiered approaches), emission factors and activity data.
- ✓ It helps in selecting appropriate methods and emission factors, in quantifying and analysing uncertainty, in determining **key source categories**, in recalculating emissions data, and in setting up quality assurance and quality control plans.
- ✓ <http://www.ipcc-nggip.iges.or.jp/public/gp/gpqaum.htm>

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▪ **Para. 12: Key source analysis**

- ✓ A **key source category** is one that is prioritised within the national inventory system because its estimate has a **significant influence** on a country's total inventory of direct greenhouse gases in terms of absolute level of emissions or trends in emissions, or both.
- ✓ Countries can **prioritize** their **efforts** to improve their overall estimates. Such a process **will lead to improved quality**, as well as greater confidence in the emissions estimates that are developed.
- ✓ It is good practice to identify national key source categories in a systematic and objective manner. The IPCC Good Practice Guidance explains how key sources are determined.

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B. Reporting

▪ **Para. 13: Institutional arrangements**


- ✓ Parties are welcome to provide information about the procedures and arrangements (e.g. institutional) established in order **to sustain the process of data collection and archiving**. This is intended to help make inventory preparation **a continuous process**.





▪ **Para. 14: Direct greenhouse gases**

- ✓ **3 direct GHGs** (CO₂, CH₄, N₂O) should be provided
- ✓ on a **gas-by-gas** basis (i.e. no single aggregate figure)
- ✓ in **units of mass** (the IPCC generally uses Gg, i.e. 1,000 tonnes).
- ✓ This information will be used in **Table 1** and is greatly facilitated by the use of the IPCC **inventory software** which automatically summarizes this information.








- **Para. 15: Information on HFCs, PFCs and SF₆**
 - ✓ In their INC, some Parties have already reported on emissions of HFCs, PFCs or SF₆. **Table 2**, contained in the annex to the UNFCCC guidelines, provides a framework for the reporting of such emissions.
- **Para. 16: Information on CO, NO_x and NMVOCs**
 - ✓ Reporting in **Table 1** is greatly facilitated by the use of the IPCC **inventory software** which automatically summarizes this information.



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- **Para. 17: Information on SO_x**
 - ✓ Reporting in **Table 1** is greatly facilitated by the use of the IPCC inventory **software** which automatically summarizes this information.
- **Para. 18: Use of reference vs. sectoral approach**
 - ✓ Both approaches should be used.
 - ✓ It would be useful **to explain/discuss the difference** between the two results.
 - ✓ This can help to further improve future GHG inventories by progressively **reducing this level of uncertainty**.
 - ✓ The reporting of both approaches is greatly facilitated by the use of the IPCC inventory **software** which automatically summarizes this information.



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▪ **Para. 19: Bunker fuels**

- ✓ When data on international bunker fuels is available, Parties **should strive to report it**, providing any breakdown of this information, as a **memo item** (i.e. **not included** in the national total).

▪ **Para. 20: Global warming potentials (GWP)**

- ✓ Reporting in terms of **aggregate emissions** (i.e. to convert emissions into CO₂ equivalent) serves the purpose of facilitating the comparison between sectors or comparing the relative importance of each direct GHG.
- ✓ If a Party chooses to use GWPs, it should use those provided by the **IPCC** in its **Second Assessment Report**, published in **1995** (i.e.: **1** for CO₂, **21** for CH₄ and **310** for N₂O).

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▪ **Para. 21: Sources of information**

- ✓ It is advisable to describe as precisely as possible the sources of information (activity data and emission factors) and methodologies used, **especially for country-specific sources and/or sinks which are not part of the IPCC Guidelines.**
- ✓ It contributes to the **clarity** of the information and helps the reader to understand what was done and how it was done.
- ✓ It is important for Parties **to identify the data gaps** and to make the **link with further improvement** to be achieved through **capacity-building** in order to facilitate further requests for financial and technical assistance.

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▪ **Para. 22: Use of Table 1 and Table 2**

- ✓ It is important that Parties **use** Table 1 and Table 2 contained in the annex to decision 17/CP.8.
- ✓ Will be **automatically generated** by the **IPCC inventory software** which **will be modified by the UNFCCC secretariat**.
- ✓ It is also advisable to **read carefully the footnotes** in Table 1 and Table 2. The only **notation keys** to be used by Parties are the ones agreed to by the IPCC and are listed in the footnote of table 1.
- ✓ **Particular attention** should be paid as to **how Table 2 should be presented** in order to suit the data available.

