



Good Practice Study on GHG-Inventories for the Waste Sector in Non-Annex I Countries

Study Overview

Rationale

Greenhouse gas emissions arising from the treatment and disposal of liquid and solid waste need to be covered by the greenhouse gas (GHG) inventories by both, developed, and emerging countries in their reports to the United Nations Framework Convention on Climate Change (UNFCCC). While emissions from this sector are relatively low, in developing countries they have risen continuously due to changing production and consumption patterns. However, experience shows that:

- significant emission reductions at **relatively low costs** are possible in this sector;
- the sector has a great potential to achieve **sustainable development co-benefits**, which is a critical factor in the decision-making of countries.

As a **first step towards implementing policies and measures to reduce GHG emissions from the waste sector**, it is necessary to **adequately quantify** and understand the main reasons and sources of these **emissions**. A high-quality GHG inventory is able to answer these questions.

Purpose of the study

The purpose of the study is to support the preparation of GHG inventories in the waste sector through the provision of examples of **good practices**, which can be applied in different countries. The study is addressed at experts and practitioners involved in the compilation of GHG inventories in the waste sector, especially in non-Annex I countries. It provides an overview of the relevant provisions of the IPCC Guidelines and good practice guidance for general GHG inventory preparation. It further provides methodological guidance and compiles examples from mainly Non-Annex I countries on the development of GHG inventories specific to the waste sector, showing how

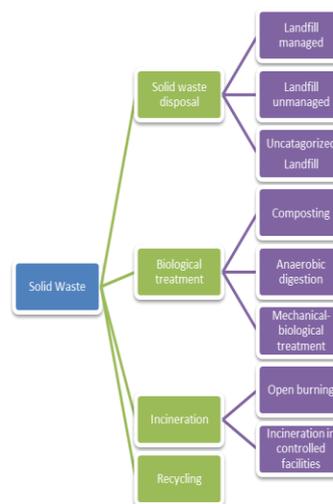
common problems have been solved in different countries. Based on the IPCC Guidelines and country examples, specific recommendations are given for all source categories of the waste sector.

Content of the study

The study focusses on emission estimates from four sub-categories according to the 2006 IPCC Guidelines:

- 1) solid waste disposal;
- 2) biological treatment of solid waste;
- 3) incineration and open burning;
- 4) wastewater treatment and discharge.

However, the study has a strong focus on emissions from solid waste, presenting all possible routes for treatment and disposal (see graph below).





Furthermore, the study shows how GHG inventories in the waste sector can be used in the planning of *Nationally Appropriate Mitigation Actions* (NAMAs) and other sectoral mitigation activities and policies. The study also presents the IPCC Waste Model, along with other selected waste emission models.



Recommendations and main findings of the study

The study outlines recommendations for both, the general development of the GHG inventory and specifically that of the waste sector in developing countries. Recommendations address the following topics:

- How to **institutionalise the system**, by developing and agreeing on processes to avoid ‘starting from scratch’ each time an inventory has to be prepared. This greatly facilitates inventory preparation for each *Biennial Update Report* (BUR) and *National Communication* (NC).
- How to conduct **key source category analysis** to consequently allocate resources and efforts to the most relevant categories.
- How to use **IPCC methodologies and default values** to gap-fill missing data.
- How to ensure **time series consistency** when sources of data differ over time; and

- How to improve the quality of the inventory as part of a continuous **Quality Assessment / Quality Control** (QA/QC) process, that should include an inventory improvement plan.

The study also shows how GHG inventories in the waste sector can serve multiple purposes:

- Raising **understanding of emissions** and practices in the sector;
- Improve the **quality of GHG emission estimates** from the waste sector (e.g. through improved application of methodologies and/or available models and examples of good practices as shown in this study);
- Provide a basis for **developing mitigation policies and activities, including NAMAs** and other mitigation actions in the waste sector;
- **Comply with international requirements** under the UNFCCC.

Such benefits help to justify the cost of inventory compilation.

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