

Portuguese National System for the Estimation of Emissions by Sources and Removals by Sinks of Air Pollutants –SNIERPA

Legal Framework

The National System for the Estimation of Emissions by Sources and Removals by Sinks of Air Pollutants - (SNIERPA) includes a set of legal, institutional and procedural arrangements that aim at ensuring the accurate estimation of emissions by sources and removals by sinks of air pollutants. This framework covers, therefore, gases other than greenhouse gases.

The national system was formally adopted by the Council of Ministers in January 2005. It defines the Institute for the Environment (Instituto do Ambiente – IA) as the Responsible Entity for the inventory preparation and for its submission to the relevant international organizations.

The Resolution of the Council of Ministers n.º 68/2005 (RCM) defines very clearly the duties, tasks and responsibilities of all the entities, which possess information relevant for the estimation of emissions. Three levels of responsibility have been defined, taking into account the hierarchy among the different institutions and the level of importance of the information a given entity needs to provide to the Responsible Entity.

Focal Points are the second most important type of entity. Their main task includes co-ordinating the work and the participation of the relevant sectoral entities over which it has jurisdiction. It is also the Focal Points duty to provide expert advice on methodological choice, emission factor determination and accuracy of the activity data used. Focal Points play a vital role in sectoral quality assurance and methodological development.

Finally, the Involved Entity includes all other entities that provide any kind of information (activity data, emission factors or other parameters, including expert opinion) relevant for the estimation of the emissions.

All entities have the responsibility to ensure, at a minimum, co-funding of the investment needed to guarantee the accuracy, completeness and reliability of the emissions inventory.

The RCM also includes a procedure for the final approval of the inventory by the Responsible Entity. A draft inventory must be submitted by the Responsible Entity for comments at the level of the designated representatives of Focal Points and Involved Entities. The final version shall incorporate comments and proposals by these entities.

The SNIERPA is composed of three technical elements:

- A QA/QC System
- A Methodological Development Programme, and
- An integrated IT system for the management of the SNIERPA.



Quality Assurance and Quality Control System

The QA/QC System has been developed in such a way as to be consistent and part of the Integrated Environment and Quality System (in accordance with ISO 9000 and ISO 14000) of the Institute for the Environment.

The main objective of the QA/QC System is to provide a set of basic verification (check) procedures to ensure the accuracy, completeness, transparency, reliability and representativeness of the emissions inventory.

The QA/QC System is composed of two main elements:

- A QA/QC Programme, which includes a calendar for the application of QA/QC procedures to key sources, and
- A QA/QC Manual, which includes a very detailed description and instructions for the application of:
 - QC tier 1 procedures
 - QC tier 2 procedures and
 - QA procedures.

The procedures included in the QA/QC Manual were based upon the IPCC Good Practice Guidance and on the USEPA QA/QC Manual.

Tier 1 procedures include checks on the accuracy of data acquisition processes (including, e.g., transcription errors) and basic checks on calculation procedures. As an example, quality controllers must ensure that, if a parameter is used to calculate the emissions in more than one source, the value for that parameter is the same throughout the inventory. Documentation and archiving QC procedures include checks on procedures for information handling. A check can be the trace of a specific input back to the original source.

Tier 2 QC procedures include technical verifications of emission factors, activity data, methodologies adopted and calculation procedures. As an example, quality controllers shall compare emission factors used with those used by countries with similar circumstances.

Both tier 1 and tier 2 procedures can be applied by experts involved in inventory compilation.

Quality Assurance procedures are applied by experts not involved in inventory preparation and with recognised expertise in the specific source and are characterised by a thorough review of all assumptions and choices made to estimate emissions.

Methodological Development Programme

The Methodological Development Programme (MDP) is a key element of the Portuguese National System, as it constitutes the main planning exercise regarding the increase of accuracy and completeness of the emissions inventory.

The MDP is based on the compilation of structured inputs from different entities, processes and experts which, via quality assurance procedures (among other procedures not formally considered QA) identify areas needing further consideration and potentially further methodological development investment in the inventory.

The MDP lists all tasks that, in a given period, must be executed to ensure the continuous improvement of the inventory quality. It assigns responsibilities to the different entities involved.

The tasks included in the MDP focus, with the aim of producing improvements, on the following areas:

- the methodology currently used, with the aim of assessing the possibility of adopting a higher tier;
- the source of data, including the methodology used to compile primary data;
- the source of emission factors and/or other parameters;
- the institutional arrangements between the inventory agency and the relevant entities involved.

Inputs to the MDP can be collected from:

- QA/QC procedures and reports;
- Review process under the UNFCCC and the KP;
- Annual inventory compilation process (all experts and entities involved can make proposals for methodological development);
- Expert opinion;
- Official process for the consideration of the inventory.

The setting of Methodological development priorities shall be based on the following parameters, among others:

- Uncertainty associated with the activity data, emission factor and emissions estimate;
- Importance of the source and contribution to the reduction of general inventory uncertainty;
- Availability of cost-efficient alternatives to the current approach.



Integrated IT System for the Management of the SNIERPA

The integrated IT system for the management of the SNIERPA (ISMS) is a tool which aims at facilitating the implementation of routine tasks necessary for the compilation of emissions inventory. It also aims at facilitating public access to emissions inventory information.

The ISMS is composed of 5 elements/tools:

- Element with exclusive access to entities involved in inventory compilation. This element will facilitate entities submission of data to the inventory agency, will facilitate time keeping and will issue warnings regarding certain breaches. It will also facilitate communication and information exchange among all entities and experts involved.
- Element accessible only to the inventory team. This element allows the inventory team to override any action performed in other levels, thus granting it privileged rights in the micro-management of the system and of the inventory compilation process.
- Archiving tool. The system will keep record of all actions as well as it will archive all information in such a way as to facilitate "paper trail."
- Public Access tool. This element will make available to the general public a set of relevant information regarding emissions and emissions inventory.
- Data base infrastructure. This database will include all the information necessary for emission estimates.