

Assessment of Air pollution in Republic of Macedonia



Msc. Magdalena Trajkovska Trpevska

Assessment of Air pollution in Republic of Macedonia

Implementation of Gothenburg Protocol

Status of the LRTAP Convention Republic of Macedonia

- In 2010 Gothenburg Protocol has been ratified under the Law of ratification
- Group of experts together with Ministry of environment and physical planning has prepared NAP
- NAP gives and analyzes of compliance of Macedonian Laws and regulations with the requirements stated within the Gothenburg Protocol
- Integrated Assessment modeling is not prepared in Republic of Macedonia (next step of implementation)

Assessment of Air pollution in Republic of Macedonia

National Legal Framework on air

- ❖ **Law on Environment;**
- ❖ **Law on ambient air quality;**
- ❖ **Rulebook on CORINAIR inventory methodology;**
- ❖ **Rulebooks on content and manner for preparation of:**
 - **National plan on air protection;**
 - **Programs for air improvement and protection, and**
 - **Action plans for air protection.**

Assessment of Air pollution in Republic of Macedonia

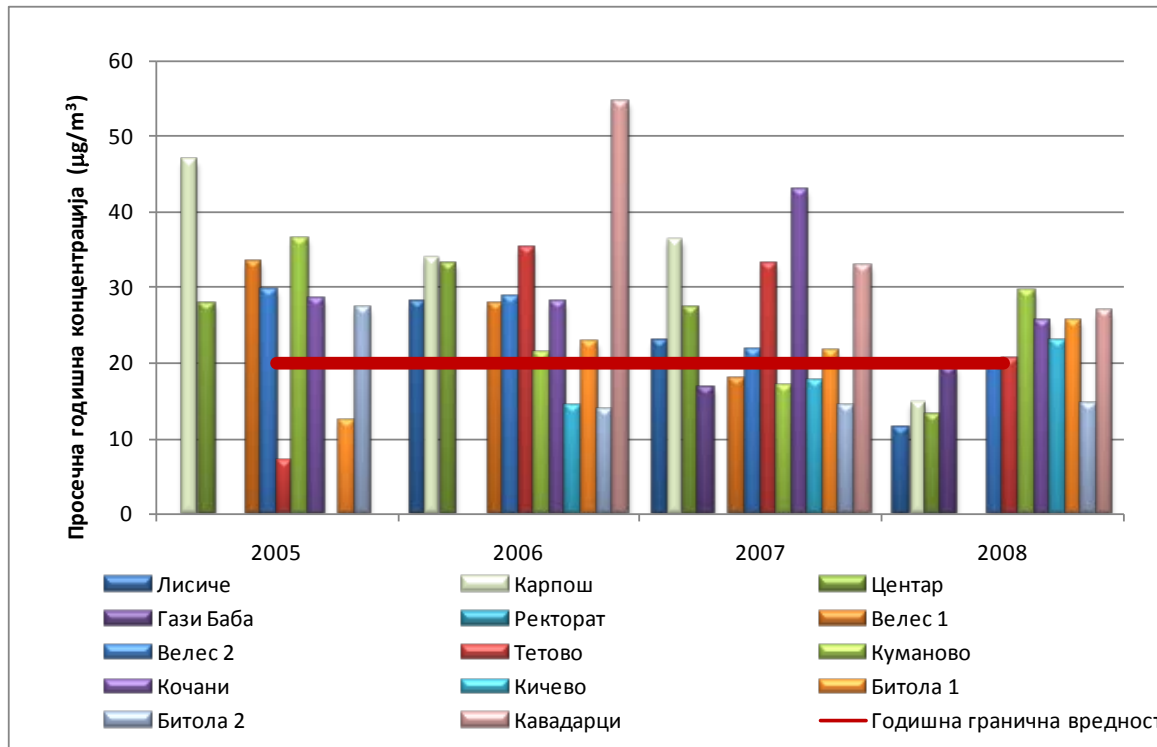
National Legal Framework on air

- ❖ **Rulebook of methodology for monitoring of ambient air quality (it is sent to the Official Gazette to be publish);**
- ❖ **Rulebook on data transmission (it is sent to the Official Gazette to be publish);**
- ❖ **IPPC directive is transposed in the national legislation;**
- ❖ **Rulebook on National emission ceilings for emissions of atmospheric polluters;**
- ❖ **Rulebook on air emissions limit values from stationary sources.**

Assessment of Air pollution in Republic of Macedonia

Air quality

✓Trend of the average annual concentration of sulphur dioxide for the period 2005 – 2008



Assessment of Air pollution in Republic of Macedonia

Air emission monitoring

- Emission monitoring is carried out by the LCP installations big production industries, and by accredited laboratories. Installations are obliged to send the emissions data towards MEPP, on monthly base;
- The system of IPPC is established and the process of issuing adjustment plans permits for 100 installations which have applied for a permit is in progress;
- Inspection is carried out by the State Inspectorate for environment;
- In the frame of the Kyoto protocol requirements, our country carry out cleanup/renovation programs for industrial installations (desulfurization, introduction of natural gas).

