Training on the preparation of national GHG inventories under the ETF of the Paris Agreement

In-country support training for Kenya

Background

The MPGs, formulated to implement transparency in reporting under the Paris Agreement, defined specific new requirements for reporting the results of national GHG inventories. As such, information on national GHG inventory results should be included in a specific chapter of the BTR (Chapter I) and supporting information should be included in the annexes. In addition, all Parties must provide a national inventory report (NIR), which consists of a national inventory document (NID) and the common reporting tables (CRT), to the UNFCCC as part of each country´s BTR submission process.

Although many countries now count on the skills to prepare national GHG inventories, cultivated as part of the preparation of their previous National Communications and BUR, Kenya has not submitted both reports in the past years. Kenya has already started updating the current inventory that was used to prepare the Updated NDC as part of preparing their BTR. However, the task of reporting on the associated processes that lead to the development of inventories and on the data and results is also a key aspect of ensuring that countries comply with the transparency conditions established in Article 13 and can become a challenge for the countries.

The objective of the **CBIT-GSP** is to provide streamlined support and capacity-building at the national, regional, and global levels to assist developing countries in responding to the reporting provisions under the UNFCCC and the Paris Agreement's Enhanced Transparency Framework and ultimately increase ambition for climate action. The CBIT-GSP plans to achieve this through multiple support modalities, including establishing and working 10 Regional Networks across the globe to foster south-south collaboration, knowledge-sharing, and learning among countries. The Regional Networks for Anglophone Africa are invited to participate in a joint training exercise on reporting the national GHG inventory under the MPGs, which was assessed as one of the priorities of capacity building for transparency in the regional networks.

About Kenya

The Government of Kenya enacted the Climate Change Act in 2016, and the Act provides a regulatory framework for enhanced response to climate change mechanisms and measures to achieve low-carbon development. The Act establishes a governance structure for climate change management in the country, with the National Climate Change Council (NCCC) being

responsible for oversight and coordination. The NCCC is chaired by His Excellency, the President of the Republic of Kenya. The lead government agency responsible for coordinating climate change plans and actions and related measurement, monitoring, and reporting is the Climate Change Directorate under the State Department for Environment and Climate Change Ministry of Environment, Climate Change and Forestry.

Since the adoption of the UNFCCC in 1992 and its ratification in 1994, Kenya has been trying to fulfil its reporting obligations to the UNFCCC, but there have been some challenges. Kenya prepared its First National Communication (FNC) to the Conference of the Parties in 2002 and submitted its Second National Communication (SNC) in 2015. Kenya submitted the first NDC in 2015, adopted the Paris Agreement in 2015, developed the National Adaption Plan for 2015-2030, developed the Climate Change Act in 2016, and developed the National Climate Change Action Plan in 2018. Kenya's ambitious plan in their updated NDC estimates that USD 62 billion is required to implement Kenya's NDC (mitigation and adaptation actions) in 2020-2030. The resource requirement for adaptation actions alone is up to 2030, which is USD 43.9 billion.

In recent years, Kenya's reporting challenges have hindered timely reporting on the National Communications (NCs) and Biennial Update Report (BUR). This year (2024), Kenya is set to start the process of reporting by submitting both the NC and the first Biennial Transparency Report BTR) by December 2024. Considering the short time period, Kenya is required to fast-track the process by building the capacity of the technical staff to support reporting at different levels, including the preparation of national GHG inventories under the ETF of the Paris Agreement.

To this end, Kenya requested the **CBIT-GSP** to provide support and capacity-building of Kenya's technical staff in responding to the reporting provisions under the UNFCCC and the Paris Agreement's Enhanced Transparency Framework and ultimately increase ambition for climate action. Specifically, Kenya's technical staff will be trained on the key elements of developing the national GHG inventories under the ETF of the Paris Agreement.

