

HELLENIC REPUBLIC MINISTRY FOR THE ENVIRONMENT, PHYSICAL PLANNING AND PUBLIC WORKS

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WRITTEN SUBMISSION OF GREECE

GREEK NATIONAL GHG INVENTORY SYSTEM

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1. General Description of the System

The Ministry for the Environment, Physical Planning and Public Works (henceforth Ministry for the Environment, MINENV) is the governmental body responsible for the development and implementation of environmental policy in Greece, as well as for the provision of information concerning the state of the environment in Greece in compliance with relevant requirements defined in international conventions, protocols and agreements, as well as the environmental *acquis communautaire*. Moreover, the Ministry for the Environment is responsible for the co-ordination of all ministries involved, as well as of any relevant public or private organization, in relation to the implementation of the provisions of the Kyoto Protocol according to the Law 3017/2002 with which Greece ratified the Kyoto Protocol.

In this context, the Ministry for the Environment and more specifically the Division of Air Pollution and Noise Control has the overall responsibility for the national GHG inventory, and the official consideration and approval of the inventory prior to its submission. (National UNFCCC Focal point : Elpida Politi, <u>Address</u>: 147, Patission Street, 11251, Athens, Greece, e-mail: <u>epoliti@minenv.gr</u>, tel.: +30210 8677012, fax: +30210 8646939.

Till the beginning of 2007, the entities participating in the system, apart from the Ministry for the Environment which was designated as the national entity for the GHG inventory, were:

- the National Observatory of Athens (NOA), assigned on a contract basis by the Ministry for the Environment the technical responsibility for the compilation of the annual inventory and for the methodological approach, data collection (activity data and emission factors provided by statistical services and other organizations), data processing and archiving, as well as the implementation of general quality control procedures.
- other ministries of the Greek government and relevant public or private organizations that were involved in inventory preparation processes. This involvement is not limited to data providing but also concerns methodological issues as appropriate.

Since early 2007, taking the advantage of the experience gained during the past years, the Ministry for the Environment, started an effort to further enhance the reliability of the national GHG inventory system in compliance with the guidelines for national systems under Article 5 /Paragraph 1 of the Kyoto Protocol (decision 19/CMP.1) and the preparation of the information required under Article 7 of the Kyoto Protocol (decision 15/CMP.1).

The reengineered system is focusing mainly on:

- > the enhanced role of the Ministry in the inventory planning, preparation and management.
- the institutional, legal and procedural arrangements necessary to perform the functions relating to inventory planning, preparation and management, specified by the decision 19/CMP.1, among the responsible government agencies and other entities,
- the capacity of timely performance of the system,
- the technical competence of the staff involved in the inventory development process,
- the continuity of the inventory preparation process and knowledge management issues.

The ERT visited Greece the last week of April 2007, thus the in-country review of Greece coincided with this transitional period of the country's effort for reorganisation and improvement of the national system.

The outcome of the reengineering process was a new organisational structure of the national inventory system with re-defined roles and responsibilities of the entities participating in it. Figure 1 provides an overview of the new organizational structure of the National System. The entities participating in it are:

The Ministry for the Environment designated as the national entity responsible for the national inventory, which keeps the overall responsibility, but also plays a more active role in the inventory planning, preparation and management.

- The National Technical University of Athens (NTUA) / School of Chemical Engineering, which has the technical and scientific responsibility for the compilation of the annual inventory.
- Governmental agencies and ministries, international associations, along with individual private industrial companies. The involvement of these entities is not limited to data providing but also concerns methodological issues as appropriate.



Figure 1. Organizational Structure of the National Inventory System

2. Roles and Responsibilities

The roles and responsibilities of the above-mentioned entities are as follows:

2.1 Ministry for the Environment, Physical Planning & Public Works

The Ministry for the Environment, as previously stated, designated as the national entity, has the overall responsibility for the national GHG inventory. Among its responsibilities are the following:

- The co-ordination of all ministries and governmental agencies involved, as well as any relevant public or private organization. In this context, it oversees the operation of the National System and decides on the necessary arrangements to ensure compliance with relevant decisions of the COP and the COP/MOP.
- > The official consideration and approval of the inventory prior to its submission.
- The response to any issues raised by the inventory review process under Article 8 of the Kyoto Protocol, in co-operation with the NTUA Inventory Team.
- The timely submission of the GHG inventory to the European Commission and to the UNFCCC Secretariat.
- The keeping of the Centralised Inventory File¹, which is delivered to the technical responsible for the inventory institution (currently NTUA) at the beginning of each inventory cycle. Thus, the continuity of the inventory preparation process and

¹ The "Centralised Inventory File" includes: a list of the reports, the input data files and the calculation files, the members of the inventory team, final versions, in electronic format and hard copy, of the NIR, CRF tables, calculation files, including the uncertainty estimation files, expert review reports, a list of permissions given for the modification of elements stored in the Centralised Inventory File.

knowledge transfer between the bodies which undertake the technical responsibility of the GHG inventory preparation is ensured.