Assessment of Air pollution in Republic of Macedonia

Status of national inventories

➤ **Cadastre of air polluters and pollutants**

Basic pollutants 2004/2005 data. and 2007/2008

Ministry of environment and physical planning have authorized Tehnolab Ltd, to prepare Cadastre of air polluters and pollutants for the period from 2004 till 2008, covering the main pollutant substances: SO₂, NO_x, CO, CO₂, TSP

➤ **GHG Inventory under the Second National Communication**

Main GHGs (CO₂, N₂O, CH₄) + nondirect GHGs: HFCs, HFCs and SF₆ as well as CO, NO_x, SO_x and NMVOCs Time series 1999-2002

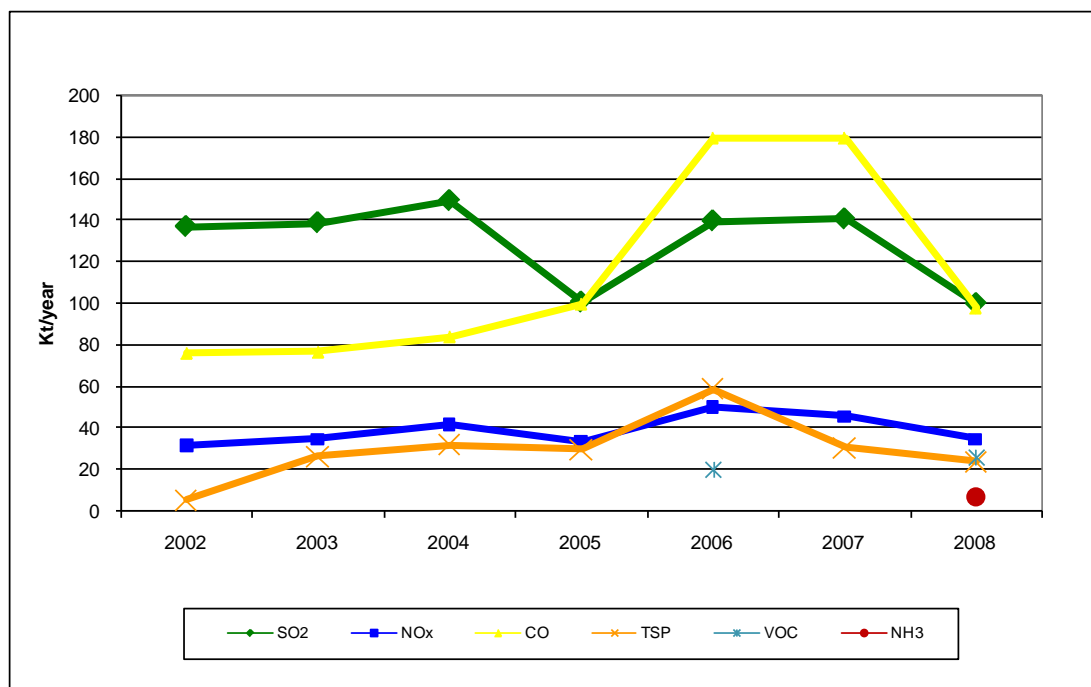
Status of national inventories

- **Inventory of emission data based on CORINAR** Methodology, covering SO₂, NO_x, NMVOC, CO, CO₂, N₂O, NH₃, TSP, with data for 2004, 2005, 2006, 2007 and 2008
- National implementation plan on reduction and elimination of POPs in accordance with Stockholm convention in 2002 – it should be reviewed.

Assessment of Air pollution in Republic of Macedonia

Air emissions

✓ Trends of emissions of acidifying substances



Assessment of Air pollution in Republic of Macedonia

Air emissions

- ❖ **Emission ceilings:** The existing national legislation in relation to Article 3 paragraph 1 and Annex II of the Gothenburg Protocol is the Rulebook on the amounts of the emission ceilings of polluting substances.
- ❖ Annex I to the Rulebook specifies the following ceilings for the emissions of SO₂, NO_x, VOC and NH₃:

SO ₂ kilo tones	NO _x kilo tones	VOC kilo tones	NH ₃ kilo tones
130	39	20	17

- **Note:**
 - The values of the emission ceilings for the polluting substances have been determined on the basis of the analysis made of data reported to UNECE –CLRTAP for the period 2002-2008. This means that no models for ceilings determination have been used for 2010.

Assessment of Air pollution in Republic of Macedonia

Closing remarks:

- ✓ **Critical loads of polluting substances causing acidification and eutrophication are not determined in the Republic of Macedonia;**
- **The monitoring of the quality of precipitation - rainwater is inadequate as it is performed only at one measuring point in the country;**
- **So far, no analysis of acid sedimentations in the soils, nor of the effect of eutrophication, i.e. biogene nitrogen, has been carried out in the Republic of Macedonia;**
- **Although certain amount of data on the concentration of ground-level ozone is available, no analysis is performed with regard to its impact on people and vegetation;**
- **No monitoring and assessment of the state of forests are performed with regard to acidification and eutrophication;**
- **Regular monitoring and assessment of the state of water are performed in the Republic of Macedonia, but the monitoring is not sufficient for the purpose of determination of acidification and eutrophication of individual water bodies at national level.**

Assessment of Air pollution in Republic of Macedonia

Action plan

❖ **Next steps:**

- ✓ **Preparation of programmes for reduction of pollution and improvement of the quality of the air and action plans for air quality protection; (From 2010 to 2013)**
- ✓ **Preparation of plan and reduction scheme for volatile organic compounds (December 2011)**
- ✓ **Implementation of the strategy for transport (continuous)**
- ✓ **Integrated assessment modelling**

Thank you for your attention



Msc. Magdalena Trajkovska Trpevska
magdalena@tehnolab.com.mk