



REPUBLIC OF BULGARIA  
MINISTRY OF ENVIRONMENT AND WATER  
EXECUTIVE ENVIRONMENT AGENCY

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**Improvement  
of the Bulgarian National Inventory System  
for compliance with commitments under Article  
5.1 of the Kyoto Protocol**

**Detelina Petrova  
ExEA**



**IMPROVEMENT PLAN**

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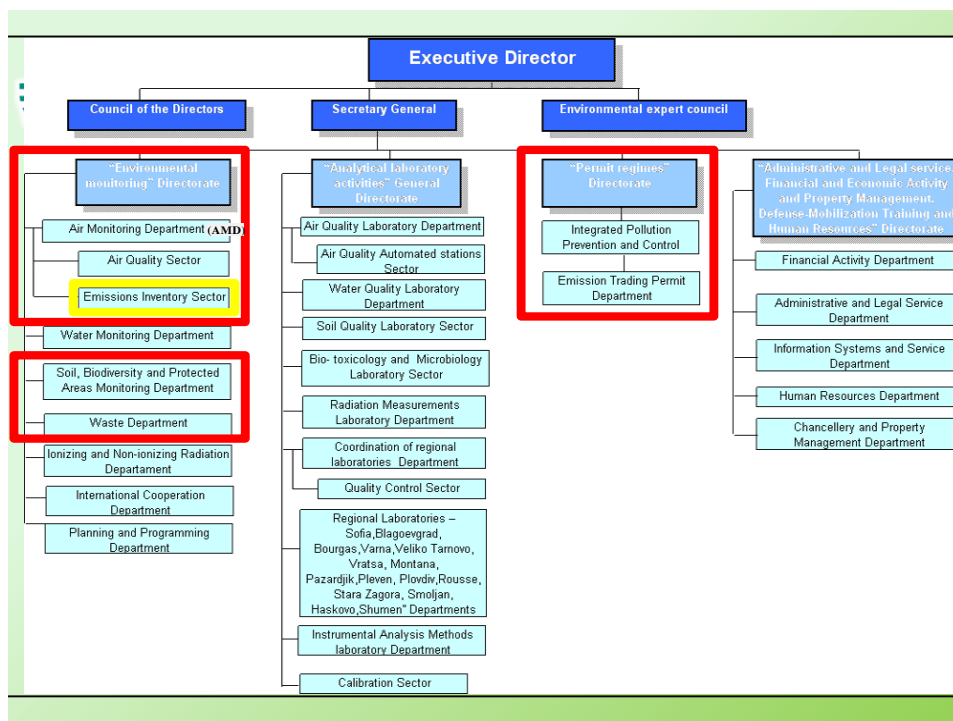
**Expert capacity in ExEA**  
High priority



## IMPROVEMENT PLAN

**Extension of the staff**, involved in planning, preparation and management of the emissions inventory by an Order of the Executive Director of ExEA, engaged departments within ExEA:

- **Air Monitoring Department**
- **Water Monitoring Department**
- **Land Monitoring Biodiversity and Protected Areas Department**
- **Waste Department**
- **Integrated Pollution Prevention and Control Department**
- **Emission Trading Permit Department**





## IMPROVEMENT PLAN

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- A **training programme** for Bulgarian inventory experts within the **Twinning project BG/07/IB/EN/07** with the Federal Environment Agency of Austria
- The program covered all inventory sectors in a series of workshops realised in the period December 2009 to September 2010
- **Online training** by the UNFCCC and GHG Management Institute



## IMPROVEMENT PLAN

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**Institutional arrangements**  
High priority



## IMPROVEMENT PLAN

Agreements between MoEW and the following key players have been signed in 2010:

- National Statistic Institute (February 2010)
- Ministry of Agriculture and Food (March 2010)
- Ministry of Economy and Energy (June 2010 )
- Ministry of Internal Affairs/Road Control Department (June 2010 )

*Translation from Bulgarian*

### AGREEMENT

For cooperation and exchange of information between the Ministry of Environment and Water and the National Statistical Institute for the conduct of stock-takings of the emissions of hazardous substances under the United Nations Framework Convention on Climate Change (UNFCCC) and under the Convention on long-range transboundary air pollution