The administration of the National Registry. Greece cooperates with the Member states of the European Union and with the supplementary transaction log and the registry of the European Community by maintaining the national registries in a consolidated system. The administration of the registry is assigned to the National Center for the Environment and Sustainable Development, which reports to the Ministry of Environment and operates under the authority of the latter.

The role of the Ministry for the Environment is not narrowed to the co-ordination of the entities involved in the inventory process and to facilitate the activity data transfer from the data providers to the NTUA's Inventory Team.

MINENV has an active role in monitoring and participating in the inventory process through continuous communication and frequent scheduled and / or ad-hoc meetings with the Inventory Team of NTUA and the competent ministries involved.

For that reason, a five (5) member team (task force) was established, named the MINENV Climate Team, within the Ministry for the Environment, comprising high level professionals with adequate technical and scientific background and experience. The scope of this team is the fulfillment of the above-mentioned roles and responsibilities. The team is comprised of the following experts, personnel of the Division of Air Pollution and Noise Control of the Ministry:

- 1. Elpida Politi, National UNFCCC focal point
- 2. Sotiria Koloutsou
- 3. Moraiti Christina,
- 4. Balas Dionisios
- 5. Lytras Euthimios

2.2 National Technical University of Athens (NTUA) - School of Chemical Engineering

The Ministry for the Environment has assigned, on a contract basis, the National Technical University of Athens (NTUA) / School of Chemical Engineering as the national institution that has the overall technical and scientific responsibility for the compilation of the annual national inventory (Inventory Team). In this framework, NTUA has the following responsibilities / tasks to fulfill for the GHG inventory preparation:

- Data collection (activity data and emission factors) for all source / sinks categories that are Energy, Industrial Processes, Solvents and Other Product Use, Agriculture, Land Use, Land Use Change and Forest, and Waste.
- 2. Reliability check of input data through
 - ✓ the comparison of the same or similar data from alternative data sources and
 - ✓ time-series assessment in order to identify changes that cannot be explained.
- 3. Selection of the appropriate methodologies according to IPCC guidelines.
- 4. Data processing and archiving.
- 5. Assessment of the consistency of the methodologies applied.
- 6. Reliability check of results.
- 7. Key categories analysis.
- 8. Inventory improvement recalculations.
- 9. Uncertainty assessment.
- 10. Preparation of Common Reporting Format (CRF) tables.
- 11. Preparation of National Inventory Report (NIR).
- 12. Reporting of the required information according to Article 3 of the Decision 280/2004/EC of the European Parliament and of the Council.
- 13. Preparation and keeping of Centralised Inventory File which is delivered to the Ministry for the Environment / Climate Team at the end of each inventory cycle.
- 14. Development of QA/QC procedures.
- 15. Monitoring the implementation of QA/QC procedures.

- 16. Internal audit of GHG inventory preparation.
- 17. Training of representatives of providing data agencies on inventory issues.

The NTUA co-operates with a number of government agencies and other entities for the preparation of the inventory (see next section). It should be mentioned that this co-operation is not restricted to data collection but it also concerns methodological issues as appropriate

NTUA is also responsible in co-operation with MINENV's Climate Team to perform greenhouse gas balance projections in terms of sources and sinks as a minimum for the years 2010, 2015 and 2020, organized by gas and by sector, according to the national policies and measures adopted.

