

**EUROPEAN NEIGHBOURHOOD AND PARTNERSHIP INSTRUMENT -  
SHARED ENVIRONMENTAL INFORMATION SYSTEM**

**AZERBAIJAN COUNTRY REPORT**



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## LIST OF ACRONYMS

AAWF	Azerbaijan Amelioration and Water Farm Joint Stock Company
CDM	Clean Development Mechanism
DNA	Designated National Authority
EEA	European Environment Agency
ENPI	European Neighborhood and Partnership Instrument
IDA	International Development Association
IPCC	Intergovernmental Panel on Climate Change
JSC	Joint Stock Company
MENR	Ministry of Ecology and Natural Resources
MA	Ministry of Agriculture
MED	Ministry of Economic Development
MES	Ministry of Emergency Situation
MIE	Ministry of Industry and Energy
MH	Ministry of Health
MT	Ministry of Transport
NDEM	National Department of Environmental Monitoring
NGO	Non-governmental organizations
NEAP	National Environmental Action Plan
POP	Persistent Organic Pollutants
REC	Regional Environmental Center
PRECIS	Providing Regional Climates for Impact Studies
SEIS	Shared Environmental Information System
SCS	State Committee of Statistics
SCLC	The State Committee of Land and Cartography of Azerbaijan Republic
SOCAR	State Oil Company of Azerbaijan Republic
UNFCCC	United Nations Framework Convention on Climate Change
WMO	World Meteorological Organization

## Executive summary

The current report was prepared for EEA under the ENPI-SEIS Project by the Azerbaijan Branch office of REC Caucasus with inputs from ENPI-SEIS national focal points and based on discussions during the SEIS country visit of the EEA on 13-14 June 2011.

This report reflects the current State of Play and future development needs of the three SEIS components – inter-institutional cooperation, content and infrastructure – and identifies the country's capacity for taking SEIS implementation forward. The overall objective of the ENPI-SEIS project is to promote the protection of the environment in the ENPI countries. Specific objectives include identification and further development of environmental indicators; improvement of capacities in the field of monitoring, collection, storage, assessment and reporting of environmental data; promoting setting up national and regional environmental information systems in line with the SEIS principles; and tracking progress of the regional initiatives.

The expected long-term outcome of the process includes improved assessment of the quality of the environment at regional level by using common tools and methodologies; stronger institutional partnership at national level; trained experts in all SEIS components; and improved regional cooperation and partnership with regional and international bodies.

In the regional meeting held in Brussels in November 2010, the following priorities were agreed for ENPI East region by the representatives of the countries: freshwater, household and municipal waste, and atmospheric air.

This report describes cooperation, infrastructure and data/information availability in Azerbaijan in the field of freshwater, waste and air emissions, assesses current environmental inter-institutional cooperation in the three priority fields and identifies the country's capacity for taking ENPI-SEIS implementation forward.

Chapter 1 of the report describes the inter-institutional cooperation and the national governance for environmental information and statistics in the priority sectors, including the links among the different bodies.

Chapter 2 on infrastructure describes the current status of environmental monitoring and information systems, including the structure and content of the monitoring and information systems used in the country and a description of the duties of those responsible for the management of the systems.

Chapter 3 of the report presents the reporting obligations of Azerbaijan according to multilateral, regional and sub-regional environmental agreements, and also describes environmental data and indicator availability, including analysis of existing datasets.

Chapter 4 analyzes strengths and weaknesses for ENPI-SEIS implementation in Azerbaijan.

Chapter 5 proposes follow-up activities for implementation of ENPI-SEIS project in Azerbaijan.

## 1. Inter-institutional Cooperation

Throughout 20-years period of its independence, the Republic of Azerbaijan has constantly been improving its environmental protection system. As a result of structural reforms within the country, the State Committee on Hydrometeorology, the State Committee of Ecology and Control on the Use of Nature and the “Azermeshe” Production Union were merged and became part of the Ministry of Ecology and Natural Resources following the order of the President of Republic of Azerbaijan of May 23, 2001. Environmental management, including monitoring of the quality of atmospheric air, precipitation, soil, surface and ground water, biological resources, biodiversity, forests, radioactive pollution of the environment, as well as issues related to climate change, waste management, assessment and forecast of environmental processes under anthropogenic impact, creation of database on the state of the environment, as well as data flow is performed by the Ministry of Ecology and Natural Resources (MENR – [www.eco.gov.az](http://www.eco.gov.az) ).

MENR is the Designated National Authority (DNA) for participation in the Clean Development. With a view to implementing commitments to the Convention, facilitate coordination and support the State Commission, a Climate Change and Ozone Center was established within the Ministry of Ecology and Natural Resources. Presently, there are 3 divisions dealing with climate change issues at the Center

Funding for MENR has been on the rise since 2003. The structure of the Ministry consists of the central apparatus and specialized departments. In 2003, the structure of the Central Apparatus was reorganized as the result of the implementation of the Law on Civil Service. As a result of the 2003 restructuring of the Civil Service, the Forests Development Department and the Department for Protection of Biological Diversity and Protected Areas were removed from the composition of the apparatus and started functioning as subordinate organizations.