No SP-1 12.02.2010

No ..... / ..... 2010

Today, ..... 2010, in the city of Sofia between the Ministry of Environment and Water (MoEW), UIC No 000697371, represented by Nona Karadjova – Minister of Environment and Water

And

The National Statistical Institute (NSI), UIC No 000695146, represented by Assoc. Prof. Dr. Mariana Kotseva – President of NSI

This agreement was entered into as follows:

#### I. Grounds for the conclusion of the Agreement

**Art. 1.** This Agreement shall be concluded on the grounds of the contractual commitments of the Republic of Bulgaria for the application of the United Nations Framework Convention on Climate Change (UNFCCC), the Kyoto Protocol, inclusive of Decision 28/2004/EC of the European Parliament and of the Council of 11.02.2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol, the Convention on long-range transboundary air pollution (CLRTAP) and Directive 2001/81/EC on national emission ceilings for certain atmospheric pollutants.

#### II. Subject-matter of the Agreement

**Art. 2.** Preparation of the annual inventories of the emissions of hazardous substances and greenhouse gas in the ambient air hereinafter referred to as Inventories.

#### III. Rights and obligations of the Parties under the Agreement

##### A. Rights and obligations of the Ministry of Environment and Water

**Art. 3.** The Ministry of Environment and Water, via the Executive Environment Agency (EIA), shall coordinate the overall activity related to the elaboration of the Inventories, inclusive of:

1. It shall notify the National Statistical Institute in due time about the relevant changes in the effective managements and / or methodologies (national, general European and / or international) for the elaboration of the Inventories, included in the Revised IPCC (Intergovernmental Panel on Climate Change) Guidelines for National Greenhouse Gas Inventories of 1996 and/or Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories of 2000 with the United Nations Framework Convention on Climate Change and/or the Unified Methodology for Inventory of Emissions of Hazardous Substances in the Air of the Ministry of Environment and Water of 2008.
2. It shall notify the National Statistical Institute in due time about the relevant terms and format, inclusive of scope and contents, within which the available data about the natural and related indicators needed for the elaboration of the Inventories should be presented, in conformity with the commitment of the country pursuant to Art. 1.
3. Annually but not later than 31 October it shall present to the National Statistical Institute data about wastes for the preceding year.
4. It shall annually perform preparation of the Inventories within the relevant terms and format, inclusive of scope and contents.
5. It shall annually draw up a Plan for provision, control and evaluation of the quality and verification of the authenticity of the data of the national inventories of emissions of hazardous substances in the air in conformity with the Convention on long-range transboundary air pollution (CLRTAP) and/or United Nations Framework Convention on Climate Change (the Inventories), which shall be presented for ratification by the Ministry of Environment and Water after coordination with the National Statistical Institute.
6. It shall coordinate the activities for the implementation and the application (by the Ministry of Environment and Water, the National Statistical Institute, and the Ministry of Agriculture and Food and other institutions) of the Plan ratified by the Ministry of Environment and Water under item 5 hereinabove.
7. It shall present to the National Statistical Institute the elaborated Inventories and Plans.
8. It shall develop and improve the Inventories and via the provision of adequate technical and institutional capacity.

##### B. Rights and obligations of the National Statistical Institute (NSI)

**Art. 4.** The National Statistical Institute shall render the needed cooperation to the Ministry of Environment and Water with a view to the fulfillment of the obligations pursuant to Art. 3, items 4, 5 and 6, inclusive of:

1. It shall prepare the part of the national inventories in compliance with its statutory regulated responsibilities.
2. Annually but not later than 30 November of the current calendar year, in compliance with the terms and the form, inclusive of the scope and the contents pursuant to Art. 3, item 2 it shall send to the Executive Environment Agency preliminary data about the