Objective

The purpose of the GHG Inventory Training, following the IPCC 2006 Guidelines for the Waste, Energy Sector, and Agriculture, Forestry, and Other Land Use (AFOLU) sector, is to enhance the capacity of technical experts in Kenya in the compilation, analysis, and reporting of greenhouse gas (GHG) inventories. This hands-on training, incorporating the IPCC software, is designed to equip the participants with the necessary skills to improve their contributions to the national reporting under the Enhanced Transparency Framework (ETF) of the Paris Agreement. The training aims to ensure that Kenya's GHG inventories are accurate, comprehensive, and conform to UNFCCC modalities procedures and guidelines for reporting

under the ETF, thus supporting informed policymaking and contributing to global efforts in combating climate change. The specific objectives are;

- To strengthen the capacity of Kenya's technical experts in preparing and reporting GHG inventories under the ETF.
- To deepen the technical experts' understanding of the 2006 IPCC Guidelines for GHG inventories, focusing on methodologies, data collection, and reporting requirements for the Waste, Energy, and AFOLU sectors.
- To provide participants with practical skills in using the IPCC software for GHG inventory compilation and analysis. This includes training on data input, manipulation, and interpretation of outputs, enabling participants to estimate GHG emissions and removals accurately.

Audience

This activity is intended for technical officers who work as coordinators of the national GHG inventory and sectorial(s) inventory data providers in Kenya. This includes government staff at the national and sectoral levels and staff from other institutions that are part of Kenya's institutional arrangements for reporting inventories under the UNFCCC and the Paris Agreement.

The Approach

The training will be conducted using a two-phase approach. The first phase will be two introductory webinars that will mainly set the stage for the training and will cover the foundational, procedural and governance processes of the national greenhouse gas inventories. The first webinar will focus on the foundational elements and rationale of GHG inventories and the new requirements for reporting national GHG inventories under the Paris Agreement (MPGs) and associated flexibility provisions, whilst the second webinar will take participants through the governance and procedural processes necessary for sustainable GHG inventory process under the ETF.

The second phase will be an in-country hands-on training in Kenya on the 2006 IPCC guidelines for national greenhouse gas inventories for Energy, Waste and AFOLU, including the IPCC inventory software. It is envisaged that through this training, participants will acquire the necessary knowledge and insights for reporting of the national inventory under the ETF.

Dates

- The online training is on **8 and 15 March 2024.**
- The in-country **8 April 2024.**

Stage I: Introductory webinars

Proposed technical contents to be covered in the introductory webinars (2hrs per webinar)

National inventory systems in practice
What are UNFCCC Inventories, benefits, use
IPCC Guidelines
IPCC software
Data needed
General Examples
Introduction to the new requirements for reporting national GHG inventories under the Paris Agreement (MPGs) and associated flexibility provisions:
Institutional arrangement for inventories: national inventory systems (NIS) following the MPGs and sustainable systems for data collection
inventory workplan and management of the inventory cycle.
Management of QA/QC and documentation material
Data management system for archiving the inventory data. (International examples of data management systems.)
Design of the inventory improvement plan for facilitating improved reporting and transparency over time
Innovative experiences **from country inventory teams** (including local training activities and inventory awareness and dissemination examples)

Proposed detailed agenda for two webinars.

WEBINAR 1: 7th March 2024		
TIME	**ACTIVITY**	**FACILITATOR**
09:00 - 09:05	Welcome remarks	Kenya Representative CBIT-GSP
09:05 - 09:15	Mentimeter	Moderator
09:15 – 09:40	The GHG Inventory process - What are UNFCCC Inventories, benefits, use? - IPCC Guidelines - IPCC software - Data needed. - General Examples	UNEP-CCC
09:40 -09:45	Q&A	All
09:45 - 10:15	Introduction to the new requirements for reporting national GHG inventories under the Paris Agreement (MPGs) and associated flexibility provisions:	UNEP-CCC
10:15 - 10:20	Q&A	All
10:20 – 10:30	Mentimeter and closing	

