

**Training Workshop on the National  
GHG Inventory Database Quality  
Control and Quality Assurance  
Procedures**

## Initiative for Climate Action Transparency – ICAT

### Training Workshop on the National GHG Inventory Database Quality Control and Quality Assurance Procedures

Deliverable 15 and 16

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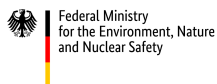
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# 1. Background

Addressing the climate change requires the building of new institutional arrangements that enable near real time actions by different actors. The United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement call on Parties to put in place strong institutional arrangements for the reporting of greenhouse gas (GHG) emissions and the related mitigation actions. The quality of the data within a Parties' GHG Inventory has implications on the mitigation policies, strategies and actions that the Party crafts to achieve low carbon development. Furthermore, data quality has implications on the aggregate figures that feed into global processes such as the 2023 Global Stocktake (GST).

As countries implement the Enhanced Transparency Framework (ETF) arrangements, they are expected to fully institutionalize the processes of periodic data collection, collation and quality control, assurance and verification within permanent government structures. The monitoring, reporting and verification of greenhouse gas emissions should become part of the normal day to day activities of government. This will ensure that there is sustainability, efficiency and effectiveness in the reporting to the UNFCCC. It will also eliminate double counting and mismatches in data by different government institutions and within different government issued documents.

Currently and probably in the next reporting cycle (Fifth National Communication), the Zimbabwe Government makes use of a team of local expert consultants to gather and analyse GHG emissions. The data generated is then uploaded onto the National GHG Inventory whose electronic database was developed in 2021. The ICAT Project in Zimbabwe is supporting the training of Government Officials on the use of the National GHG Inventory Database as part of the process of capacitating them in GHG data quality assurance and quality control (QA/QC) measures expected under the UNFCCC.

Against this background, consultant was hired to work on the development of manual for GHG data QA/QC for use by government officials within the context of National GHG Inventory database. In addition, a two-day practical training workshop to train the government officials and get their feed on the database was organised. The workshop involved participants from the Climate Change Management Department, Ministry of Energy, Ministry of Transport, Environmental Management Agency, Ministry of Industry and Ministry of Agriculture (key institutions in gathering data according to IPCC methodologies – Energy; Agriculture, Forestry and Other Land use; Industrial Processes and Product Use; and Waste).

This report covers deliverables 15 and 16 of the ICAT Project in Zimbabwe. Deliverable 15 pertains to the physical holding of the GHG data verification/QA/QC training workshop whilst deliverable 16 to the report of that particular training workshop.

## 2. Workshop Objectives

The objectives of the workshop were as follows:

- i. Introduce focal government officials to matters related to quality assurance and quality control in GHG Inventories.
- ii. Train the focal government officials in the use of the GHG Inventory database and how they can aid to improvement in data quality.

## 3. Workshop Proceedings

### Proceedings

#### Day 1

Mr Ndidzano, Deputy Director, Climate Change Management Department facilitated the opening the first session and reiterated that the ICAT project was collaboration of various developmental partners that include Denmark Technical University Partnership (UNEP DTU Partnership) (now as UNEP Copenhagen Climate Centre) and the Italian Institute for Environmental Protection and Research (ISPRA).

Ms Romano from ISPRA highlighted that the project aids in the implementation of

the NDCs. The focus of the training are on QA/QC of inventory data, this will allow for accurate and precise data that eventually aids in policy and strategy formulation as envisioned under the Transparency Framework of the UNFCCC. Mr Ndidzano gave the objectives of the training and highlighted the veracity of climate change and how it is of utmost importance to have QC/QA on inventory data so as to adequately report emissions in the BURs and GHG inventories as stipulated under the UNFCCC.

Mr T Muhwati, Climate Change Scientist, in the Climate Change Management Department gave the next presentation on International and national policies and strategies on Climate Change. He briefly touched on the Paris Agreement of 2015, and how the aim is to reduce global temperature rise to below 2 degrees Celsius through various mitigation interventions to reduce GHG emissions. The presenter then explained the UNFCCC and how Zimbabwe ratified the agreement in 1994, as such, is accountable for compliance to its provisions. Mr Muhwati highlighted how the UNFCCC is based on a system of transparency as each country does its reporting, emphasising how transparency fosters accountability and obligation of each country to comply with the provision of the UNFCCC. The presenter then went on to highlight the various documents of reporting that are produced by each member state that include the BURs, National Communications, National GHG Inventory and NDC documents, and explaining the cycles of reporting for each document .

Particular attention was given to the GHG Inventory Cycle, explaining requirements under the UNFCCC for QA/QC each stage. To help participants in understanding the processes involved, the presenter concluded his session of presentations by highlighting the scientific work of the IPCC and how it shapes reporting of greenhouse gas emissions by all countries party to the UNFCCC.

Mr Ndidzano presented next on Zimbabwe's Revised NDCs, explaining how it has 37 mitigation strategies which have allowed for the improved emission reduction target go up to 40% GHG emissions reduction per capita from the previous 33%. He highlighted how the mitigation strategies are drawn from the various climate related policies such as the National Renewable Energy Policy, National Biofuels Policy and

National Development Strategy. The presenter concluded his presentation by highlighting the mitigation actions taken in the four economic sectors identified under the IPCC (Energy, Waste, IPPU and AFOLU) and how each of the organisations represented at the meeting should play a part in ensuring that the actions are reported on as required under the Enhanced Transparency Framework.