The names and contact details of the NTUA inventory team follows:

- Prof. Ioannis Ziomas, Scientific responsible
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 Engineering, Heroon Polytechniou 9, Zografos, 157 80 Athens, Greece.
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- 2. Prof. Dimitris Marinos-Kouris E-mail: marinos@chemeng.ntua.gr Tel: +30 210 772 3148 FAX: +30 210 772 3155 (FAX)
- Athina Progiou, Dr Mechanical Engineer E-mail: athenaproyou@axonenviro.gr Tel: +30 210 8223083 Fax: +30 210 8238604

- 4. Ioannis Sempos (Sebos), Chemical Engineer, MBA, NTUA technical staff E-mail: isebos@mail.ntua.gr Tel: +30 210 772 3240 FAX: +30 210 772 3155 (FAX)
- 5. Spyridoula Ntemiri, Chemical Engineer, NTUA E-mail: spyrdem@chemeng.ntua.gr Tel: +30 210 772 3149 FAX: +30 210 772 3155 (FAX)
- 6. Leonidas Kallinikos, Chemical Engineer, NTUA E-mail: leokalls@central.ntua.gr Tel: +30 210 772 3240 FAX: +30 210 772 3155 (FAX)

It should be stressed that, when necessary, the above mentioned NTUA's Inventory Team is ad hoc supported by experts either from the NTUA or other institutions.

2.3 Government agencies and ministries, international associations, individual private or public industrial companies

The following government agencies and ministries, international associations, individual private or public industrial companies develop and maintain, within their terms of operation, data sets and emission methodology information necessary for the estimation of GHG emissions / removals.

The Ministry for the Environment provides information and data for Large Combustion Plants (fuel consumption, NOx and SO2 emissions - Department of industries), solid waste management (Department of Solid Waste Management) and domestic wastewater handling practices (Department of Water Resources). (Contact persons: Dimitris Chadjidakis, Macheras Ioannis, 147, Patission Street, 11251, Athens, Greece, tel.: +30210 8650053, fax: +30210 8646939)

- The National Statistical Service of Greece, supervised by the Ministry of Economy and Finance, represents the main source of information for the estimation of emissions / removals from most of the IPCC source / sink categories (contact person: Ioanna Papanagnou, 46, Pireos str. and Eponiton, 18510 Pireas, Greece, tel: +30210 4852045, fax: +30210 4852453, e-mail: papanag@statistics.gr, and Konstantina Katartzi).
- The Ministry for Development, is responsible for reporting and maintaining annual statistical data for energy consumption and production (more specifically: Energy policy division – Solid fuels and electricity; Petroleum policy division – Liquid and gaseous fuels; Division of RES and energy conservation – Renewable energy sources) as well as for providing those data to international organizations such as the International Energy Agency (IEA), the European Statistical Service EUROSTAT, etc (Contact persons: Constantinos Chatzigianakis, Director of Electricity production division, 119, Mesogeion Avenue, 10192, Athens, Greece, tel: +30210 6969450, fax: +30210 6969416, e-mail ChatzigianakisK@ypan.gr, and Xarikleia Piperopoulou, Director in the General Secretariat of Industry, 119, Mesogeion Avenue, 10192, Athens, Greece, tel: +30210 6965809, fax: +30210 6965845, e-mail: piperopouloux@ypan.gr).
- The Ministry of Rural Development and Food provides information and data (through the National Statistical Service of Greece which processes primary data collected by the Ministry) for the main indices and parameters of rural economy (e.g. animal population, cultivated areas, crops production, etc.) and forestry. Furthermore, the Ministry of Rural Development and Food is the responsible entity for establishing a system for the identification and measurement of areas of land subject to LULUCF activities under Article 3, paragraphs 3 and 4 of the Kyoto Protocol. These activities are afforestation, reforestation and deforestation, which are mandatory according to Article 3.3, along with the elected one forest land

management according to Article 3.4. (Contact persons: Eirini Nikolaou, and Panagiotis Drougas, General Directorate of Forests, 31, Chalkokondili str., Athens, tel: +30210 2124728, fax: +30210 2125240122, e-mail: <u>xa31u037@minagric.gr</u>, <u>xa31u025@minagric.gr</u>,).

- The Ministry of Transport and Communications provides information and data for the vehicle fleet and its technical characteristics. The Civil Aviation Organization, supervised by the Ministry of Transport and Communications, provides information on Landing and Take-off cycles for both domestic and international aviation (Contact persons: Anastasios Kokkinos, General Director of Civil Aviation Organisation, tel: +30210 8916555, fax: +30210 8983226 and Panagiotis Tselikas, tel: +30210 6508233. fax: +30210 6508200). Data from the Association of Motor Vehicles Importers Representatives are supplementary to the official data and are only used in cases where official data are temporarily not available
- Data are also obtained from International Organizations as the United Nations Food and Agricultural Organization (FAO) from which data on the annual consumption of fertilizers are collected, the EUROSTAT, the International Iron and Steel Institute, the International Energy Association. These data are supplementary to the data collected from the aforementioned data providers.