	Webinar 2: 8 March 2024	
TIME	**ACTIVITY**	**FACILITATOR**
09:00 - 09:05	Welcome Remarks	Kenya Representative CBIT-GSP
09:05 – 09:10	Mentimeter	Moderator
09:10 – 09:30	Institutional Arrangements for GHG Inventories in Kenya	Kenya Representative
09:30 – 09:35	Q&A	All

09:35 –10:10	Institutional arrangement for inventories: national inventory systems (NIS) following the MPGs and sustainable systems for data collection	UNEP-CCC
10:10 – 10:15	Q&A	All
10:15 – 11:15	GHG Inventory Management Process - inventory workplan and management of the inventory cycle. - Management of QA/QC and documentation material - Data management system for archiving the inventory data. (International examples of data management systems.) - Design of the inventory improvement plan for facilitating improved reporting and transparency over time	UNEP-CCC
11:15 – 11:20	Q&A	All
11:20 – 11:30	Mentimeter and closing	CBIT-GSP

Stage II: In-person workshop

Proposed technical contents for an agenda for the in-person workshop:

GHG Inventory Process: IPCC 2006 Guidelines and IPCC Software
Cross-Cutting Issues
• Methodological approaches. • Data needs and data collection issues • Data gap-filling techniques • Uncertainty analysis • Key Category analysis
Overview of the energy sector
Overview of the waste sector
Overview of the AFOLU (Agriculture and Forestry) sector
IPCC Software

Proposed detailed agenda for the five days hands on training.

Day 1 - Cross-Cutting Issues: Good Practice Elements		
08:30 - 09:00	Registration	
09:00 – 09:30	Opening Session - Welcome remarks Kenya. - Welcome remarks CBIT-GSP - Introductions of participants - Workshop objectives	Kenya Representative CBIT-GSP Representative
30’	Country Experience • GHG Inventory process in Kenya • Challenges and lessons learned	Kenya representative
60’	Guidance on good practice elements - Approaches to data collection - Uncertainty analysis	UNEP-CCC - Consultant
15’	Health Break	
60’	Guidance on good practice elements - Methodological choice & key category analysis	UNEP-CCC - Consultant
60’	Guidance on good practice elements - Time series consistency - Practice of gap filling exercise	UNEP-CCC - Consultant
60’	Lunch	
45’	Overview of reporting requirements and the importance of transparency, consistency, comparability, completeness, and accuracy (TCCCA).	UNEP-CCC - Consultant
60’	2006 IPCC Inventory Software - Overview of the IPCC Software - Installing and navigating the IPCC software.	UNEP-CCC - Consultant

	- Basic functionalities and data management within the software. Software administration and control levels	
20’	Closing session: Recap of the workshop, open discussion for questions	UNEP-CCC - Consultant
Day 2: ENERGY SECTOR – GHG Inventory		
09:00 – 09:30	Registration and recap from the 1st day	
30’	Overview of the energy sector's role in GHG emissions.	UNEP-CCC - Consultant
30’	Energy Sector overview in Kenya	UNEP-CCC - Consultant

60	Overview of sector categories according to the IPCC guidelines.
	
	- Fuel Combustion
	  ○ stationary combustion,
	  ○ mobile combustion,
	- Reference Approach
		UNEP-CCC - Consultant

15’	Health break	
30’	Overview of sector categories according to the IPCC guidelines. - Fugitive emissions	UNEP-CCC - Consultant
60’	Data Requirements and Sources for the Energy Sector - Types of data needed, sources, and methodologies for data collection. - Challenges in data collection and strategies to overcome them.	UNEP-CCC - Consultant
60’	Lunch	
120’	Exercises in using the IPCC Inventory Software • Simulation exercise on inventory compilation • Data imports and Exports • Key category analysis • Uncertainty Analysis	UNEP-CCC - Consultant

