

Climate MRV for Africa – Phase 2

Development of National GHG Inventory

Structure of Waste Sector According to IPCC 2006 Guidelines



NIRAS
Lead partner

GreenStream

TÜVRheinland[®]
Precisely Right.

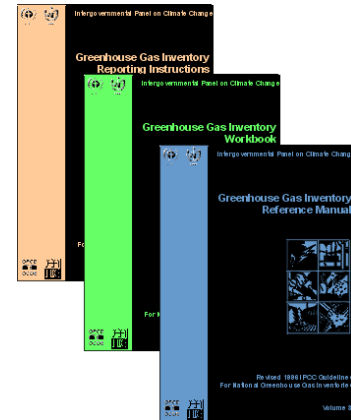
camco
clean energy

Project of the European Commission
DG Climate Action
EuropeAid/136245/DH/SER/MULTI

Amr Osama Abdel-Aziz, Assen Gasharov, Mike Bess
and Laura Lahti
Team Leader and Key Experts
January 2017

Overview

- IPCC Revised 1996 Guidelines
- IPCC 2006 Guidelines
- Main Differences



IPCC Revised 1996 Guidelines



Volume 1: the reporting instructions

provides step-by-step directions for **assembling**, **documenting** and **transmitting** completed national inventory data consistently, regardless of the method used to produce the estimates.



Volume 2: the workbook

It is intended to help experts in as many countries as possible to start developing inventories.



Volume 3: the reference manual

It provides summaries of the scientific basis for the inventory methods recommended and gives extensive references to the technical literature.

IPCC 2006 Guidelines



Volume 1: General Guidance and Reporting

Volume 2: Energy

Volume 3: Industrial Processes and Product Use (IPPU)

Volume 4: Agriculture Forestry and Other Land Use (AFOLU)

Volume 5: Waste

Differences in Structure

2006 GL Category Code	Category Name	1996 GL Category Code
4A	Solid waste disposal	6A
4D	Wastewater treatment and discharge (Wastewater handling)	6B
4C1	Waste incineration	6C
4E	Other waste emissions	6D

IPCC Guidelines

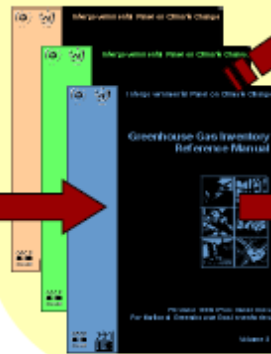
Currently, all the Parties use these under the UNFCCC and the Kyoto Protocol.

Annex I Parties shall use GPG.
Non-Annex I Parties are encouraged to use GPG.

GPG2000 (non-LULUCF) **GPG2003** (LULUCF)

