

SUSTAINABLE NOW Training Workshop on CO2 monitoring

- Freiburg -

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Moderator: Miguel Morcillo, Climate Alliance

<< Introductory presentation >>

▪ Why is a CO2 inventory such an important step?

The CO2 emissions inventory provides a comprehensive picture of the main emission sources and their respective reduction potentials. The LEAP will prioritise the reduction measures accordingly.

▪ International and European contexts

International standards: IPCC and UNFCCC guidelines - “GHG inventories must be transparent, consistent, comparable, complete and accurate” (2006), GHG Protocol

European framework reference: Covenant of Mayors guidelines (2010)

▪ Basic notions when setting up a CO2 inventory

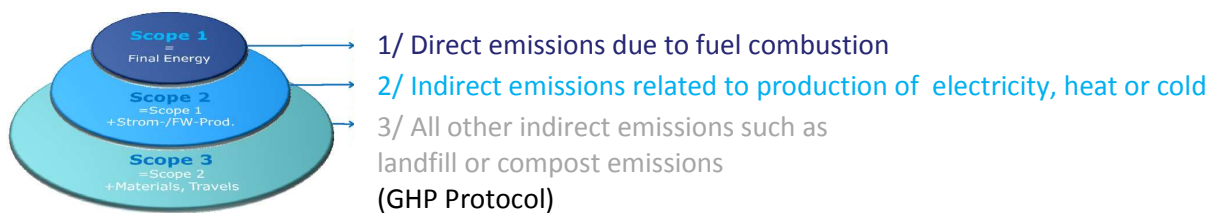
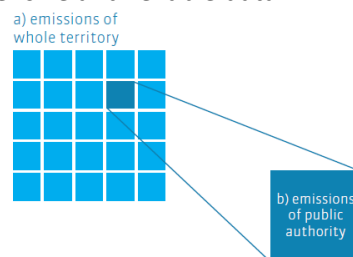
→ Defining the baseline year for which you can get the most comprehensive and reliable data

→ Defining your boundaries

a) all emissions that occur within the geographic boundaries

b) only emissions that are directly linked to activities carried out by the public authority

→ Setting your emissions scope



→ Choosing your emission factors: standard factors (in line with IPCC) or Life Cycle Assessment (LCA) factors

→ Choosing the GHGs to be included: CO2, CH4, NOX other GHGs

- **The Covenant of Mayors – an European framework for data management and reporting**
- **Boundaries** = geographical boundaries of the local authority
- **Scope** = direct emission from use of fuels in the territory (scope 1), direct and indirect emissions due to production of electricity, heat and cold consumed in the territory (scope 1 & 2)
- **Emission factors** = standard (IPCC) or LCA
- **Compounds** = at least CO₂, other GHGs optional
- **Sectors** = Energy consumption (electricity, heating, cooling), urban transportation (road and rail), fuel use in local heat/cold and electricity plants



Covenant supporting materials (developed by COMO and JRC)

- **JRC's Report II**, including an overview of the most commonly used methodologies and their suitability for the compilation of a CO₂ emission inventory
- **SEAP Guidebook** (Part II "Baseline Emission Inventory") - providing advice, tips and recommendations for compiling a CO₂ emission inventory
- **SEAP template and related instructions** - helping local authorities to structure and present key information of their CO₂ emission inventories and action plans (SEAPs)

<< COL partners' presentations >>

- **State of play: where you are in the preparation of your GHG emission inventory?**
- **Questions & needs to be addressed during the workshop**

(see ppt presentations available on Sustainable NOW website, partners'area)

<< Discussion session >>

Subjects of discussion based on identified needs in the preceding COL presentations:

- **Energy and CO₂ Data collection – How to get the data (e.g. in the private household sector)?**

Energy market operators have the obligation to provide on request, but not more than once a year, aggregated statistical information on their final customers' (Directive 2006/32/EC on energy end-use efficiency and energy services, article 6). Another alternative may be making inquiries directly to the energy consumers, in order to obtain the missing data.

- **Industry sector: How to include the industries in your inventory?**

Plants covered by the ETS (European CO₂ Emission Trading Scheme) should be excluded (as it is recommended for example by the Covenant of Mayors guidelines), unless they were included in

previous plans of the local authority. The industrial sector in general can be included in a CO₂ inventory if the local authority may choose to include actions in this sector.

To cover the industrial sector in the inventory may be useful as an overview of the local emissions. Otherwise it is not necessarily useful as a foundation of a long term action plan because of the limited scope of influence of the municipality in this sector.

- **CO₂ emissions calculation**

- Forestry / Agriculture: should a local authority consider CO₂ absorption when calculating CO₂ emissions?

Some of the workshop participants have developed CO₂ inventories considering the CO₂ absorption options of the forestry and soil (like under the IPCC methodology). The issue raised is the small accuracy of the data for this calculation. The absorption capacity for soil and forestry depends on several factors that are difficult to quantify (e.g. what kind of trees are catching more CO₂? How to consider grassland or animals by the carbon catcher?). Lack of methodology.

After discussion we recommend to consider if desired CO₂ absorption within a CO₂ overview but not in the calculation of the CO₂ emissions. An inventory should only quantify emissions that occur due to energy consumption in the territory of the local authority. Moreover CO₂ absorption by forests should not count as compensation for these emissions in the inventory.

- Transport: How to calculate transport related emissions?

As raised by many community partners, it is extremely difficult to get exact data about the energy consumption from vehicles circulating within the territory. Here we would recommend make calculation taking account the national energy consumption average.

- National and regional statistics complementing local data:

Many municipalities make a mix of both, like Comunita Montana, that calculated the emissions of the energy consumption according to the data the national energy mix in Italy.

Valuable data may be available at regional or national level.

- Baseline year:

It is the year against which the achievements of the emission reductions shall be compared. It is important to make a reasonable selection of a baseline year, i.e. to choose the year for which the most comprehensive and reliable data can be collected.

- **Data monitoring**

- Standardised monitoring procedure

Collection methodology should be consistent through the years. This concerns the municipality as well as all stakeholders responsible for data collection.

- Availability of the years

Sources serving as basis for the emission calculation should be available in the future to realise the monitoring process.

- **Cooperation with stakeholders, involvement of the population**

