REPUBLIC OF ARMENIA
MINISTRY OF ENVIRONMENT

LRTAP
Long-range Transboundary Air Pollution

UNECE

THEMATIC SESSION ON BARRIERS TOWARDS RATIFICATION AND IMPLEMENTATION OF THE GOTHENBURG PROTOCOL
ARMENIA

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Ambient Air Quality Monitoring and assessment

Current state

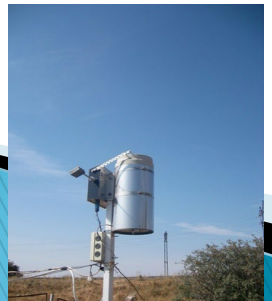
- **Air quality monitoring method**–Active and passive sampling and chemical analysis
- **Number of stations–15** (active sampling) and 215 (passive sampling)
- **Number of observed settlements**: 10
- **Observed parameters**– Total dust, sulfur dioxide (SO2), nitrogen dioxide (NO2), ground-level ozone (O3), heavy metals in dust
- **Transboundary air pollution monitoring** at Amberd station (EMEP)– Atmospheric air and aerosols pollution, the composition of atmospheric precipitation
- **Monitoring of the composition of atmospheric precipitation– 2** stations for 36 basic physicochemical parameters
- **Quality Control and Assurance (QC/QA)**– Participation in intercomparison studies conducted under the scope of EMEP and Global Atmosphere Watch.
- **The degree of ambient air pollution** is assessed by comparing daily or daily, monthly and annual average concentration with the maximum allowable concentration (MAC).

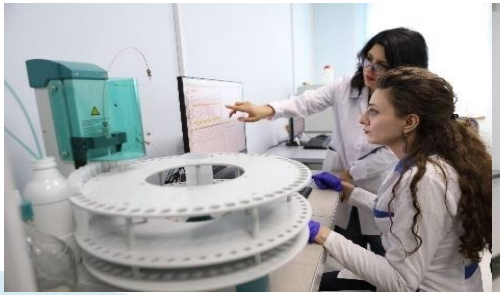
Gaps

- Lack of automatic stations,
- No measurement of $PM_{2.5}$ and PM_{10}
- Very limited measurement of ground-level ozone
- No measurement of VOCs
- Not developed detailed rules for air quality assessment
- Insufficient air quality data gathering, treatment and interpretation
- Air quality standards –very high number of pollutants observed, different limit values, in some cases different averaging periods

Measures

A general concept for improving air quality monitoring in Armenia based on requirements arising from the CEPA agreement (harmonization towards the European Air Quality Framework Directive) has been developed by the Austrian Environment Agency




Public access to the ambient air quality data

Published:

- Weekly data on air pollution by cities
- Air pollution distribution maps (weekly and monthly).
- Monthly information on air pollution.
- State Environment report (annual).
- Annual newsletters on air pollution.

Gaps

- Insufficient air quality data gathering, treatment and interpretation
- Limited access to actual information on air quality
- No online real-time monitoring data available for data users and public.

Data Provision

- Provision of monthly, annual data on atmospheric air to the RA National Statistical Committee.
- Reporting of information on high level of pollution of atmospheric air to the RA Inspectorate of Environmental Protection and Mining resources and Ministry of Health
- Provision the annual summary of atmospheric air quality to the Department of Atmospheric Policy of Ministry of Environment
- Providing data on request.

- *Ministry of Environment: http://www.env.am/*
- *Hydrometeorology and Monitoring Center SNCO: http://www.meteomonitoring.am/*
- *Facebook page of HMC*

Emission Inventory

Current state

- Collect data on emissions from registered (permitted) stationary sources based on annual statistical forms
- Data on emissions from mobile sources are calculated on the basis of the consumption of fuels, taking into account the composition of vehicle fleet
- Informative Inventory report (IIR)- since 2018.
- Agricultural sector are calculated based on the EMEP/CORINAIR methodology.