▪ **Para. 23: Sectoral tables and worksheets**

- ✓ The **sectoral tables**, which summarize the emissions by sectors, are **automatically generated** by the IPCC inventory **software**.
- ✓ The provision of the **electronic copy** of the worksheets and sectoral tables of the GHG inventory is intended to **facilitate the compilation of data** for the preparation of compilation and synthesis as well as other documents. This task can easily be achieved by providing the electronic files generated by the IPCC GHG inventory software in **MS Excel format**.
- ✓ <http://www.ipcc-nggip.iges.or.jp/public/gl/software.htm>

▪ **Para. 24: Level of uncertainty**

- ✓ The **GPG** has **substantially improved the methodology** for calculating and managing uncertainties (see chapter 7 of the GPG).
- ✓ A major objective of the IPCC methodology is **to help national experts reduce uncertainty** in their GHG inventories to the minimum level possible.
- ✓ However, the approach also recognizes that **significant uncertainties will remain** despite these efforts, and that these uncertainties will vary widely.
- ✓ The provision of such information is intended to help the reader better understand the information contained in the national GHG inventory.

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(ii) **GEF Operational Procedures for the Expedited Financing of NCs**

- ✓ To be presented at the GEF Council meeting later this month
- ✓ Available on the GEF web site (http://www.gefweb.org/Documents/Council_Documents/GEF_C22/gef_c22.html)
- ✓ Will be officially launched at COP 9 at NAI side event (CC:Forum, 2nd Dec. 2003)



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(3) GHG inventories for Asia region

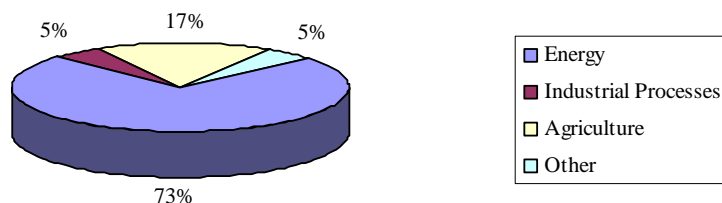


- ✓ 148 NAI Parties, 106 NCs, 99 GHG Inv. Already available via the UNFCCC on-line database
- ✓ 32 NCs from NAI Parties from Asia
- ✓ Still 22 from Asia to be submitted



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Distribution of GHG emissions from the Asia region
(excluding LUCF)



- Total emissions for 32 countries (excluding LUCF): 2 142 Mt CO₂ Equiv.
- LUCF: 42 Mt CO₂ Equiv. (or 2%)



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Recent trends in preparing National Communications for non-Annex I countries

Mr. Dominique Revet

(4) What's next?

- Start preparing request for **funding of 2nd NC**
- Future development at **UNDP/NCSU**:
 - NCs Programme for Climate Change (60 M\$ project over 6 years)
 - Training Manual for GPG
 - Training module in support of the development of inventory systems for LULUCF sector in NAI countries
 - 2 regional projects (Europe/CIS, and West and Francophone Central Africa) on Improving the Quality of GHG Inventories
- **UNFCCC User Manual** for the Guidelines on the Preparation of NCs from NAI Parties
- Consultative Group of Experts (**CGE**) on NAI NCs to conduct hands-on training from 2004
- Why not ... ?



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Some Useful Web Links

- UNFCCC/IMP-NAI** <http://unfccc.int/program/imp/nimp1.html>
- UNFCCC on-line searchable database on GHG inventories**
<http://ghg.unfccc.int/default1.hf?time=11%3A27%3A25+AM>
- UNDP/NCSU(NCSU)** <http://www.undp.org/cc/index2.htm>
- IPCC** <http://www.ipcc.ch/>
- Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories** <http://www.ipcc-nggip.iges.or.jp/public/gl/invs1.htm>
- IPCC Software for National GHG Inventory and Workbook** <http://www.ipcc-nggip.iges.or.jp/public/gl/software.htm>
- IPCC GHG Inventory Software Incorporating the Decision 17/CP.8 Tables** (will only available from first semester of 2004)
<http://unfccc.int/program/mis/ghg/index.html>
- Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories**
<http://www.ipcc-nggip.iges.or.jp/public/gp/gpqaum.htm>
- Technical Support Unit (TSU) for IPCC-NGGIP (National Greenhouse Gas Inventories Programme)**
<http://www.ipcc-nggip.iges.or.jp/tsu/tsustaff.htm>
- UNITAR/CC-TRAIN** (original CC-TRAIN training materials only available on CD-rom at the moment, should be updated and made available on the UNITAR web site soon) <http://www.unitar.org/cc/>



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