	• Reporting tables Entering data for mobile combustion and fugitive emissions. Using the IPCC software to analyze emissions and identify potential errors. Exercises in ensuring Time Series Consistency	
20’	Closing session: Recap of the workshop, open discussion for questions	UNEP-CCC - Consultant
DAY 3 WASTE SECTOR GHG INVENTORY		
09:00 -09:30	Registration and recap of day 2	All
30’	Understanding the significance of waste sector GHG inventories	UNEP-CCC - Consultant
30’	Waste characterization in Kenya and waste sector challenges	UNEP-CCC - Consultant
60’	Overview of waster Sector categories – Methodologies and data required. - Solid waste disposal, - Wastewater treatment and discharge,	UNEP-CCC - Consultant
15’	Health Break	
60’	Overview of waster Sector categories – Methodologies and data required. - Waste incineration, - open burning of waste	UNEP-CCC - Consultant
60’	Strategies for data collection and management, including overcoming common challenges in data availability and quality	UNEP-CCC - Consultant
60’	Lunch	
120’	Exercises in using the IPCC Inventory Software • Simulation exercise on inventory compilation • Data imports and Exports • Key category analysis • Uncertainty Analysis	UNEP-CCC - Consultant

	• Reporting tables Hands-on session focused on entering data for solid waste disposal, wastewater treatment and discharge. Calculating emissions and understanding the output.	
20’	Closing session: Recap of the workshop, open discussion for questions	UNEP-CCC - Consultant
DAY 4: AGRICULTURE GHG INVENTORY		
09:00 – 09:30	Registration and recap of day 2	
30’	The role of the agriculture sector in GHG inventories	UNEP-CCC - Consultant
30’	Agriculture inventory in Kenya	UNEP-CCC - Consultant
60’	Overview of categories within the agriculture sector: Methodologies and Data requirements - Enteric fermentation - Manure management	UNEP-CCC - Consultant
15’	Health Break	
60’	Overview of categories within the agriculture sector: Methodologies and Data requirements - Rice cultivation, - Agricultural soils, and - Prescribed burning of savannas.	UNEP-CCC - Consultant
30’	Discussion: Sources of data and methodologies for collection	UNEP-CCC - Consultant
60’	Lunch	
120’	Exercises in using the IPCC Inventory Software • Simulation exercise on inventory compilation • Data imports and Exports • Key category analysis • Uncertainty Analysis • Reporting tables	UNEP-CCC - Consultant

	Entering basic data and understanding software functionalities related to the agriculture sector.	
20’	Closing session: Recap of the workshop, open discussion for questions	UNEP-CCC - Consultant
Day 5 – LULUCF SECTOR GHG INVENTOR		
09:00 – 09:30	Registration and recap of day 2	
30’	The national GHG inventory for the LULUCF sector in accordance with the 2006 IPCC guidelines - Overview, general elements of the LULUCF GHG inventory.	UNEP-CCC - Consultant
30’	Land representation. - Stratification - Methodological Approach	UNEP-CCC - Consultant
60’	Carbon Pools - Living biomass and dead organic matter - Soil organic matter in mineral soils - Soil organic matter in organic soils - Harvested wood products	UNEP-CCC - Consultant
15’	Health Break	
60’	Land use categories. - Forest land - Cropland and grassland - Wetlands - Settlements and other land	UNEP-CCC - Consultant
60’	Lunch	
30’	Assessing uncertainty analysis in LULUCF	UNEP-CCC - Consultant
120’	Exercises in using the IPCC Inventory Software - Hands-on exercise on entering data for Forest Land. - Calculating emissions and removals using the IPCC software.	UNEP-CCC - Consultant

	- Data imports and Exports	
20’	Innovative experiences from country inventory teams (including local training activities and inventory awareness and dissemination examples)	UNEP-CCC
20’	Closing session: Recap of the workshop, open discussion for questions	UNEP-CCC - Consultant