Gaps

- No detailed inventory of road transport
- Absence of fugitive emissions from diffused sources Absence of waste emissions
- Missing self-monitoring of emissions with automatic measurements by the operators of large installations
- Absence of application of advanced modeling techniques
- Absence of air quality projections and emission projections
- Emission inventory has been reported only for the current year
- No gridded sectoral data so far was submitted by Armenia
- LPS data did not report yet.
- Absence of a national database of methodologies for emission estimation and the inability of direct application of European methodologies as the result of the differences in technologies used;
- Absence of the complete set of activity data;

"Building Armenia's National Transparency Framework under Paris Agreement" UNDP-GEF project:

- ❖ Institutional setting of GHG emission inventory
- ❖ Reconcile LRTAP reporting and GHG inventory data for common database

Air Quality Management

- Atmospheric air protection law (last revision 07.12.2022)
- European Union–Armenia Comprehensive and Enhanced Partnership Agreement (CEPA), entered into force on 1st March 2021
- Climate Change policy, Circular Economy
- Technical regulations of Eurasian Economic Union
- LRTAP convention with consideration of the ratification of Gothenburg protocol
- Provisions other Conventions signed by the Republic of Armenia.

Commitments Armenia-EU Comprehensive Extended Partnership Agreement (CEPA)/EU Directives

The roadmap for the implementation of the commitments of CEPA was approved by the Decision the Prime Minister of RA N 666-L of on June 1, 2019.

The roadmap consists the actions of 8 EU directives related to AGP:

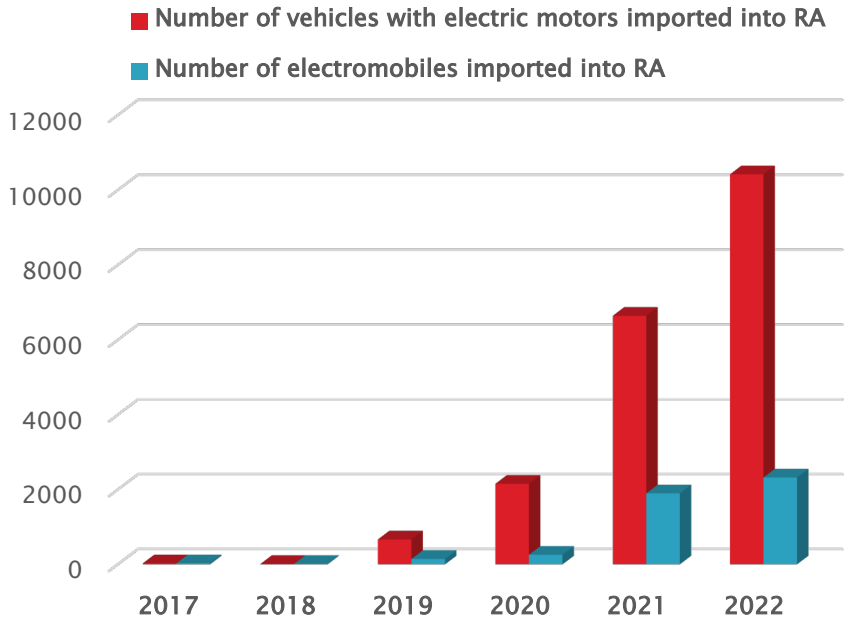
- **Directive 2008/50/EC** of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe
- **Directive 2004/107/EC** of the European Parliament and of the Council of 15 December 2004 relating to arsenic, cadmium, mercury, nickel, and polycyclic aromatic hydrocarbons in ambient air
- **Directive 2010/75/EU** of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
- **Directive 2004/42/EC** of the European Parliament and of the Council of 21 April 2004 on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products and amending Directive 1999/13/EC
- European Parliament and Council **Directive 94/63/EC** of 20 December 1994 on the control of volatile organic compound (VOC) emissions resulting from the storage of petrol and its distribution from terminals to service stations
- **Council Directive 1999/32/EC** of 26 April 1999 relating to a reduction in the sulphur content of certain liquid fuels and amending Directive 93/12/EEC
- **Directive 2003/4/EC** on public access to environmental information and repealing Directive No 90/313/EEC
- **Directive 91/676/EC** concerning the protection of waters against pollution caused by nitrates from agricultural sources as amended by Regulation (EC) No 1882/2003

The approximation of above mentioned directives will be implemented during 2021-2027.

Recent developments and progress in Air quality management in Armenia

- **Atmospheric air protection law was updated, and adopted on 7th December, 2022**
  - ✓ Pollution level, and critical level of pollution, and its method of determination, limit value, agglomeration and zone, BAT, technical norms of emitted pollutants
  - ✓ Provisions related to the technical regulation of emissions, accounting of emissions, distribution of credentials have been added
  - ✓ Provision to establish the integrated emission inventory of GHG and atmospheric pollutants

- **Promotion of clean transport by tax exception**
  - ✓ Electric motor vehicles: buses, passenger vehicles, motorcycles and mopeds the period of exemption of value added tax on import and/or disposal has been extended until January 1, 2024.
  - ✓ On March 17, 2022, a zero customs duty was set for the import of 7,000 electric cars in 2022 and 8,000 electric cars in 2023.