Regional environmental departments were dissolved in consecutive orders in 2004, 2005, and 2006, reducing the number from 20–25 departments to 12–13, primarily as a means of reducing costs. These regional departments are subordinated to MENR and their funding comes out of the State budget, through requests from MENR. They carry out similar functions as MENR with regard to environmental media, but in their own locality.

Other changes in the structure of the Ministry include the establishment in 2004 of the Section on Environmental Promotion within the Central Apparatus of the Ministry. A Microbiology Sector was established in 2006 within the National Monitoring Department and a Microbiological Research Section in 2008.

A Response Center for the Pollution of the Caspian Sea under the Environmental National Monitoring Department was created by ministerial order in 2008, as was a center under the National Monitoring Department for checking the quality of potable water along the Kura River. Following the Presidential Decree on Tree Planting and Landscape Structure dated 13 June 2008, an Open Joint Stock Company under the Ministry was established to provide services related to tree planting. In November 2008, a Scientific and Technical Council was organized in the Environmental Center of the Ministry for the development of scientific technical information and methodology, with the aim of increasing efficiency and effectiveness in the use of natural resources and of developing environmental standards.

In addition to MENR, a number of other ministers and agencies in the country perform environmental activity, having departments on environmental protection in their structure and coordinating their activity with MENR.

Other Government bodies play an important indirect, role, including the Ministry of Agriculture, the Ministry of Economic Development, the Ministry of Education, the Ministry of Industry and Energy, the Ministry of Health, the Ministry of the Interior, the Ministry of Justice, and the Ministry of Transport (table 1.1). As a rule, ministries also have a Department of Environment coordinating activities with MENR, although coordination is not always effective. Within the Cabinet of Ministers, a separate section on environment was recently established, whereas before there was

a Section on Environment and Agriculture. Municipalities are responsible for water supply and sanitation activities and land use decisions within the geographic areas of their jurisdiction.

The institutional distribution of responsibilities is summarized in table 1.1.

**Table 1: State ministries or agencies with environmental responsibilities**

Sector	State ministries or agencies with environmental responsibilities
Air	MENR, MH, MT, MES
Biodiversity, Forestry, Fisheries	MENR
Land and Soils	MENR, SCLC, MA
Water	MES, MENR, Azersu Joint Stock Company, MH, AAWF JSC, MA
Oil pollution	SOCAR, MENR, MES
Hazardous waste	MES, MENR; MH
Waste	MED, MENR, Executive powers and municipalities
Mineral resources	MENR, MED
Climate change	MENR, MED, MIE

**Ministry of Health** (<http://www.mednet.az>) of the Azerbaijan Republic is the central executive authority implementing State policy and regulation on public health protection. It implements atmospheric air control in industrial zones and dwelling premises, control of drinking water quality in recreational areas and control of medical wastes management.

The **Ministry of Agriculture** (<http://www.agro.gov.az/>) implements state policy on the following spheres: development of production and processing of the agricultural products; necessary service and provision of information to producers of the agricultural products; amelioration and water economy, veterinary, plant quarantine and favorable use of the soil; implementation of unique scientific-technical policy, to organize priority investigation programs on plant growing and animal breeding; supply food security in the country and economic and social development of the villages. Along with the MENR the land and soil state control is also implemented by the **MA** as for the pesticides use. MA carries out state tests and registration of pesticides and agrochemical substances and makes decisions on registration and use of pesticides and agrochemical substances that have been proved positive. It is entitled to temporarily or entirely prohibit the application of substances to ensure their safety.

In 2004 State Phyto-sanitary Control Service was established within the Ministry of Agriculture. Pursuant to the statutes of the Service, pesticides cannot be imported, exported, manufactured, repackaged, distributed, sold or proposed for sales unless they have been registered by State Phyto-sanitary Control Service.

**State Committee of Land and Cartography** (<http://www.dtxk.gov.az>) is the central executive power body implementing land cadastre, land monitoring, geodesy, topography, mapping, gravimetric, land reform, formation of fruitful use of land resources, restoration and increase of land productivity, regulation of land-citizen relations, setting territorial units, state control on geodesy and cartography. Besides, the Committee prepares technical documents to form state registration of rights of property to land according to legislation, assures creation of geographic information systems of state importance, designing and publication of general geographic, land, geo-botanical, political-administrative, scientific information and other inter-field thematic maps, carries out delimitation and demarcation of state frontiers of the Republic of Azerbaijan, also frontier waters and sector of Caspian Sea (lake) belonging to the Republic of Azerbaijan.

The control of harmful substance emissions from mobile sources, mainly from the motor transport, is authorized with the **Ministry of Transport**. Ministry of Transport (<http://www.mot.gov.az>) is the central executive body, regulating the interregional relations and shaping the single state policy in the railways, water, motor and civil aviation roads (the road transport complex) and transport and expedition activity, the projection, construction, repair and maintenance of the roads, the technical maintenance of the navigation hydro technical plants, water, air and rail roads and highways, and other individuals and legal enterprises that carry out

the scientific researches and training of specialists, repair the transport means and technical equipment and conducts other operations related to transport.

