

Ministry of Ecology and Natural Resources of Ukraine

# Air quality work in Ukraine in the context of CLRTAP

Nataliia Pavlenko

Department of air protection

Tel / Fax: 8 044 206 31 30

[n.pavlenko@menr.gov.ua](mailto:n.pavlenko@menr.gov.ua)

**TASK FORCE ON INTEGRATED ASSESSMENT MODELLING  
(TFIAM)**

41th session, 7-9 May 2012

# Legislation in the field of air protection

- Since 2001, a regulatory mechanism for air emissions from stationary sources is being implemented in accordance with the Ukrainian law *On Atmospheric Air Protection*. This mechanism provides administrative and regulatory activities aimed at limiting pollutant emissions from enterprises.
- In December 2010, Ukraine adopted the Law *On Ratification of Protocol on Accession of Ukraine to Energy Community Agreement*. According to the Protocol, Ukraine must implement the requirements of LCP Directive (2001/80/EC) by 2018.
- In 2010, the key provisions of the State Environmental Strategy Until 2020 were approved. The main implementation mechanism for that is the National Environmental Action Plan covering the years between 2011 and 2015, which was adopted in May 2011.



# State accounting in the field of air protection

- All major emission sources in Ukraine are accounted for and controlled by the state.
- The Pollutant Register contains emission limits (in t per year) for about 130 pollutants. Enterprises exceeding the limits are subject to state control and accounting.
- Emissions in t per year are calculated based on emission factors.



## **A combined approach to setting emission limits in a permit**

To determine maximum allowable emissions, a combined approach is used. Taking into account the state of the environment and the level of technological development, this approach ensures fulfilment of the environmental safety norms as well as implementation of the best available – and economically feasible – technologies for reducing negative environmental impacts.



# Norms for maximum allowable emissions

- There are norms for maximum allowable emissions, approved in a decree of the Ministry of Environment from 2001-12-28. These norms apply to the existing as well as projected, constructed and renovated stationary emission sources.
- There is an approved Register of manufacturing equipment for which norms for maximum allowable emission values should be developed. The Register is adjusted in accordance with the requirements of the LCP Directive, Annex 1.



# Technical norms are being developed for equipment listed in the Register. The norms contain both limit values and time frames for achieving those values

Technical norms are already developed for:

- Heat and power installations with nominal heat power => 50 MW
- Rotary kilns for cement production with production capacity => 500 t/day
- Coke ovens
- Boiler plants working on sunflower husks
- Glass production installations with smelting capacity => 20 t/day



# Main problems appearing that may prevent the ratification of the Convention Protocols

- Ukrainian enterprises use old and energy-intensive technological equipment with ineffective emission abatement systems; at the same time, implementation of BATs requires substantial time and financial resources;
- Not all categories of stationary emission sources are analysed in terms of their potential and time frames for achieving ELVs specified in the Protocol Annexes;
- There is a lack of modern measuring technology for control and monitoring of the fulfilment of obligations under the Protocols;
- Existing methodologies of pollutant concentration measurement are not consistent with the requirements of the European legislation;
- Ukrainian system of regulation of VOC emissions from stationary sources is different from the one adhering to the Gothenburg Protocol.



# Continuation of the bilateral Ukrainian-Swedish project

## *Validation of Ukrainian Air Pollution data within the Convention on Long Range Transboundary Air Pollution – CLRTAP*

The following activities are planned within the project:

- Formation of a working group with representatives from relevant authorities, ministries, and governmental scientific organisations;
- A pilot project: **Implementation of the GAINS model in Ukraine for Donetsk region;**
- GAINS trainings for working group members with focus on the model as a scientific support tool for environmental decision-making on regional and national level;
- Implementation of the GAINS model on national level.