Mr Tsigu, the National Communications to the UNFCCC Manager in the Climate Change Management Department explained the principles related to Transparency, Accuracy, Consistency, Completeness and Comparability (TACCC principles) of inventory data under the UNFCCC and what they entail. He then passed on the floor to Mr Mhanda, the Inventory Database consultant who presented on the what, why and how an Inventory Database functions before having the local participants engage in a practical exercise on the *ClimSoft Plus* Climate Change Inventory Database Software including the installation of the software on participants laptop devices.

## **Day 2**

The second day consisted of a practical hands-on demonstration of the *ClimSoft Plus* software. The installation had a successful rate of 100% as 15 computers successfully installed and ran the software following the step by step approach with guidance from Mr Mhanda. Participants provided recommendations to the consultant on the training manual on the installation and guidance on improving the user interface of the software. All participants managed to navigate through the software and created user accounts for familiarization with the four IPCC sectors namely Agriculture, Forestry and Other Land Use (AFOLU), Energy, Waste and Industrial Processes and Product Use (IPPU).

### **Key issues emanating from the session**

- The Ministry of Agriculture highlighted the need for sub-regional information to start from ward level, to district, then provincial clusters of data. The ministry has the datasets and spatial files that the consultant can use to enhance the AFOLU section of the GHG Inventory Database.



- User interface can have geo point facility so as to present red zones of data and show spatial distribution. This would assist the responsible government agencies making use of the database to quickly discern areas where data is lacking and focus their efforts to solving specific challenges in specific areas.
- The software can capture data at any given time unlike the IPCC software which captures data on an annual record and is not easy to manipulate and the creation of information products by non-GHG Inventory experts.
- Sector specific workshops were requested so that each data provider would understand the key categories and sub categories data indicators relevant to its own sector and enhance accuracy. This would also allow the training of more officials from each sector and prevent the challenges that might be caused by high staff turnover or brain drain from government agencies.

Following the successful installation and demonstration of the new software, participants were aggregated into two groups to deliberate on the use of the software which were reported back through interactive feedback presentations. The key highlights from the group discussions are contained in table 1.1

*Table 1: Summary of discussions on the use of the GHG Inventory Database from the participants*

Database opportunities available in institutions	Database limitations	Database recommendations
<p>-Can be adopted at grassroots level as it is user friendly and simple to use.</p> <p>-Continuous update of data at regular intervals is possible if dedicated personnel is provided.</p>	<p>-Lack of technical capacity to adequately use the software in the various ministries.</p> <p>-Software compatibility with certain computer versions as there is old technology which is slow.</p>	<p>-The crafting of data collection template for ground level data recorders or data providers should be enhanced.</p> <p>-More trainings on database management is required for a number</p>

Database opportunities available in institutions	Database limitations	Database recommendations
<p>-Improves data management and information accessibility by stakeholders.</p> <p>-Offline access makes data collection easier even when the internet is not available.</p> <p>-Units are easy to and standardized according to UNFCCC reporting requirements.</p> <p>-The software can complement IPCC software and be used by non-GHG experts.</p> <p>-Helps achieve TACCC principles in an automated manner.</p> <p>-Institutional coordination and monitoring of activities is made easier.</p> <p>-Creation of databases in ministries that only have</p>	<p>-Lack of information communication gadgets in some government agencies.</p> <p>-Data suppliers should filter data according to sectors for easier manipulation, but this will require their capacitation by the climate change experts.</p> <p>-Low computer to user ratio makes the dedication of specific IT equipment for the inventory difficult.</p> <p>-Limited know how.</p> <p>-Limited internet access in government departments.</p>	<p>officials in each lead government agency.</p> <p>-In depth sectorial level capacity building of data providers.</p> <p>-Sectorial consultations with experts on the ground for continual improvement is required.</p> <p>-There is need for better understanding what the different tiers and emission factors entail in each sector factors (what is it that is needed in order to move to a higher tier).</p> <p>-The <i>ClimSoft Plus</i> software should be made compatible with mobile devices.</p> <p>-Capacitation of government departments with IT devices with high capacity processing</p>

Database opportunities available in institutions	Database limitations	Database recommendations
<p>data placed in excel sheets.</p> <p>-The database will make the process of evidence-based policy formulation easier.</p>		<p>power.</p> <p>-Internet connectivity to enhance effective communication.</p>



*Figure 1: Mr Mhanda facilitating installation of the ClimSoft Plus software.*



*Figure 2: Group 1 focus group discussion on the use of the software*

The Director for CCMD, Mr W Zhakata gave closing remarks which appreciated the diversity of the participants who were actively involved during the course of the training workshop. The session highlighted the Government of Zimbabwe roadmap towards meeting its obligations under the Paris Agreement and how key government departments will be critical to achieving this.

## 4. Way forward

- i. The Consultant was asked to consider observations on the use of the software and contact ministry officials and stakeholders to add more information.
- ii. The Consultant was asked to ensure that the manual has a step by step quality assurance / quality control before having the final manual and report.
- iii. The Capacity Building Initiative for Transparency (CBIT) to carry on some of the activities that were initiated by the ICAT Project in Zimbabwe.

## Annex 1: List of Participants

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