Hazardous wastes management is implemented by the **Ministry of Emergencies** and **MENR**, while domestic wastes are managed by Ministry of Economic Development, MENR and municipal authorities. **Ministry of Emergency Situations** ([www.fhn.gov.az](http://www.fhn.gov.az)) develops and assures implementation of the state policy in field of civil defense, protection of population and territories from emergencies, fire safety, human safety in basins, technical safety in industry and mining works, construction safety, prevention and removal of consequences of emergencies caused by accident-related flow of oil and oil products, creation of the public material resource funds, coordinates action of central and local executive power bodies in frame of the united public system in field of civil defense, protection of population and territories against emergencies, fire safety, human safety in basins, also prevention and removal of consequences of emergencies and performs normative regulation and control-inspection functions.

Water resources management, conservation, and scientific research performed in this field are implemented by the MENR and the **AAWF**. AAWF implements the following activities:

- supplies various industries with water,
- carries out water distribution for irrigation,
- maintains register on water use and conservation,
- use and protection of water resources;
- reconstructs water and ameliorative objects of strategic importance
- removes salt water on the meliorated lands,
- mitigate hard consequences of water flow,
- provides water supply for winter pastures,
- order for new constructions,
- ensure scientific and technical development by promoting advanced technologies, modern science and techniques, designs water devices and pursues the policy of reforming the amelioration and water management sector.

**State Agency for Water Reserves under the Ministry of Emergency Situations** is recently established Agency by Presidential order. At present time the Charter and Manual of the Agency is under preparation.

The Cabinet of Ministers coordinates intergovernmental links between different governmental bodies. In most cases, there are established different commissions consisting of representative of various governmental agencies.

At present time, the information flow between the governmental bodies is regulated by mutual correspondence. There is not a unique information database on environmental monitoring to be used by all interested governmental agencies. Relevant data are collected by different agencies and shared only on request. That information is published in various reports of relevant agencies.

## 2. Infrastructure

### 2.1. Environmental Legislation

The main objective of the environmental policy of the Republic is the protection of existing ecological systems, economic potential and efficient use of natural resources to meet the needs of present and future generations. In order to provide sustainability in development from the environmental viewpoint it is required to ensure avoiding serious environmental problems in economic activities and take efforts to minimize them.

Taking account of the current environmental conditions and social economic situation three main directions of the environmental policy of the Republic can be formulated:

- ❖ Taking the provision of environmental security as a basic requirement, application of best available practice on sustainable development principles for minimizing human impact on the environment and regulating its protection.
- ❖ Efficient use of natural resources, use of renewable energy sources by alternative, non-conventional methods and achieving energy efficiency to meet the needs of present and future generations.
- ❖ Assessment of national requirements on global environmental issues, finding the ways of their resolution, ensuring their implementation by expansion of relations with international organizations.

In order to achieve the objectives set for main areas of environmental policy the following obligations and principles are taken as a basis:

- Improvement of the environment using best available practice in economic and human resource management;
- Creation and use of stimulating economic models and technologies which will improve the well-being of present and future generations;
- Application of equity principles towards representatives of the same and different generations;
- Protection of ecosystems and biodiversities which could support the everyday human activities.

The basis for environmental legislation is provided by the **Constitution**, which defines living in a healthy and clean environment as a right of the country's citizens. The Constitution sets forth certain principles for the preparation of national environmental policy. According to Article 39 of the Constitution "Each person has the right to live in sound environment. Each person has the right to get information on a state of the environment and receive compensation for damage to health and property caused by the violation of environmental rights". According to Article 78 of the Constitution (Environment Protection) - "protection of the environment is a duty of every person".

The two main environment related laws safeguarding this right are the **Law on Environmental Protection** and the **Law on Environmental Safety**, both adopted in 1999. The following issues have been addressed in the Laws:

- the rights and responsibilities of government, citizens, public associations and local authorities;
- use of natural resources;
- state registry of natural resources of the environment, monitoring, standardization and certification;
- economical regulation of environmental protection;
- ecological terms required for implementation of economic activities;
- education, research, statistics and information;
- environmental emergency response situations and zones of ecological disasters;
- control on environmental protection, environmental impact assessment;

- environmental inspection, environmental audit;
- responsibility for the violation of environmental legislation;
- international cooperation

**The Law on Environmental Protection** is a framework law and covers all media (water, soil, air), waste management, protection of fauna, protected areas and ecological expertise. This law determines the order for the protection of atmospheric air, water objects, and soils, organization of waste collection and disposal, animal world protection, operation of specially protected areas.

**The Law on Environmental Safety** was extensively amended in 2007 to introduce changes relating to noise and vibration in public spaces. Following these changes, presidential decrees in 2008 and 2009 set vibration and noise standards in residential and public buildings and granted authority to monitor and enforce compliance to MENR, the Ministry of Interior Affairs and the Ministry of Health.

In 1998 **the Law on Consumption and Production Wastes** was adopted, which was significantly revised in 2007. The revised version of the Law includes provisions related to the inventory of industrial wastes, hazardous wastes registration, and requirements for their trans-boundary movement.

**The Law of 2002 on access to environmental information** was significantly changed in 2010 in part for interpretation of conditions for the public access to this information, as well as criteria according to which the information is classified as public or restricted.

**The Law “On phyto-sanitary control”** is adopted by Milli Mejlis (National Assembly) on May 2006 (No.102-IIIQ) and approved by the President Decree No 441 of 02.08.2006. The Laws **“Law on pesticides and agrochemical substances”** and **“Law on plant conservation”** were repealed due to the above mentioned Presidential Decree.