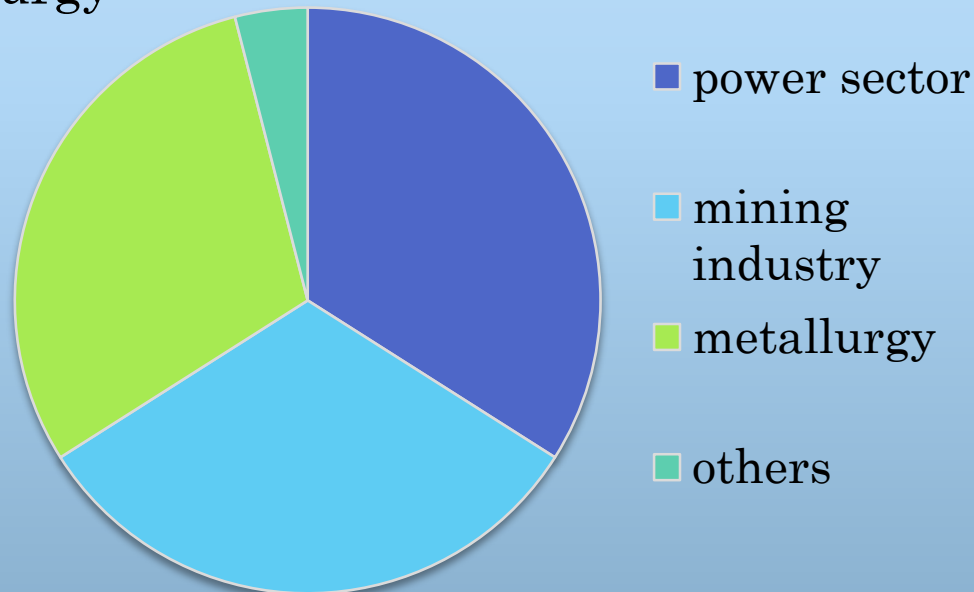




# Donetsk region

Donetsk region is characterized by the highest development pressure in Ukraine. Pollutant emissions from Donetsk region account for 35% of the total national emissions, mainly originating from the power sector and industry:

- 34% – power sector
- 32% – mining industry
- 30% – metallurgy



# Implementation of the GAINS model in Ukraine will make it possible:

- To facilitate decision-making in the area of atmospheric air protection at both regional and national level;
- To develop emission projections and scenarios taking into consideration requirements of the national legislation mentioned above;
- To estimate possible time frame for ratification of the Convention Protocols.



# According to its obligations under the Convention, Ukraine provides:

- For EMEP Protocol – data on emissions from stationary and mobile sources for the following pollutants: NO<sub>x</sub>, CO, SO<sub>2</sub>, NH<sub>3</sub>, heavy metals (cadmium, mercury, lead) and POPs (PCB, dioxins and furans);
- Overview of policies in the air protection area in a form of answers to the *Questionnaire on strategies and policies for air pollution abatement*



# Difficulties connected to the EMEP reporting:

- Differences between emission inventory methodologies under the Convention and in accordance with the national statistical reporting;
- Development of national emission reports with the necessary level of detail and in the required format is quite a complicated task;
- Incompleteness of the emission reports

## State statistical reporting:

- Too formal approach to filling in the statistical form 2-TP (air) by enterprises;
- Differences in data formats and classifiers

## EMEP Guidance

- Insufficient methodological basis for high quality inventory (especially what concerns POPs and heavy metals)



# **The Protocol to the CLRTAP on the Financing of the Co-operative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP), Geneva 1984, (ratified by Ukraine in 1985)**

A work has been done in Ukraine to establish an international EMEP monitoring station in the Karadag Nature Reserve of the National Academy of Sciences, in accordance with the new EMEP monitoring strategy:

- 1) Choice of location of the station is justified in terms of physical-geographical, topographical, climatic and meteorological conditions.
- 2) Equipment is purchased for testing and analysis: ion chromatograph, portable pH meter, conductometer.
- 3) Air samples are taken in the Karadag; depositions and concentrations of certain pollutants are measured.
- 4) A program for precipitation sampling and analysis is developed.
- 5) Spatial distribution of local pollution sources in the Karadag is analyzed to develop an EMEP monitoring program for the station. The location of the station is tentatively agreed with the EMEP Chemical Coordinating Center.