<p>preceding calendar year and by 15 January of the following year – final data needed for the preparation of the Inventories, in conformity with the commitments of the country pursuant to Art. 1, as well as about the verification of the authenticity of the data presented.</p> <p>3. Annually but not later than 30 November of the current calendar year it shall send to the Executive Environment Agency final data about the preceding calendar year about the balances of the energy resources in specific measurement units (SMU) and TJ, in the form of EUROSTAT, inclusive of data about the resources (the natural indicators) in the relevant SMU and the conversion factors (from SMU into TJ);</p> <p>4. Annually but not later than 30 November of the current calendar year it shall send to the Executive Environment Agency preliminary data about the preceding calendar year and up to 15 January of the following year – final data as follows:</p> <p>4.1. Data about the production of industrial products per categories of activities and codes, in conformity with PRODPROM (the nomenclature of the industrial production) in the units of measure of PRODPROM nomenclature (inclusive of xx xx xx xx), in conformity with the Classification of the Economic Activities 2008.</p> <p>4.2. Data about:</p> <ul style="list-style-type: none"><li>- Household wastes formed (in 1000 t/y), inclusive of kg/y per capita;</li><li>- Collected household wastes, inclusive of wastes disposed, temporarily stored and handed over for recycling (in 1000 t/y).</li><li>- The number of the household wastes disposal depots and of the populated area comprised by organized refuse collection systems, inclusive of the share of the population serviced by the latter (in %).</li></ul> <p>4.3. Data (respectively, in conformity with Tables 1, 2 and 3 from Annex 3 with the Annual Report of the National Statistical Institute) for:</p> <ul style="list-style-type: none"><li>- Waste waters, inclusive of the waters from cooling (in 1000 t3/y) – in total and from the public sewerage and the Populated Area WWTP;</li><li>- Waste waters formed, inclusive of the waters from cooling (in 1000 t3/y) – per categories of industrial activities in conformity with the Classification of Economic Activities 2008;</li><li>- Waste waters formed and waters from cooling processes from the observed economic units per economic activities (in 1000 t3/y).</li></ul> <p>5. It shall determine the relevant experts in charge of controlling the quality of the data presented in the Executive Environment Agency about the natural and other related indicators , in conformity with the Plan pursuant to Art. 3, item 5.</p> <p>6. It shall participate in the development, shall implement and apply the Plan pursuant to Art. 3, item 5, inclusive of making proposals to improve the quality of the inventories, i.e. to</p>	<p>improve the representativeness, the authenticity and the precision (respectively, reduction of the indefiniteness) of the data contained in them.</p> <p>7. In conformity with its competence, it shall participate in the development, selection and/or determination of the national (specific for the country) emission factors / coefficients, inclusive of the coefficients and / or other indicators used for the determination of the emissions (of hazardous substances and / or greenhouse gases) related to them within the framework of the Inventories.</p> <p>8. It shall make proposals for the improvement and / or optimization of the procedure for the elaboration of the Inventories.</p> <p><b>IV. Other conditions under the Agreement</b></p> <p><b>Art. 5</b> This Agreement between the Ministry of Environment and Water and the National Statistical Institute shall be entered into for a term of one year and shall enter into force from the date of its signing. Its effect shall be automatically extended each following year, if no requests were received for amendment by the parties within a one-month term prior to the expiration of the term of validity of the Agreement.</p> <p><b>Art. 6</b> This Agreement may be amended and supplemented by mutual consent of the Parties stated in writing.</p> <p><b>Art. 7</b> The Parties under the Agreement shall send all the communications and notifications between each other in writing.</p> <p><b>Art. 8</b> The provisions of the legislation effective in the country shall be applied to all the issues unsettled by this Agreement.</p> <p>This Agreement was drawn up in four uniform copies – two for each of the parties.</p> <table><tr><td>FOR THE MINISTRY OF ENVIRONMENT AND WATER</td><td>FOR THE NATIONAL STATISTICAL INSTITUTE</td></tr><tr><td>MINISTER: /Sgd. III/ /NONA KARADIOVA/ SEAL of the Ministry of Environment and Water</td><td>PRESIDENT: /Sgd. III/ /ASSOC. PROF. DR. 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## IMPROVEMENT PLAN