**The law on phyto-sanitary control** defines legal basis for tests, registration, use of pesticides and agrochemical substances and organization of agrochemical service in agriculture. This law defines the framework principles of regulations and rules on production, import and export, packing and labeling, storage and transportation, use, removal of expired and prohibited substances, clean-up and elimination of pesticides and agrochemical substances.

The first **National Action Plan on Environmental Protection** of Azerbaijan was implemented in the period from 1998 through 2003. Based on this document similar plans were adopted at the local level as well.

In 2003 the President’s Decree № 1152 adopted the National Programme on the Environment and Sustainable Social and Economic Development for 2003-2010. In terms of its environmental part this Program is aimed at the environmental protection and rational use of natural resources, as well as addressing global environmental protection problems, and became the basic element for the environmental policy of the country.

Several documents for the Republican level were adopted with due dates set for 2004-2010. These include:

- Program of Development of Hydrometeorology, which envisages complex of measures on environmental objects monitoring system improvement in the country;
- State Hazardous Wastes Management Strategy;
- State Program on Effective Use of Pastures and Desertification Prevention.

In 2006 the National Strategy and Action Plan on Biodiversity Conservation and Sustainable Use were developed and endorsed for the period 2006-2009.

A Comprehensive Action Plan to improve environmental situation in Azerbaijan in 2006 – 2010 was endorsed by the Presidential decree No.1697 dated September 28, 2006. The Plan foresaw improvement of the air-quality monitoring in Baku by installation of five automated air monitoring stations. The Presidential Decree No.2244 as of 2007 “On Protection of the Caspian Sea against

Pollution from Land-Based Sources” foresees to strengthen control of waste water discharges to the Caspian Sea from the territory of Azerbaijan.

The Cabinet of Ministers’ decree No.90 as of July 1, 2004 endorsed the Rules for Monitoring of the Environment and Natural Resources, which set goals and basic requirements for monitoring (sampling frequency, number of observation points, measured parameters, etc.).

In 2004 the State Program on Alternate Energy Sources were endorsed. But actual activities on implementation of this Program were only started in 2008.

The Cabinet of Ministers adopted the decree No. 45 as of 06.03.2010 “On Activities to comply with the European Standards and Requirements for Emissions in Atmosphere of Harmful Substances from Transport in Azerbaijan (import and production in the Republic)”. According to the decree, from July 1, 2010 all automobiles exploited since this date should apply the environmental standard Euro-2 for harmful substances emissions. This decree endorsed the Action Plan concerning Compliance with the European Standards and Requirements for Harmful Substances Emissions in the Atmosphere from Automobile Transport.

Up-to-date, Azerbaijan has adopted the following sectoral policies:

(a) State Program on Renewable and Alternative Sources of Energy, 2008–2015 and Concrete Action Plan 2010-2020 for alternative sources. A State Agency for Renewable Energy and Alternative Sources of Energy was established within the Ministry of Fuel and Energy during the implementation of the Program.

(b) State Program for the Development of Fuel Energy Complex for the period 2005–2015 has been adopted. One component aims at reducing the environmental impact of energy generation by upgrading and increasing the energy efficiency of thermal plants.

(c) State Strategy on Hazardous Waste Management for the period 2004–2010

(d) Hydrometeorology Development Program for the period 2004–2010 with planned actions for improved monitoring.

(e) State Program on Summer/Winter Pastures, Effective Use of Meadows and Desertification Prevention for the period 2004–2010.

(f) State Program on Reforestation and Afforestation for the period 2003–2008, which included measures to rehabilitate polluted land and mitigate climate change (Chapter 9);

(g) National Strategy and Action Plan on Biodiversity Conservation and Sustainable Use for the period 2006–2009 (Chapter 9).

The 2008 Law on Natural Treatment Areas and Resorts is connected to the 2000 Law on Nature and Protected Areas. The new Law focuses on natural cures for patients but is linked to the development of protected areas. The Law on Access to Information on Environmental Matters has also been strengthened with several bylaws, for example the 2003 one on the Classification of Information about the Environment. In this case, the bylaw defines the institution where the public can seek information, depending on whether the information is classified as open- or closed-access.