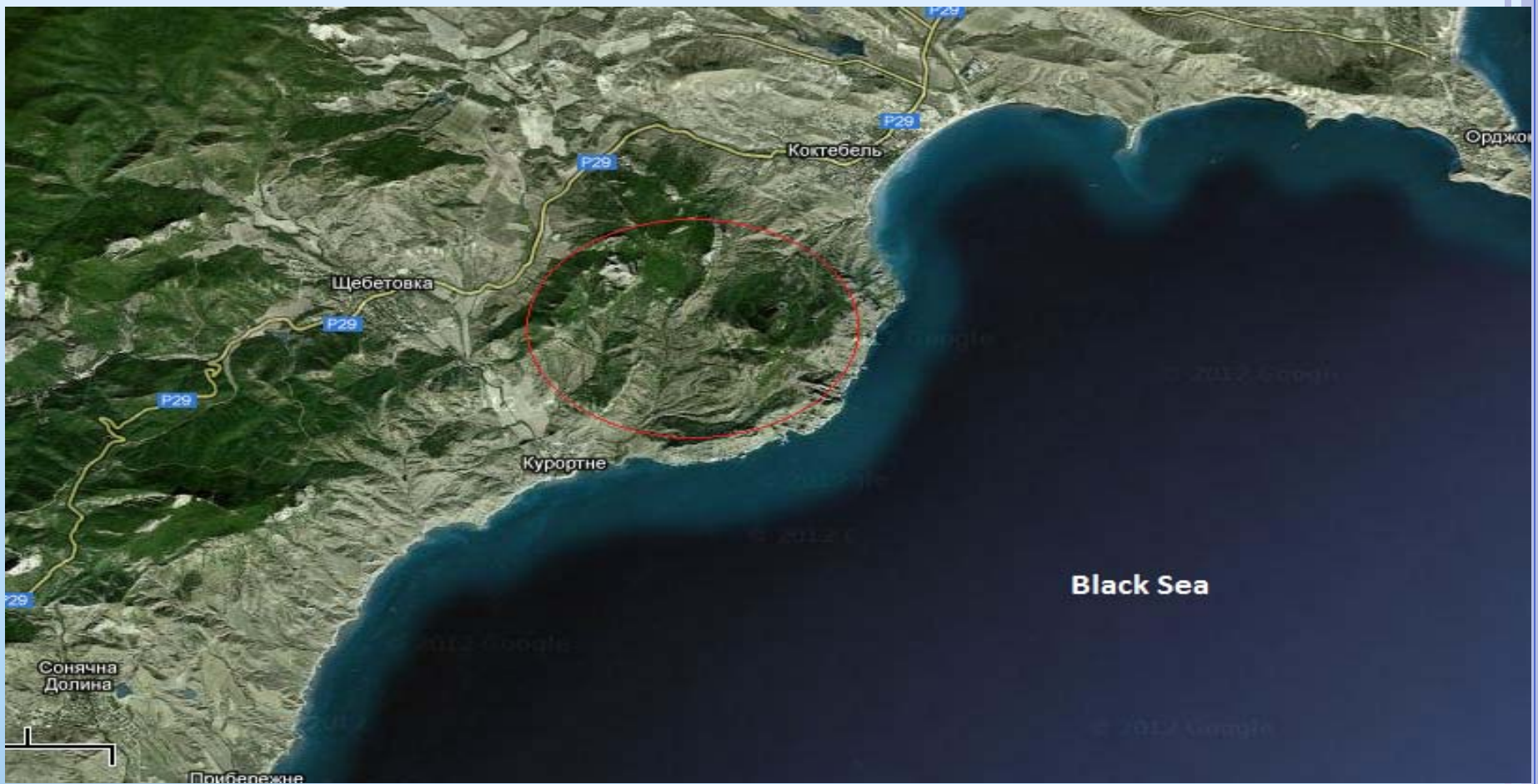




**Environmental Background Monitoring Station (EBMS) of the Karadag Nature Reserve (KNR) of the National Academy of Sciences of Ukraine was established in 1988.**

**KNR is located in the south of Ukraine in a south-east part of the Crimean peninsula. It occupies the territory of the Karadag Mountains and surrounding aquatory of the Black Sea.**





The area of the reserve is 28,742 sq. km, which includes 8, 091 sq. km of the Black Sea aquatory. KNR location at the crossroads of land and sea, mountains and plains, forests and steppes is unique and has determined the great diversity of natural conditions and landscapes of this part of Crimea. The station is located on the northern slope of Mountain *Sviataja* at the altitude of 180 m above the sea level (44 ° 55 'N, 35 ° 14' VD). Distance to the nearest industrial centers (Kerch and Simferopol) is more than 100 km, and to the settlement of Koktebel - 2.5 km.



**Дякую за увагу !!!**

