

TRAINING CENTER

FOR NATIONAL GREENHOUSE GAS AND AIR
EMISSION INVENTORY CAPACITY BUILDING



CHALLENGES OF THE FUTURE

Climate change and air pollution present enormous challenges that we aim to tackle by making a transition to a low-carbon and low-pollution economy, in order to secure the quality of life for future generations on a sustainable basis.

National and regional emission inventories provide an important knowledge base and key data for decision making. They are essential for active climate and air quality policies. They identify the trends and causes of greenhouse gas and air emissions and thus provide the basis for taking measures efficiently and for monitoring their implementation.

Without reliable inventories it is not possible to take targeted or cost-efficient measures. Only a robust, high quality inventory will meet the increasing demands of national and international agreements and market instruments.

Umweltbundesamt – the Environment Agency Austria – **has been compiling Austrian and European greenhouse gas and air emissions inventories for more than 20 years** and is continually improving and optimizing them. The high standard of our inventories is regularly confirmed by international and independent expert reviews. With our extensive knowledge we strive to provide high-quality and cost-efficient solutions at all levels of inventory compilation and for all underlying processes.

Umweltbundesamt: Your partner for inventory compilation

Umweltbundesamt has been compiling the **Austrian national emission inventory** every year since 1994, in accordance with international guide-

lines (IPCC Guidelines, EMEP/EEA Air Pollutant Emission Inventory Guidebook) and reporting requirements.

- The Austrian national emission inventory currently comprises approximately 590 sources, 16 greenhouse gases and 14 air pollutants and time series from 1980 to 2013.
- It follows the requirements of transparency, consistency, comparability, completeness and accuracy.
- It is subject to a continuous improvement process.
- A Quality Management System was developed and has been implemented. Since 2006 Umweltbundesamt has been accredited as *Inspection Body for Emission Inventories* in accordance with the EN ISO/IEC 17020 International Standard "General criteria for the operation of various types of bodies performing inspections".
- 18 experts from Umweltbundesamt are listed on the UNFCCC roster of experts, and six are listed as inventory review experts under the LRTAP convention.

Our sector experts for energy, industrial processes and product use, as well as transport, waste, agriculture, forestry and other land use, have acquired a deep insight into international climate policy and are up-to-date with the latest developments in monitoring, reporting and verification of greenhouse gas and air emissions. They also have experience with the **UNFCCC expert review activities**, having acted as reviewers and lead reviewers and as delegates to COP/CP negotiations.

Umweltbundesamt has **extensive experience** with international **capacity building projects** in the field of GHG and air emission inventory compilation (Twinning, Support under the Technical Assistance and Information Exchange instrument of the European Commission (TAIEX), UNECE projects and workshops, bilateral cooperation projects), and in providing consulting services to the European Commission and the European Parliament.

YOUR BENEFIT

Because of our long experience with all aspects of inventory compilation we are able to offer tailor-made support for the establishment or improvement of a national or regional emission inventory. We provide support for single sectors as well as for the system as a whole, depending on the status of reporting and on the reporting requirements of the beneficiary country.

Depending on the individual requirements, we offer support for capacity building and assistance in the entire emission inventory preparation process:

- **Setting up a national system** (including the institutional and procedural arrangements required).
- **Collection of activity data, emission factors** and all relevant information needed for final emission estimates.
- Finding appropriate sectoral **methodology**.
- **Estimation of emissions** following the UNFCCC and UNECE/LRTAP guidebooks and relevant reporting guidelines.
- **Assistance** in key category analysis, uncertainty analysis, emission projections and gridding of emissions.
- **Preparation and improvement of national greenhouse gas and/or air emission reports** for submission to the UN and/or EU.
- **Identification of improvement needs**.

Additionally we provide support for the Development, Monitoring and Evaluation of **mitigation measures**, the reporting of **policies and mea-**

asures, the specification of emission **scenarios** and the calculation of **projections** of GHG and air emissions for all sectors.

The inventory preparation process:



The main elements of a robust inventory system are:



The establishment and maintenance of **institutional, legal and procedural arrangements** between government agencies and other entities responsible for the performance of all functions defined in the guidelines for national systems.



The creation of a **data management system** to prepare or improve the preparation of national greenhouse gas and/or air emission reports that are to be submitted to the UN and/or the EU. A flexible system that can easily be adjusted to new requirements is needed.



The Implementation of a **Quality Management System** that fulfils the QA/QC requirements of the 2006 IPCC Guidelines for National GHG Inventories and other relevant reporting guidelines.

PERSONAL SERVICE

We offer the following services which can be adapted according to your needs.

- **Workshops** offered either on-site or in Vienna
- **Face-to-face training** of national inventory compilers and sectoral experts
- **Webinars**
- Efficient ad-hoc and long-term **support via email, telephone and Skype**
- **Identification of improvements and training needs in peer reviews and audits** of existing national inventories/inventory systems:
 - a) Audits and assessments of institutional and procedural arrangements
 - b) Audits of existing QA/QC
 - c) Review of sectoral methodologies including input data and parameters
- **Preparation of inventories** (or parts of inventories)



Selected project references

Umweltbundesamt is a partner of the **European Topic Centre on Air Pollution and Climate Change Mitigation** and responsible for compiling the EU's GHG inventory for submission to the UNFCCC, but also the EU air emission inventory under the LRTAP Convention.

Umweltbundesamt hosts the **EMEP Centre on Emission Inventories and Projections (CEIP)** which collects data on emissions and projections of air pollutant emissions. This centre is one of five European Monitoring and Evaluation Programme (EMEP) centres. EMEP is a science based and policy driven programme under the Convention on Long-range Transboundary Air Pollution (CLRTAP).

Umweltbundesamt has been part of a consortium which prepared in 2013 – on behalf of the European Commission – the **EU's National Communication and the Biennial Report**.

„The Environment Agency Austria is a reliable partner for solutions of complex environmental issues. We support key actions to reduce air pollution and for emission control, with the aim to protect our health and the environment. Our technical know-how in the area of air quality improvement is sought after in Europe and beyond.“

*Georg Rebernig
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