**Table 2: Azerbaijan's participation in the MEA and programs**

MEA/Programme	Date of signature	Date of ratification (Rt), accession (Ac), approval (Ap), adoption (At), entry into force (EIF)
<b>Global</b>		
<b>UN Framework Convention on Climate Change (New-York, 29 May, 1992)</b>	12.06.1992	06.05.1995(Rt)
Kyoto Protocol (Kyoto, 1997)		28.09.2000(Rt)
<b>Convention on Biological Diversity (Rio-de-Janeiro,1992)</b>	12.06.1992	03.08.2000 (Ac)
Cartagena Protocol (Montreal, 2000)		01.04.2005 (Ac)
<b>Convention for the Protection of the Ozone Layer (Vienna, 1985)</b>		12.06.1996 (Ac)
Montreal Protocol on Ozone Depleting Substances (Montreal, 1987)		12.06.1996 (Ac)
London Amendment		12.06.1996 (Ac)
Copenhagen Amendment		12.06.1996 (Ac)
Montreal Amendment		28.09.2000 (At)
Peking Amendment		
<b>United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (Paris, 1994)</b>		10.08.1998 (Rt)
<b>Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (Basel, 1989)</b>		01.06.2001 (Rt)
<b>Convention on POPs (Stockholm Convention)</b>		13.01.2004 (Ac)
<b>Convention on Wetlands of International Importance (Ramsar Convention)</b>		21.05.2001 (EIF)
<b>Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)</b>		23.11.1998 (Ac)
<b>Convention Concerning the Protection of the World Cultural and Natural Heritage</b>		16.12.1993 (Rt)
<b>International Convention for the Prevention of Pollution from Ships</b>		01.10.1997 (EIF)
<b>FAO Global Forests Resources Assessment</b>		Participates
<b>Regional</b>		
<b>Convention on Long-Range Transboundary Air Pollution (Geneva, 1979)</b>		03.07.2002 (Rt)
Protocol on Reduction of Eutrophication, Oxidation and Formation of Ground Ozone		
Protocol on Persistent Organic Pollutants (Aarhus, 1998)		
Protocol on Heavy Metals (Aarhus, 1998)		
Protocol on Further Reduction of Sulphur Emissions (Oslo, 1994)		
Protocol on Limitation of Emissions of Volatile Organic Compounds or their Transboundary Fluxes (Geneva, 1991)		
Protocol concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes (Sofia, 1988)		
Protocol on the Reduction of the Sulphur Emissions or their Transboundary Fluxes by at least 30 per cent (Helsinki, 1985)		
Protocol on a Long-Term Financing of a Joint EMEP Prog.		

<b>Convention on the Transboundary Effects of Industrial Accidents</b>		16.06.2004 (Rt)
<b>Convention on the Protection and Use of Transboundary Waters and International Lakes</b>		03.08.2000 (Rt)
Amendment		
Protocol on Water and Health		09.01.2003 (Ac)
<b>Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus, 1998)</b>		23.08.2000 (Ac)
Amendment		
Protocol on Pollutant Release and Transfer Register		
<b>Convention on Environmental Impact Assessment in a Transboundary Context</b>		25.03.1999 (Ac)
Amendment 1		
Amendment 2		
Protocol on Strategic Environmental Assessment		
<b>Convention on the Conservation of European Wildlife and Natural Habitats</b>		01.07.2000 (EIF)
<b><i>Sub-regional</i></b>		
<b>Framework Convention on the Protection of the Marine Environment of the Caspian Sea (Teheran, November 4, 2003)</b>	04.11.2003	18.05.2006 (Rt)
<b>Reporting to the Inter-state Statistical Committee of the Commonwealth of Independent States</b>		Yes

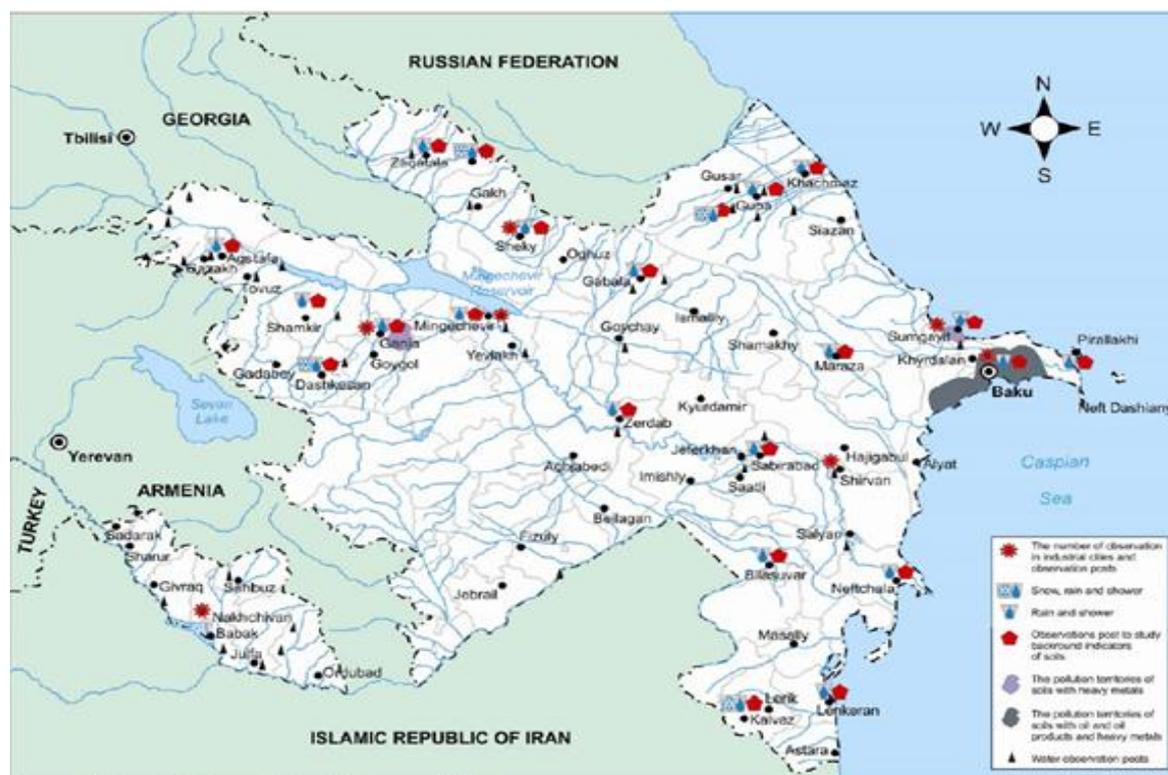
## 2.2. Monitoring

In Azerbaijan monitoring of quality of air, precipitation, soil, surface and ground water, biological resources, radioactive pollution of the environment, assessment and forecast of environmental processes under the anthropogenic impact, as well as creation of the state-of-environment database and data distribution (including via internet – <http://eco.gov.az>.) is performed by MENR.