Linkages of Gothenburg Protocol with CEPA)/EU Directives

In 2019, National Action plan has been developed with support to the LRTAP secretariat

TASKS	ACTIONS THAT NEED TO BE TAKEN BY THE COUNTRY
Development and approval of strategic documents	1.1. Development and approval of National Strategic Documents
Development of the emission inventories, emission projections and regular reporting to the Secretariat of the Convention	2.1. Development/improvement of emission Inventories including information on the past and present levels of emissions based on the advanced methodologies specified in the specified guidelines
	2.2. Development of emission projections: a) Create methodological and administrative framework; b) Improve capacity of governmental institutions;
	2.3. Maintain emission inventory and projections and report to the EB of the Convention/EMEP: enhancement of legislative, institutional and human capacities for development of the yearly emission reports
Development and integration of the legal acts	3.1. National emission reduction targets to be integrated into the national legislation
	3.2. Harmonisation of fuel quality standards with the requirements of the Protocols
	3.5. Development and introduction of emission limit values for mobile sources
Introduction of the integrated (complex) permitting system	4.1. Introduction of emission limit values (ELV) and best available techniques (BAT); development and introduction of the integrated permitting system
	4.2. Facilitate exchange of technologies and availability of information regarding BAT
Development and introduction of measures aimed at reduction of emissions	5.1. Development of measures aimed at reduction of VOC emissions through introduction of the regulatory control for VOC content in specific products a) from petrol storage and distribution, b) from the waste products containing VOC
	5.2. Development and enforcement of a Code of Good agricultural practice or equivalent (NH3) and establishment of the necessary legal framework
	5.3. Encourage development of research in the field of air quality (e.g. research on impacts of air pollution on human health)
	5.4. Develop economic, voluntary or regulatory measures for reduction of emissions (e.g. pollution charges, taxes or marketable permits)
	5.5. Further improve energy efficiency and encourage use of renewable energy and less polluting types of fuel or/and promote the implementation of the existing programmes
	5.6. Introduce measures for development of less polluting transport systems and promote the implementation of the existing programmes
	5.7. Investigate the potential for introduction of measures aimed at control of mercury content in products, such as electric and electronic devices, medical equipment, luminescence lamps, pesticides, paints etc.
Air quality assessment	6.1. Improve air quality assessment in accordance with the requirements of the protocols and EU legislation: Introduction and implementation of air quality standards (Critical levels of O3, PM, NH3; Critical loads of acidity and nutrient nitrogen; ambient concentrations and depositions of sulphur and nitrogen compounds; ambient concentrations of O3, VOCs and PM; Estimation of exposure to O3 and PM)
Information dissemination	7.1. Make information available to the public: Establish information exchange platform or ensure availability of resources for upgrade and maintenance of the existing systems