Legal basis  
High priority



## IMPROVEMENT PLAN

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Regulation of the Council of Ministers:

- to establish and maintain the institutional, legal and procedural arrangements necessary to perform the functions of BGNIS, as defined in Decision 19/CMP.1
- to reinforce the institutional agreements by specifying the roles of all data providers
- QA/QC activities



## IMPROVEMENT PLAN

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**Collaboration with external experts**

High priority



## IMPROVEMENT PLAN

External experts	Projects for
University of Forestry - Sofia	LULUCF and KP-LULUCF (CRF&NIR)
University of Agriculture – Plovdiv	Agriculture (CS EFs)
University of Chemical Technology and Metallurgy - Sofia	Waste sector (CS EFs)
Geophysical Institute/Bulgarian Academy of Science	Non-GHG emissions
Denkstatt Bulgaria	Energy calculation model Model for actual F-gases emission



## IMPROVEMENT PLAN

### Main outputs of the project

- To improve transparency, completeness, consistency, including recalculations and time-series and comparability of national emission inventory;
- To improve the technical competence of the staff within the BGNIS;
- To eliminate the differences in reported national totals for non GHGs pollutants between inventories under UNFCCC and UNECE/CLRTAP;
- To develop the basic calculation models of emissions.



## IMPROVEMENT PLAN

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# Source categories improvements High-Medium-Low priority



## IMPROVEMENT PLAN

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- Revising of the AD (entire time series) based on:
  - National sources (national energy balance, EU ETS, E-PRTR, IPPC permits and EU LCPD) or
  - international sources (IEA/EUROSTAT questionnaire and FAO database) in order to ensure time series consistency
- Revising of the EF - developing a country-specific EF, either based on plant-specific data (from the single operator) or using data collected within the framework of EU ETS, E-PRTR and the IPPC permits
- Increase TACCC in the NIR
- Comparison of emissions using alternative approaches
- Documentation and archiving of all information required in NIR, background documentation and archive





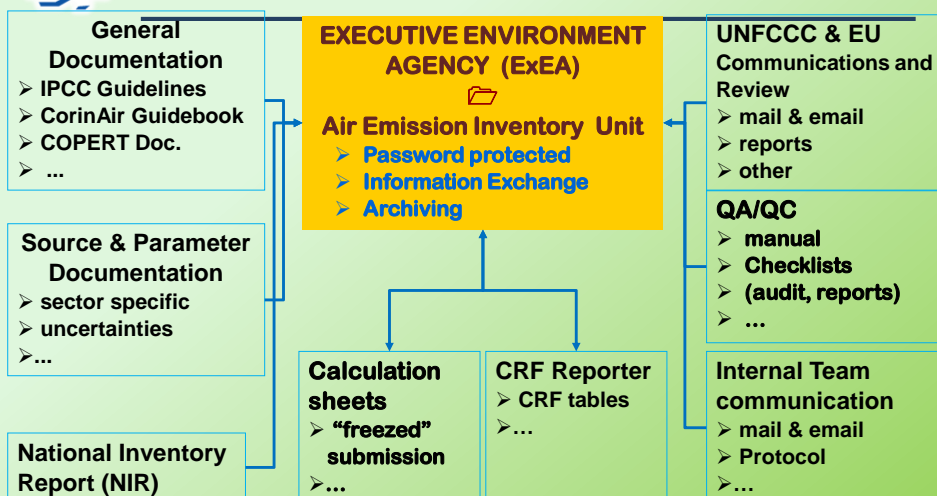
## IMPROVEMENT PLAN

# Archiving system

## High priority



## IMPROVEMENT PLAN





## IMPROVEMENT PLAN

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# Quality Management System

## High priority



## IMPROVEMENT PLAN

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A project for **“Improvement of National Quality Management System for GHG Inventories”** had been performed together with the Austrian Environmental Agency.

The purposes of the projects are:

- To analyze/review the current QMS;
- Proposal on implementation of the improvements;
- Training of the quality manager and the sectoral experts (within the QMS) according to 2006 IPCC GLs Chapter 6 and following the ISO 9000 standards.