The Rules for Monitoring of the Environment and Natural Resources, adopted by the Cabinet of Ministers' decree No.90 dated July 1, 2004, set basic goals and requirements for a monitoring procedure (sampling frequency, number of observation points, measured parameters, etc.) and include 12 independently arranged types of monitoring:

- the state of atmospheric air;
- atmospheric precipitation;
- the state of water bodies;
- the state of land resources;
- mineral resources and raw materials;
- radioactive situation;
- harmful impacts on the environment;
- waste management;
- the state of biological resources;
- special protected areas;
- sanitary and epidemiologic control;
- natural disasters.

**Figure 1: Main networks of environmental monitoring in Azerbaijan**



### 2.2.1. Water monitoring

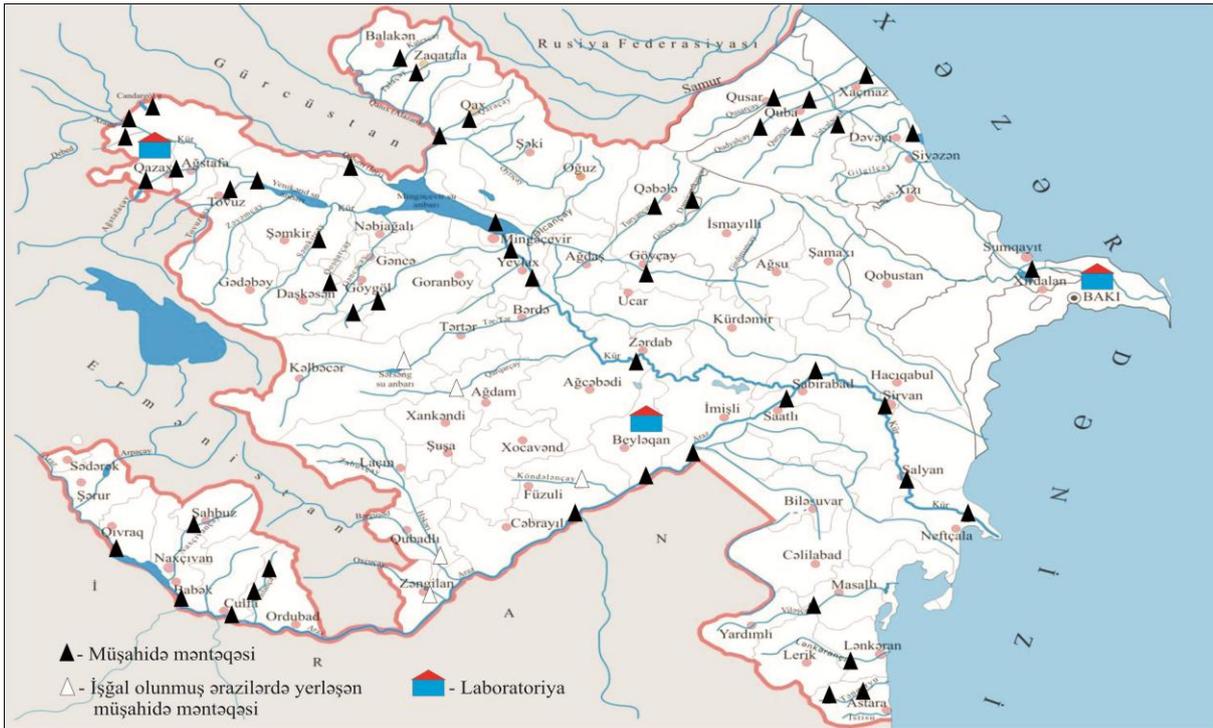
The water policy is mainly implemented through water legislation, particularly, through Water Code of the country. Water Code is basic legislative act of the country regulating water sector. Based on this Code, several Laws, and a number of bylaws were adopted. Particularly, the Law on Water Supply and Wastewaters, Law on Melioration and Irrigation, Law on Hydro-meteorological Activities, Law on Entrails, Law on Municipal Water Economies, Law on Safety of Hydro-technical Installations, etc.

Relationships between agencies and water users connected with use and protection of water bodies and water resources (water relationships) are regulated in accordance with water Legislation of Azerbaijan Republic. MENR as a major water related policy making state agency implements programs related to monitoring and protection of water resources. Management in the field of use and protection of water bodies in municipal ownership is carried out by municipalities within the limits of authority defined by law. The use of surface water resources and management of water infrastructure is carried by the Amelioration JSC, ground waters by the MENR. Ministry of Health is controlling the sanitary-epidemiological situation in the country and regulation of health protection in the work place. State Agency for Water Reserves under the Ministry of Emergency Situations is recently established Agency by Presidential order. At present time the Charter and Manual of the Agency is under preparation.