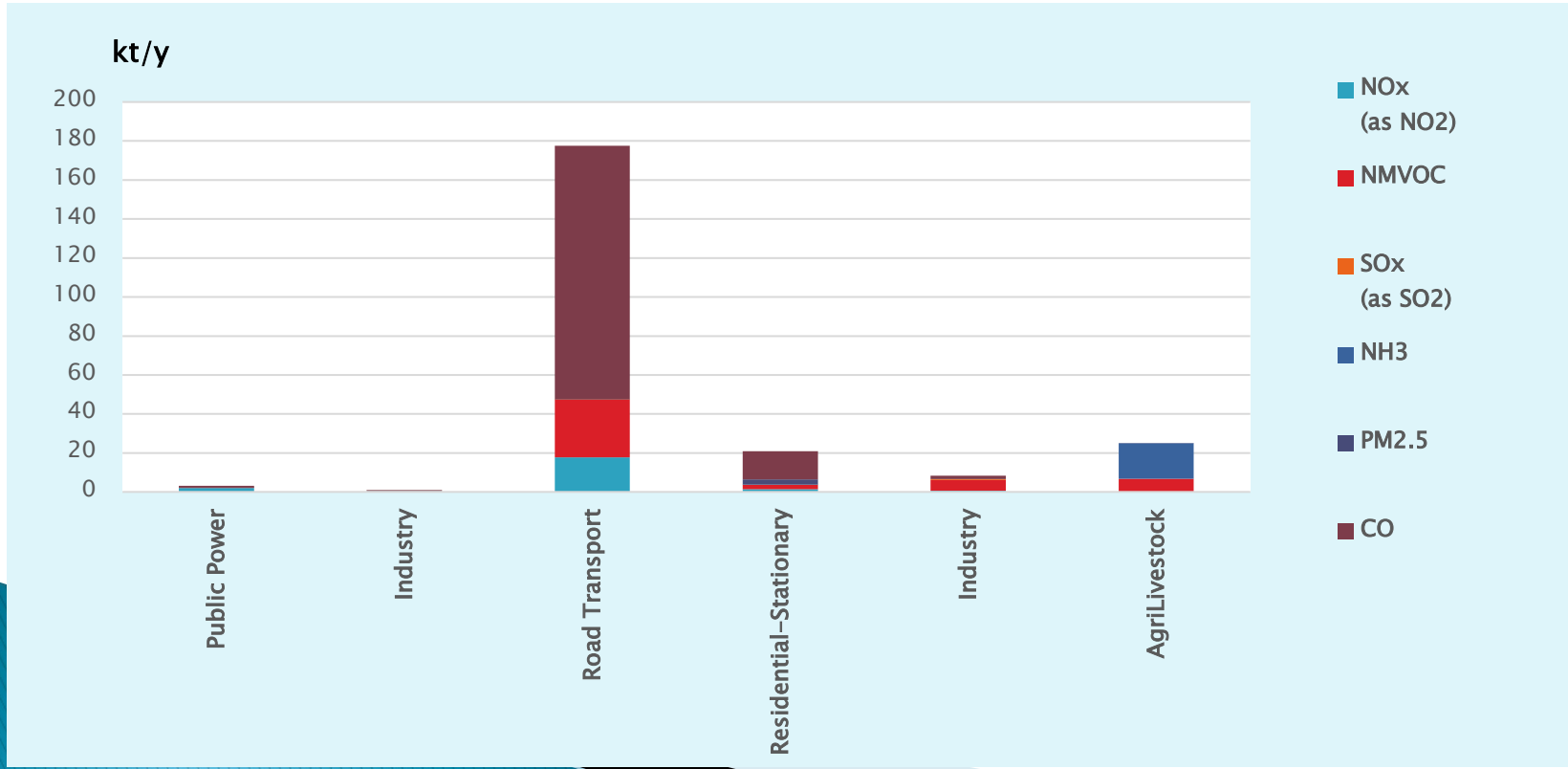
National emissions and main challenges

Total emission- 308.9 kt/y.

- Mobile source-69.6%
- Stationary sources-30.4%

Pollutants with the biggest emissions:

- Carbon monoxide
- NMVOC
- NOx
- NH_3



Main barriers to ratification and implementation of the AGP

Political barriers

- Economic considerations and other priorities such as energy security, competitiveness, agriculture and climate change prevail;

Financial and economic barriers

- Several protocol provisions require substantial investments and costs, mobile and stationary sources
- Initial investment costs in modern monitoring stations

Capacity and knowledge barriers

- Technical and administrative capacity and expertise are week and insufficient
- Limited knowledge of the appropriate and most cost-effective abatement strategies, policies and measures at national and local level;

Technical barriers

- Insufficient quality of emission inventories for the five main pollutants (SO_2, NOx, VOC, NH_3 and $PM_{2.5}$) to be able to establish meaningful emission reduction commitments;
- The complexity and the large number of the protocol provisions (contributing to a capacity gap that acts as a barrier);

Communication barriers

- Week awareness of air pollution issue among all stakeholders

Measures to support ratification GP

To support in particular to Armenia in ratification and implementation the provisions of the amended Gothenburg Protocol:

- **Develop technical capacity in terms of air quality monitoring**
  - Modernize existing air quality monitoring system in accordance with international requirements,
- **Improve the emission inventories and develop the emission projections**
  - Introduction of advanced methodologies for the development of emission inventories (mobile sources, fugitive emissions from diffused sources)
  - Introduction of advanced modeling tools for the development of emission inventories and emission projections
- **Adaptation of national legislation to GP commitments**
  - Adaptation of the commitments of CEPA/directives into national legislation and implementation of its
  - Integrate emission ceilings/emission reduction commitments into the national legislation
  - Harmonization of fuel quality standards with the requirements of the Protocols
  - Develop the optimal and most efficient policies introducing emission limit values for mobile sources
- **Develop the national framework of the information exchange between different initiatives and policies such as Climate change, stakeholders**
- **Continue fundraising efforts to support in particular the EECCA countries in implementing the provisions of the amended Protocols.**

THANK YOU FOR YOUR ATTENTION !!