Ministry of Ecology and Natural Resources of Ukraine

Current national legislation and policies on air Pollution in Ukraine and major issues regarding implementation protocols of LRTAP Convention

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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*.
- 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.

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
- Installations for the roasting and sintering of metal ore (including sulphide ore)
- Installations for the smelting of ferroalloys production capacity exceeding 20 tones per 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;

Challenges faced by Ukraine regarding implementation Gothenburg Protocol

- Emission reduction commitments for PM2.5

for 2020 and beyond.

- Ukrainian system of regulation of VOC emissions from stationary sources have is different from the one adhering to the Gothenburg Protocol.
- There is no system of regulation products for volatile organic compounds in Ukraine
- Introduction to the emission control system «Black carbon»
- Monitoring the implementation of the limit values of pollutants at stationary sources

LIMIT VALUES FOR FUELS AND NEW MOBILE SOURCES

- In order to reduce emissions from mobile sources in Ukraine have adopted national standards for automotive fuel, which comply with the requirements of Euro 4. In parallel, in Ukraine there are standards, requirements which comply with Euro-2 and Euro-3. Ukraine is working on the renovation of the existing plants in order to improve quality of fuels and the gradual transition to fuel EURO-4 standard.
- Law On Some Issues on Import into the Customs Territory of Ukraine and Registration of Wheeled Vehicles No 2739-IV of 06.07.2005 (with major amendments of Law No 5177-VI of 06.07.2012)
- **Euro 3:** vehicle categories; M, N **– 01.01.2013**
- **Euro 4:** vehicle categories: M, N **– 01.01.2014**
- **Euro 5** *(V)***:** vehicle categories; M, N **– 01.01.2016**
- **Euro 6** *(VI)***: – 01.01.2018**

Currently in Ukraine the are not any legal acts with the same mandatory norms non-road mobile machines

- **Currently petrols of the environmental classes Euro 4, Euro 5 are available at the Ukrainian market.**

Challenges faced by Ukraine regarding implementation Protocol POPs

- Air emissions:
  - The need to develop methods of quantifying emissions of POPs for the inventory system.
  - Difficulties in the implementation of regulations on POPs due to the lack of a monitoring mechanism to implement them.

  Monitoring:
  - The need to update the data on laboratory capacity to perform sampling and chemical analysis measurements of POPs.
  - No state program for monitoring of POPs in atmospheric air.

According to its obligations under the Convention, Ukraine provides:

- For EMEP Protocol – data on emissions from stationary and mobile sources for the following pollutants: NOx, CO, SO2, NH3, 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)

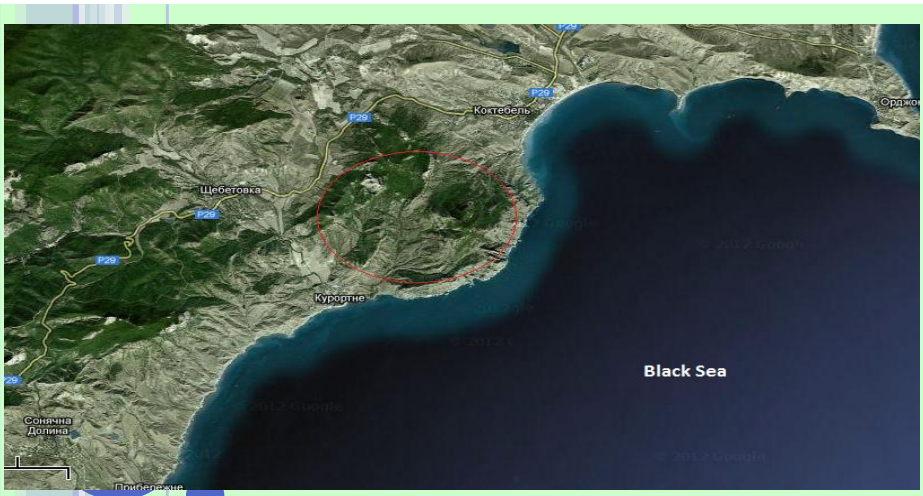
A work has been done in Ukaine to establish an international EMEP monitoring station in the Karadag Nature Reserve of the National Academy of Sciences, in accordance with the new EMEP monitoring strategy:

1) Choice of location of the station is justified in terms of physical-geographical, topographical, climatic and meteorological conditions.
2) Purchased the equipment company Horiba.
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.

Ukrainian site UA01 was also re-established in 2013.



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.

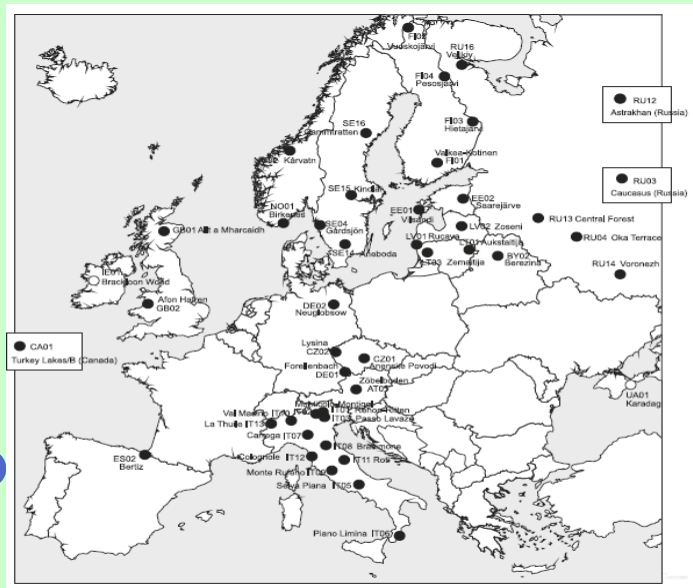


Figure 1.1 Geographical locations of ICP IM sites with data from recent years.