1995 IPCC Guidelines

Revised 1996 IPCC Guidelines



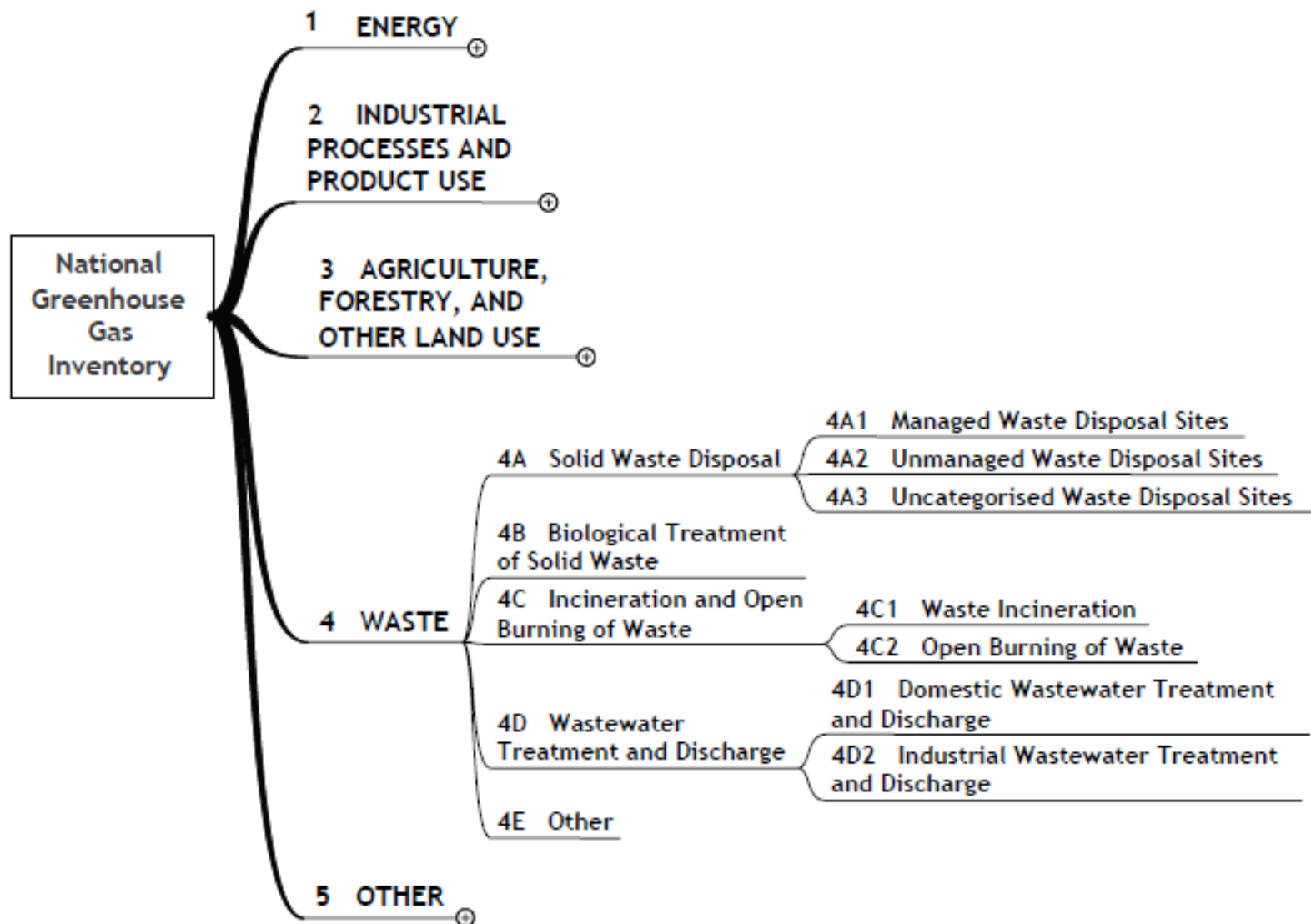
Annex I Parties must use from 2015

2006 IPCC Guidelines



Revision/Update by the IPCC

Structure of Waste Sector



Structure of Waste Sector

4A Solid Waste Disposal:

- ✓ 4 A1 Managed Waste Disposal Sites
- ✓ 4 A2 Unmanaged Waste Disposal Sites
- ✓ 4 A3 Uncategorized Waste Disposal Sites



Structure of Waste Sector

4B Biological Treatment of Solid Waste



Structure of waste sector

4C Incineration and Open Burning of Waste



4C1 Waste incineration



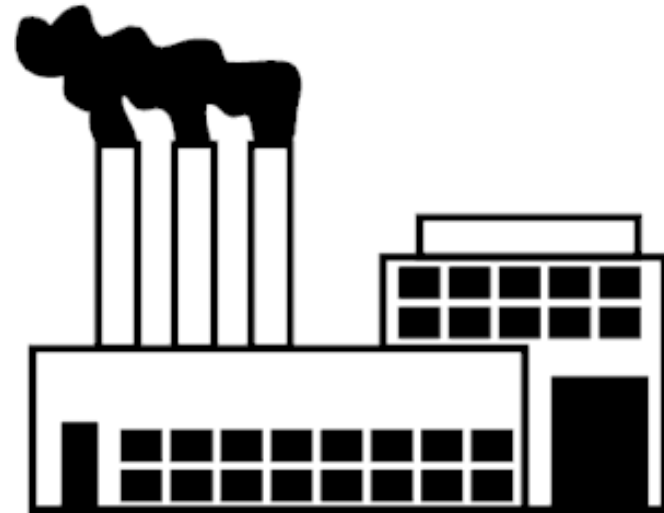
4C2 Open burning of waste

Structure of waste sector

4D Wastewater Treatment and Discharge



4D1 Domestic waste water treatment and discharge



4D2 Industrial waste water treatment and discharge

IPCC 2006 Guidelines - Overview

- The scope of the Waste Volume is similar to the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories
- New subcategories have been added:
 - ▣ Biological treatment of solid waste
 - ▣ Open burning of waste
- Mass Balance Method in IPCC 1996 deleted

IPCC 2006 Guidelines - Overview

- The 2006 Guidelines include a new section to estimate CH₄ emissions from uncollected wastewater
- Guidance to estimate N₂O emissions from advanced wastewater treatment plants has been added
- Suggestion to address only the most significant industrial sources

Thank you!

Amr Osama Abdel-Aziz, Assen Gasharov, Mike Bess and Laura Lahti