It should be stated that a new significant institutional source of data is the National Center for the Environment and Sustainable Development (NCESD), supervised by the Ministry for the Environment. This entity is also responsible for the operation of the National Registry. (Contact person: Alexandros Karavanas, tel: +30210 8089271, Fax: +30210 8084707).

Moreover, individual industrial companies / installations, either public or private, as Power Public Corporation, cement plants, etc, constitute a data source for the GHG inventory preparation. However, these data are used supplementary to the above mentioned data sources.

The co-operation between the NTUA Inventory Team and the MINENV Climate Team and the other entities described above started in the beginning of 2007, and soon took its final official form which is based on written agreements between MINENV, NTUA and the other entities involved. These agreements include a description of each entity's responsibilities, concerning the inventory preparation, in providing data or other relative information. This formal framework is expected to improve the collaboration between the entities involved, to assure the timely collection and the quality of the activity data required and to solve data access restriction problems raised due to confidentiality issues. The appointment of specific contact persons are responsible to collaborate with the NTUA Inventory Team and the MINENV Climate Team will further facilitate the inventory preparation process. Furthermore, it should be stated that the Ministry for the Environment intends to include the above agreements in a legislative adjustment.

Moreover, another supporting action for the improvement of the inventory system, is the planning and execution of training seminars of all representatives of the entities involved in the inventory system. The managing of this action is a responsibility of NTUA Inventory Team. Becoming familiar with the activity data and information required and their impact on the quality, completeness and timely performance of the inventory, data providers will contribute to the minimization of time delays and the improvement of the quality of the data needed.

3. GHG emissions inventory preparation process

The preparation of the Greek GHG emissions inventory is based on the application of the Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories, as elaborated by the IPCC good practice guidance.

The compilation of the inventory is completed in three main stages (**Figure 2**), while the timetable for the completion of those stages in the annual inventory cycle is presented in **Figure 3**.

Stage 1: the first stage consists of data collection and check for all source/sink categories. The main data sources used are the National Statistical Service of Greece (NSSG), the government agencies involved and large private enterprises.

Quality control of activity data include the comparison of the same or similar data from alternative data sources (e.g. National Statistical Service of Greece and International Iron & Steel Institute for steel production) as well as time-series assessment in order to identify changes that cannot be explained. In cases where problems and/or inconsistencies are identified, the agency's representative, responsible for data providing, is called to explain the inconsistency and/or help solving the problem.

Stage 2: Once the reliability of input data is checked and certified, emissions/removals per source/sink category are estimated. Emissions estimates are then transformed to the format required by the CRF Reporter (as of the present submission). This stage also includes the evaluation of the emission factors used and the assessment of the consistency of the methodologies applied in relation to the provisions of the IPCC Guidelines, the IPCC Good Practice Guidance and the LULUCF Good Practice Guidance.

Quality control checks, when at this stage, are related to time-series assessment as well as to the identification and correction of any errors / gaps while estimating emissions / removals and filling in the CRF Reporter.

Stage 3: The last stage involves the compilation of the NIR and its internal (i.e. within NTUA) check. The official approval procedure follows for one month period of interactions between the Inventory Team (NTUA) and the Climate Team (MINENV), starting on 1st of February of the year of submission. During this period, the NTUA Inventory Team has to revise the report according to the observations and recommendations of the Climate Team. On the basis of this interaction process, the final version of the report is compiled and then the NIR is submitted, by the Ministry for Environment, to the European Commission and to the UNFCCC Secretariat.



Figure 2. GHG emissions inventory preparation process in Greece

DELIVERABLES										CRF tables for year X-2 & Information acc to 280/2004/EC	(15th January)	To: European Commission	National Inventory Report (15th March)	To: UNFCCC Secretariat National Inventory Report (15th April)
					Yea	r X-1				- T		Yea	r xT	T
		MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FE	EB	MAR	APR
	Data collection & check													
្ល	Estimation of emmissions and check													
∣岸	CRF tables compilation for year X-2													
≥	National Inventory Report compilation and check													
CT	Official examination and approval													
◄	Preparation of Centralised Inventory File and													
	delivery to MINENV climate team.													

