



Country Fact Sheet

2018-2019



AZERBAIJAN

Introduction

This fact sheet was developed by the European Environment Agency under the air component of the EU funded ENI SEIS II East project with an objective to increase the use and public accessibility of air quality measurement data in the ENI East countries. The aim of this document is to describe the state of play of air quality monitoring and data management.

This factsheet was prepared by the team of experts from the European Environment Agency (EEA), Norwegian Institute for Air Research (NILU), 4sfera and the national experts from Azerbaijan.

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1. Legal framework

- Law on Protection of Environment, Regulations on State Monitoring of Environment and Natural Resources approved by the Decision No.90 dated 1 July, 2004 of Cabinet of Ministers of the Azerbaijan Republic, (01.07.2004)
- Law on the Protection of Atmospheric Air (27.03.2001)
- Law on Environmental Protection (08.06.1999)
- Convention on Long-Range Transboundary Air Pollution (04.09.2002)
- The Montreal Protocol on Substances that Deplete the Ozone Layer. The Republic of Azerbaijan has acceded to this Protocol on (18.07.2000)
- The United Nations Framework Convention on Climate Change. The Republic of Azerbaijan has acceded to this Convention in 1995 and the Annex to this Convention, Kyoto Protocol on 2000

2. Institutional framework

- Ministry of Ecology and Natural Resources (MENR)
- Ministry of Healthcare
- State Statistical Committee

3. Management of ambient air quality monitoring

All air quality related activities and monitoring done are done at the country level.

The Metrology and Standardization Centre of the MENR checks out the instruments available in monitoring stations, carries out inter-comparisons with reference devices and maintenance work.

Air quality monitoring is carried out mainly by manual stations. The data, collected manually, are stored in Excel sheet.

At the new automated stations (OP SIS, Vaisala), the data are either saved at the measurement station or directly send to the cloud service from where they are extracted manually by experts. Validated data are saved locally. It is planned to move the data storage from computers to cloud service.

Data management

Data is usually managed manually. A new Access database and comprehensive data collection for air quality data is under development.

With the manual stations, data analysis is performed based on the national limit values. Data from the new automated air quality stations is analysed using EU air quality standards.



Data dissemination

Air Quality Dissemination System: <http://eco.gov.az/en> - Near real time air quality information not working (<http://eco.gov.az/az/post/1050>).

4. Monitoring network

Number of stations

- Three modern online stations
- Twenty-five manual stations with samples taken 3 times a day and analysed in laboratories.
- It is planned to install new stations in the future.

Station meta data

- Geo coordinates
- Station type (i.e. urban, suburban, rural)
- Dominant emission sources
- Approximate distance to emission source (ex. meters to roadside)

Instruments

- 4 automatic analyser samplers
- 25 manual samplers
- Parameters measured in manual stations: dust, SO₂, NO₂, NO, CO, HF, NH₃ ...
- Parameters measured On-line: SO₂, NO₂, PM₁₀, PM_{2,5}, O₃, CO, Benzene, Toluene, Para-Xylene

Instrument models

- OPSIS DOAS AQM (Gases)
- OPSIS SM200 (Particulates)
- Vaisala AQT420 (AQ sensor)
- Teledyne TAPI400 (ozone analyser)
- Manual stations operated with old devices

Data acquisition

- Analyser memory and cloud service (less than 1 hour), computers (once a month).
- National Database using excel, access database is being built.
- Air Quality Management System: Enviman (OPSIS device).

Modelling

- Air quality forecasting models are absent.
- No real-time air quality nowcast models in use.
- Gaussian local scale dispersion modelling tool UDM-FMI is used for annual status calculations and for control measure calculations and planning.
- No model for health exposure calculations.



5. Conclusions from Regional AQ Workshop (September 2018 & November 2019)

Status

- Twinning project in place
- Manual monitoring (some automatic)
- Database is being built
- No data in near real time yet

Need for assistance:

- Implementation of e-Reporting software
- Database
- Data acquisition & management
- Review existing data (both automatic/manual)

6. Conclusions from country visit (December 2018)

Status

- Twinning project in place which finishes March 2019.
- Manual monitoring (some automatic).
- Access database has been built for manual network.
- Currently, there is no near real time data. If any real time data could be available these would NOT be from Reference equipment (nor equivalent equivalent).
- No IT infrastructure for centralizing or gathering data from future automatic stations.
- External server within Department of Monitoring is in place for the monitoring of Radiation. This is managed from outside the country by EU Institution (We believe is JRC).
- Ministry of Ecology is planning 7 new monitoring station (4 + 3).

Training requirements

- AQ Data management
- Management of AQ monitoring network
- Standardization and modelling
- Data reporting