MODULE 1: GREENHOUSE GAS INVENTORIES

Level 1: Start-up training

"If you cannot measure it, you can't control it"

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1.1: The basics

What?

- **GHG inventory is:**
  - the tabulation of energy consumed, waste produced, and other emission sources, for a chosen analysis year, plus the use of agreed emission factors.
  - used to calculate a baseline from which the "size of the emissions issue" can be assessed.

- **Baselines** are important for **monitoring progress** on any environmental project – to compare future developments against.

Monitoring Emissions Inventories (MEI) are:
- inventories conducted to follow on the BEI.
- used to check progress and monitor reductions achieved after the implementation of GHG measures.

1.1: The basics

Why?

- **Local Governments (LGs)** need a GHG inventory to assess the size of their emissions footprint.
- A **BEI** provides a starting point to measure progress toward emissions reductions achieved.

1.1: The basics

Why?

It is useful to have two inventories:

- **"Government operations" inventory**:
  provides a baseline and allows accurate measurement of results for measures involving **municipal properties.**

- **"Community" inventory**:
  the calculation of all emissions sources within the municipality's geopolitical boundaries.

1.1: The basics

Did you know?

- Municipalities that have produced an inventory and implemented ad hoc actions make more **consistent and sustainable emissions reductions**.
- Thousands of municipalities around the world have prepared GHG inventories.
- This was for example done as part of their involvement in ICLEI's Cities for Climate Protection Campaign initiated in 1993.
  Many of the European CCP participants were the first to sign the Covenant of Mayors commitment.

1.2: Key issues

What support do municipal technical staff need to produce an inventory?

- The Global Protocol for Community-scale GHG Emissions offers an overview of GHGs boundaries, levels and scopes that need to be considered.
- The Covenant of Mayors publishes a highly recommended manual for the development of Sustainable Energy Action Plans (SEAPs) and Baseline Emission Inventories (BEIs).

1.2: Key issues

What support do municipal technical staff need to produce an inventory?

- **Financial and staff resources** are needed to conduct a BEI and follow up MEIs (which should form part of the annual municipal budget).
- Municipal technical staff may not have the necessary **expertise** to conduct a BEI, and may need external assistance.

1.2: Key issues

Levels and scopes – what are these?

- **Levels:** refer to the confidence you have in your supply of data.

- **Scopes (scope 1, 2 and 3):** define whether the emissions are caused
  - directly (Scope 1);
  - indirectly (Scope 2);
  - by someone else making things to supply to our community (Scope 3).

1.3: Recommended steps

- Get started – decide to conduct a GHG inventory.
- Conduct a GHG inventory.
- Assess results: identify problem areas.
- Establish a baseline to help future monitoring.
- Analyse available data and identify data gaps.
- Identify challenges and opportunities.
- Determine which targets can be considered.
- Set up a process of monitoring & reporting.

1.4: Processes

People: Involving the right people at the right time

- Local decision-makers need to understand what a GHG inventory is, and how it fits into the municipal strategy development.
  It requires a report after the BEI has been conducted.
- Municipal staff need to know such a process will start, and that their cooperation is expected.
- Technical staff need to understand what the task entails, which tools to select and use, how to collect data and assess results through the tool used.
  It is important to know how to report to the municipal council.

1.4: Processes

Who should be involved?

- **Municipal council:** To be involved from the start of the process.
- **Municipal departments:**
  - Lead responsible team to be created at the start of the process.
  - All municipal departments should be informed of the new development.
  - A number of key municipal departments/units/teams should be involved.
    A core group should emerge to be involved in the SEAP development process.

1.4: Processes

Who should be involved?

- **Partnering with the private sector:**
  In many cases GHGs are released in the business and industry.
  Calculators for businesses could be integrated into their sustainability development plans.

- **Involving the community:**
  The interest and engagement of this group should be tickle with a continuous update on developments.

- **Local-regional cooperation:**
  The link between the municipality and its neighbors, and/or the next level of government can help to optimize approaches and cooperation.
  Data is most useful at a regional level.

1.5: Guidance

The big picture

- **European:**

  - Committee of the Regions (CDR 87/2012) "Proposal for a regulation of the European Parliament and of the Council on a mechanism for monitoring and reporting greenhouse gas emissions and for reporting other information at national and Union level relevant to climate change"

  - Covenant of Mayors – committing and reporting in a European initiative

- **International:**

  - Carbonn Cities Climate Registry – LG international reporting platform
  - Mexico City Pact – to jointly cooperate to increase direct access to international climate funding for cities
  - Standards and Protocol - global standardization of what should be addressed when conducting a local GHG inventory

1.6: Tips and tools

Recommendations and support

- Tool selection carbonn guidance
- Free ICLEI's Climate Toolkit available on joining ICLEI's Climate Campaign www.iclei-europe.org/ccp
- Glossary
- Calendar for further training offers