Figure 3. Timetable for the preparation and submission of GHG emissions/removals inventory in Greece

As shown in the timetable, the government agencies and ministries and the individual private or public industrial companies referred in section 2.3 should have collected and delivered the respective activity data needed for the inventory (for year X-2). These data should be compiled and maintained, within their terms of operation and within the time period of May to November of year X-1 (X is the submission year of CRF tables and NIR referred to X-2 GHG emissions inventory).

The information that is related to the annual GHG emissions inventory (activity data, emission factors, analytic results, compilation in the required analysis level of the CRF tables) is stored in MS Excel spreadsheets.

In addition, and within the context of the Quality Assurance/Quality Control system developed, two master files have been organized aiming at the systematic and safe archiving of inventory information: the Input Data File and the Centralised Inventory File.

- The Input Data File contains (in electronic format and/or hard copy) all input data and parameters that are necessary for the estimation of GHG emissions/removals. Data are stored in files by sector and reference year.
- The Centralised Inventory File includes all information relevant to the GHG emissions/removals inventory. At the end of each stage of the inventory preparation, all inventory related information is handled to the person responsible for keeping the Centralised Inventory File (member of the Climate Team), who in turn gives the latest version of all relevant files (calculation files and NIR) to the Inventory Team at the beginning of the next inventory cycle.

More specifically the information stored in the Centralised Inventory Files includes:

- A list of the reports, the input data files and the calculation files.
- The members of the Inventory Team.

- Final versions, in electronic format and hard copy, of the NIR.
- CRF tables in electronic format and a hard copy of the CRF tables for the last year covered by each submission.
- Calculation files, including the uncertainty estimation files.
- Expert review reports.
- Any comments from the public review of the inventory.
- A list of permissions given for the modification of elements stored in the Centralised Inventory File.

4. Quality assurance – Quality control system

The development and the implementation of an inventory Quality Assurance / Quality Control (QA/QC) plan represents a key tool for meeting the objectives of National Systems under Article 5 Paragraph 1 of the Protocol as described in Decision 20/CP.7.

With the Protocol's application, it is expected that the pressure upon national GHG emissions inventories will increase and therefore quality management would be essential to comply with the requirements of (a) producing transparent, consistent, comparable, complete and accurate emissions estimates, (b) establishing a reliable central archiving system concerning all necessary information for GHG emissions inventories development and (c) compiling national reports according to the provisions of the adopted decisions.

In this framework, a QA/QC system is being implemented since April 2004. For the implementation of the QA/QC system the National Technical University of Athens is responsible in close co-operation with the Ministry for the Environment. The system is based on the ISO 9001:2000 standard and its quality objectives, as stated in the quality management handbook, are the following:

- 1. Compliance with the IPCC guidelines and the UNFCCC reporting guidelines while estimating and reporting emissions/removals.
- 2. Continuous improvement of GHG emissions/removals estimates.
- 3. Timely submission of necessary information in compliance with relevant requirements defined in international conventions, protocols and agreements.

The accomplishment of the above-mentioned objectives can only be ensured by the implementation, from all the members of the Inventory Team (see Figure 4 for the flow

chart of activities concerning emissions inventory within the NTUA), of the QA/QC procedures included in the plan for:

- data collection and processing,
- applying methods consistent with IPCC Good Practice Guidance and LULUCF Good Practice Guidance for calculating / recalculating emissions or removals,
- making quantitative estimates of inventory uncertainty,
- > archiving information and record keeping and
- compiling national inventory reports.

The QA/QC system developed covers the following processes (see **Table 1** for the list of procedures within each process and **Figure 5** for the relationship between the processes and the activities of the inventory team):

- QA/QC system management, comprising all activities that are necessary for the management and control of the inventory agency in order to ensure the accomplishment of the above-mentioned quality objectives.
- Quality control that is directly related to the estimation of emissions. The process includes activities related to (a) data inquiry, collection and documentation, (b) methodological choice in accordance with IPCC Good Practice Guidance, (c) quality control checks for data from secondary sources and (d) record keeping.
- Archiving inventory information, comprising activities related to centralised archiving of inventory information and the compilation of the national inventory report.
- Quality assurance, comprising activities related to the different levels of review processes including the review of input data from experts, if necessary, and comments from the public
- Estimation of uncertainties, defining procedures for estimating and documenting uncertainty estimates per source / sink category and for the whole inventory.
- Inventory improvement, that is related to the preparation and the justification of any recalculations made.