## IMPROVEMENT PLAN

### Results:

- Quality manual
- Checklist
- Procedures & working instruction

**Executive Environment Agency**  
ИЗЪЛАНКОВА АГЕНЦИЯ ПО ОКОЛНА СРЕДА  
**Quality Management System for GHG Inventories**

**Quality Manual**

of the  
Bulgarian National Inventory System

of the  
Bulgarian Executive Environment Agency

Authors:  
Date:  
Signature:

	Prepared	Updated	Checked	Approved
Name				
Date				
Signature				



## Quality Policy of the Bulgarian QMS

The Executive Environment Agency designated as single national entity is aimed:

- To ensure that the annual national greenhouse gas inventory meets the requirement of the IPCC Guidelines,
- To ensure the best possible estimates of emissions and sinks given the current state of scientific knowledge and data available,
- To achieve transparency, consistency, comparability, completeness and accuracy, confidence and timeliness at all times,
- To employ qualified experts,
- To train people to increase competence or knowledge,
- To motivate the staff to comply the quality issue/objects,
- To ensure subcontractors prepare the requirements of the QMS
- To strive for good cooperation by improved legal requirements for data provider,
- To exchange expertise with data provider to the extent possible,
- To commit to continuous improvement.



## CV & Function description

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- **CV**

- Schedule for regular update

- **Function description of GHG inventory experts**

- Consideration of the function description “Deputy”

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## Function Description – National Inventory Coordinator

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### 1.Objective:

- Functioning of the National Inventory System (NIS)
- Approval of the official submission
- TACCC and timeliness



## Function Description – National Inventory Coordinator

### 2.Responsibility

- Ensuring functioning of the National Inventory System (NIS): institutional and other arrangements
- Overall responsibilities of the official submission: ensuring conformability with reporting requirements on time
- Ensuring of an inventory preparation process in a proper manner
- Ensuring of QA/QC activities throughout the entire inventory preparation process
- Ensuring of implementation of inventory improvements according to the inventory improvement plan
- Ensuring of archiving of all information related to the inventory preparation process
- Coordination activities and follow-ups of international reviews (EC/UNFCCC)
- Cooperation with
  - sector experts and deputies
  - external sector expert
  - NIR Compiler, CRF Compiler, Quality manager and Data manager
  - Expert Review Team in the framework of the UNFCCC review
  - Technical Expert Review Team (TERT) in the framework of the European ESD review
  - Ministries and Institutions as well as associations



## Function Description – National Inventory Coordinator

### 3.Competence

- Reporting under EC, UNFCCC and Kyoto Protocol
- Upload to EIONET/UNFCCC portal
- Exchange with ministry, review team, management
- Managing with subcontracts



## Function Description – National Inventory Coordinator

### 4.Task

- compile and check CRF/NIR
- Exchange with spectral experts
- CRF Reporter (update) to all sector experts
- Exchange/information to experts about new/updated requirements
- Coordination and/or preparation of the general chapters of the NIR:
- Overarching QA/QC activities for the NIR
- Exchange with experts regarding NIR
- Cooperation with all inventory team members
- Providing of information to experts about new/updated requirements regarding the NIR



## Function Description – National Inventory Coordinator

5. Requirements	
Education	University degree (Master)
Experience	Generalist and 5 years in inventory preparation Attendance of the Working Group I under the EC GHG monitoring decision Reviewer in the framework of the UNFCCC
Knowledge	<ul style="list-style-type: none"> <li>• UNFCCC Review training and/or other relevant sector</li> <li>• UNFCCC reporting requirements</li> <li>• IPCC Guidelines</li> <li>• EMEP/EEA air pollutant emission inventory guidebook</li> <li>• Relevant Bulgarian and European legislation</li> </ul>
Others	Good communication with experts, Training in CRF Reporter, Good knowledge in English, Microsoft Office (Excel, Word, Access, Power Point), E-mail Software, CRF reporter and CRF Reporter Portal (UNFCCC), Specialised software, general IT knowledge



## IMPROVEMENT PLAN

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**THANK YOU FOR YOUR ATTENTION**