Figure 4. Flow chart activities concerning the GHG emissions inventory

Process	Procedure code	Procedures				
	QM 01	System review				
	QM 02	System improvement				
	QM 03	Training				
	QM 04	Record keeping				
	QM 05	Internal reviews				
Quality management	QM 06	Non compliance – Corrective and preventive actions				
	QM 07	Supplies				
	QM 08	Quality management system				
	QM 09	Documents control				
	QM 10	Internal communication				
	QC 01	Data collection				
Quality control	QC 02	Estimation of emissions / removals				
	QC 03	Data quality control check				
	QC 04	Input data record keeping				
Archiving of inventory	AI 01	Centralised archiving of inventory information				
	AI 02	Compilation of reports				
	QA 01	Expert review of input data and parameters				
Quality assurance	QA 02	Expert review of GHG emissions / removals inventory				
	QA 03	Review from public				
Estimation of uncertainties	EU 01	Uncertainty analysis				
Inventory improvement	II 01	Recalculations management				

 Table 1. Quality assurance / quality control procedures for the Greek GHG emissions inventory

The implementation of the plan started in April 2004 and the first internal review was carried out in June 2004, following procedures and manuals (available only in Greek) developed by in house staff and outside consultants.



Figure 5. QA/QC processes and procedures and inventory related activities

5. Improvements of the national GHG Inventory System

As mentioned above, an effort for the reengineering and eventually improvement of the performance of the national GHG inventory system has taken place last year, so as to ensure the full compliance with the guidelines for national systems under Article 5 / Paragraph 1 of the Kyoto Protocol (decision 19/CMP.1) and for the preparation of the information required under Article 7 of the Kyoto Protocol (decision 15/CMP.1). This effort resulted in specific improvements of the system described in previous sections and summarized in Table 2.

A supporting action, not described previously, is **the review of the national inventory system by independent experts.** This action will definitely contribute to tracking shortcomings of the system and will improve the evaluation of the quality and completeness of the inventory. Given the limited number of local experts who have experience in the IPCC methodologies for emission estimation, MINENV examines a potential co-operation with experts of another Annex I country.

Table 2. Improvements of National GHG Inventory System

Action	Expecting Gain	Reference
New organizational structure of the inventory system. Decentralization of inventory system structure. Active participation of Ministry for the Environment.	 Establishment of institutional, legal and procedural arrangements necessary for the functions of national system. Ensuring of the continuity of the inventory preparation process and knowledge transer. 	 ✓ Article 5, paragraph 1 Kyoto Protocol,
Establishment of Climate Team within Ministry for the Environment.	Ensuring of technical competence of the staff involved and capacity of the system for timely performance.	 ✓ Article 5, paragraph 1 Kyoto Protocol, Decision 19/CMP.1, Annex, paragraph 10 b
	 Ensuring capacity of the system for timely performance. 	
Redefinition of official consideration and approval of the inventory.	Establishment of institutional, legal and procedural arrangements necessary for the functions of national system.	 ✓ Article 5, paragraph 1 Kyoto Protocol, Decision 19/CMP.1, Annex, paragraph 12e.
Establishment of a formal co-operation with data providing agencies. Specific contact person appointment.	Establishment of institutional, legal and procedural arrangements necessary for the functions of national system.	 ✓ Article 5, paragraph 1 Kyoto Protocol, Decision 19/CMP.1, Annex, paragraph 10a and 12c.
	Ensuring effective co-operation between involved entities in the inventory.	
	 Ensuring capacity of the system for timely performance. 	
Use activity data from verified emission reports of the installations covered by the emissions trading Directive.	Improvement of consistency, comparability and accuracy of inventory.	 ✓ Article 5, paragraph 1 Kyoto Protocol Decision 15/CMP.1, Annex, paragraph 6. ✓ Article 7, Kyoto Protocol, Decision 19/CMP.1, Annex, paragraph 6.

Action	Expecting Gain	Reference
Training of data providing agencies' representatives	 Effective co-operation between involved entities in the inventory. 	 ✓ Article 5, paragraph 1 Kyoto Protocol, Decision 19/CMP.1, Annex, paragraph 10a and 12c.
Review of the system by independent experts.	Improvement of transparency, consistency, comparability and accuracy of inventory.	 ✓ Article 5, paragraph 1 Kyoto Protocol Decision 15/CMP.1, Annex, paragraph 15b.