Trans-boundary rivers' water resources management issues (Araz, Kura and Samur) are priority for Azerbaijan. Kura waters, which are the major source for drinking water supply, as well as used for agricultural and industrial needs, are entering Azerbaijan already polluted.

Azerbaijan participated actively in the Trans-boundary Diagnostic Analysis (TDA) of the Caspian Sea developed in 2007 (the first one was done in 2002). TDA gave scientific and technical assessments which helped to identify and quantify problems of the marine environment in the Caspian Sea Region, to analyze their causes and impacts from both environmental and economic points of view.

**Figure 2: Monitoring of surface waters in Azerbaijan**



There is a Central Analytical Laboratory (the Centre for Environmental Pollution Monitoring), 7 analytical laboratories in Baku and 2 regional ones (in Gazakh and Beilagan). Out of 7 laboratories located in Baku, 5 were accredited (for air, precipitation, water bodies, aerosols and measuring equipment).

Within the framework of the Caspian Environment Program (CEP) and with the support from international donors, the analytical laboratory for a comprehensive monitoring of the Caspian Sea was established under the MENR. At present the laboratory is equipped with up-to-date analytical and sampling equipment. It got accreditation and the equipment was certified.

**Table 3: Identified quantity and quality indicators of water**

Type of indicators	Indicators
Hydrological indicators	Water consumption (m3/sec)
Physical indicators	Water level (m) flow speed
	Temperature (°C)
Chemical indicators	Turbidity (NTU)
	Limpidity (sm)
	Color (range)
	Fragrance (class and mark)
	Hydrogen indicator pH Hell
Main ions	CO <sup>2</sup> (mg/l)
	NH <sub>3</sub> (mg/l)
	O <sub>2</sub> (mq/l)
	Cl
	SO <sub>4</sub>
	HCO <sub>3</sub>
	Ca <sub>2</sub>
Biogenic substances	Mg <sub>2</sub>
	sodium-potassium
	total ions (mg/l)
	total roughness (mg-ekv/l)
	5 days biological consumption of oxygen OBS <sub>5</sub>
Biogenic substances	Ammonium ion
	Nitrite ion
	Nitrate ion m1N/1
	Phosphates total

Specific pollutants	Total phosphor (mg/l)
	Silica ion Si (mq/l)
	Ferrum Fe <sup>2+</sup> total (mg/l)
	Oil and oil products
	Phenols
	Synthetic surface active substances (mg/l)
	Chlorine organic pesticides (mkg/l)
	α-HXSN
	β-HXSN
	γ-HXSN
Heavy metals (mkq/l)	DDT DDE p,p-DD+ opDDT
	Lead Pb
	Copper Cu
	Nickel Ni
	Vanadium V
	StibiumSb
	Molybdenum Mo
	Cobalt Co
	Aluminum Al
	Manganese Mn
	Titan Ti
	Bismuth Bi
	Chrome Cr
	Sink Zn
	Quicksilver Hg
Cadmium Cd	
Total of heavy metals	

The monitoring data are published in periodic bulletins, which, together with proposals to address problems identified with regard to Caspian Sea pollution, are sent to 14 Government agencies. In this case, however, activities on compliance assurance are conducted by a department of the MENR dealing with monitoring of the environment rather than enforcement.

MENR conducts regular monitoring of pollution of trans-boundary rivers. Monitoring assess compounds such as phenols and copper, ammonium, nitrate and nitrite ions and oxygen concentrations. Results of the monitoring are published on MENR's website.

### 2.2.2. Air quality monitoring

These activities are mainly implemented in 3 directions:

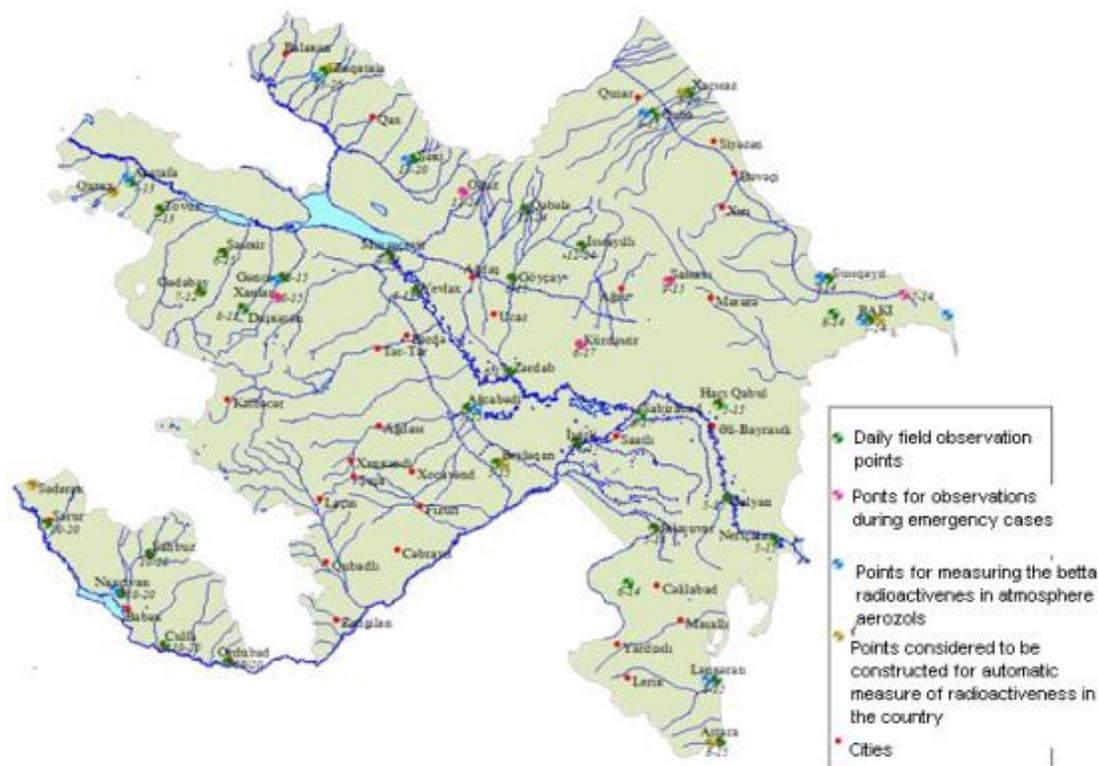
- ✓ **Stationary observations**—provided each day at 7<sup>00</sup>, 13<sup>00</sup>, 19<sup>00</sup> taking air sample as well as taking into account meteorological aspects such as atmospheric pressure, relative humidity, wind speed and direction.
- ✓ **Field observations** – conducted in most polluted areas, as well as during emergency cases
- ✓ **Under forest observations** – conducted once per year in forest areas and in distance of 0.5; 1.0; 2.0 and 5.0 km.

Measurements carried on with inadequate frequency and lack of automated monitoring equipment does not allow registering accidental or intentional emissions of pollutants in the air. In order to improve the situation in 2010 the Cabinet of Ministers granted 5 million AZN to install 5 automated air-quality monitoring stations in Baku. These stations will be operational in near future and measure O<sub>3</sub>, PM<sub>2.5</sub> and PM<sub>10</sub> in particular. It is expected that in the near future additional funds will be provided to install additional automated monitoring stations in other regions.

To control radioactivity in Azerbaijan, six automated stations were installed on the borders with the neighboring countries. They were installed in meteorological stations that ensure constant control of a radioactivity level in the air. For radioactive monitoring of trans-boundary segments of the Rivers Kura and Araz, the analytical laboratories in Gazakh and Beilaganare adequately

equipped within the framework of the Project “Modernization of the Monitoring System of Radioactive Pollution” implemented since 2006 in a technical cooperation with IAEA.

**Figure 3: Main networks of air monitoring in Azerbaijan**



Information on atmospheric pollution and radiation is published in daily bulletins placed in the web site of the MENR, as well as distributed to various State organizations and mass media.

The Environmental Protection Department at MENR was established in 2001. The department is the responsible State body providing supervision of fulfillment of current legislation during environmental activities and use of natural resources by local and foreign juridical entities, as well by private persons in the territory of Azerbaijan and also in Caspian Sea. In 2002, after structural reforms, the National Monitoring on Environment Department was established under MENR. This department provides observation, evaluation and also prognosis on atmosphere, rains, land, surface and underground natural resources, as well environmental situation and anthropogenic impacts.

The Department has produced a cadastre of greenhouse gas emissions and sinks (1995-2000) using IPCC methodology.

#### *Air emissions*

In order to study the composition of pollutant substances brought to the country via atmospheric rains and evaluate their environmental impact sample are taken for chemical analyzes at 21 observation points in high mountainous areas and also chemical composition of the snow.

The following indicators in the composition of atmospheric rains are determined:

- ✓ electrical conductivity
- ✓ roughness
- ✓ hydrogen indicator - pH
- ✓ sulphate
- ✓ nitrate
- ✓ ammonium
- ✓ chlorine
- ✓ phosphate

- ✓ hydro carbonate
- ✓ calcium ions
- ✓ magnesium ions

**Table 4: National greenhouse gas emissions and sinks (1990-2005) in Azerbaijan**

Gases	Emissions (GqCO <sub>2</sub> -eq.)							
	1990	1995	2000	2001	2002	2003	2004	2005
<b>CO<sub>2</sub></b>	50677	32039	29274	28842	28703	31347	33280	35845
<b>CH<sub>4</sub></b>	20036	10850	11354	12522	12537	12603	12895	14433
<b>N<sub>2</sub>O</b>	992	360	360	347	344	347	350	357
Total CO <sub>2</sub> -eq.	<b>71705</b>	<b>43248</b>	<b>40987</b>	<b>41710</b>	<b>41584</b>	<b>44297</b>	<b>46524</b>	<b>50635</b>
CO <sub>2</sub>	-3438	-2456	-3145	-3145	-3585	-3663	-3702	-3769
Net wastes	<b>68267</b>	<b>40793</b>	<b>37843</b>	<b>38566</b>	<b>37999</b>	<b>40634</b>	<b>42823</b>	<b>46866</b>

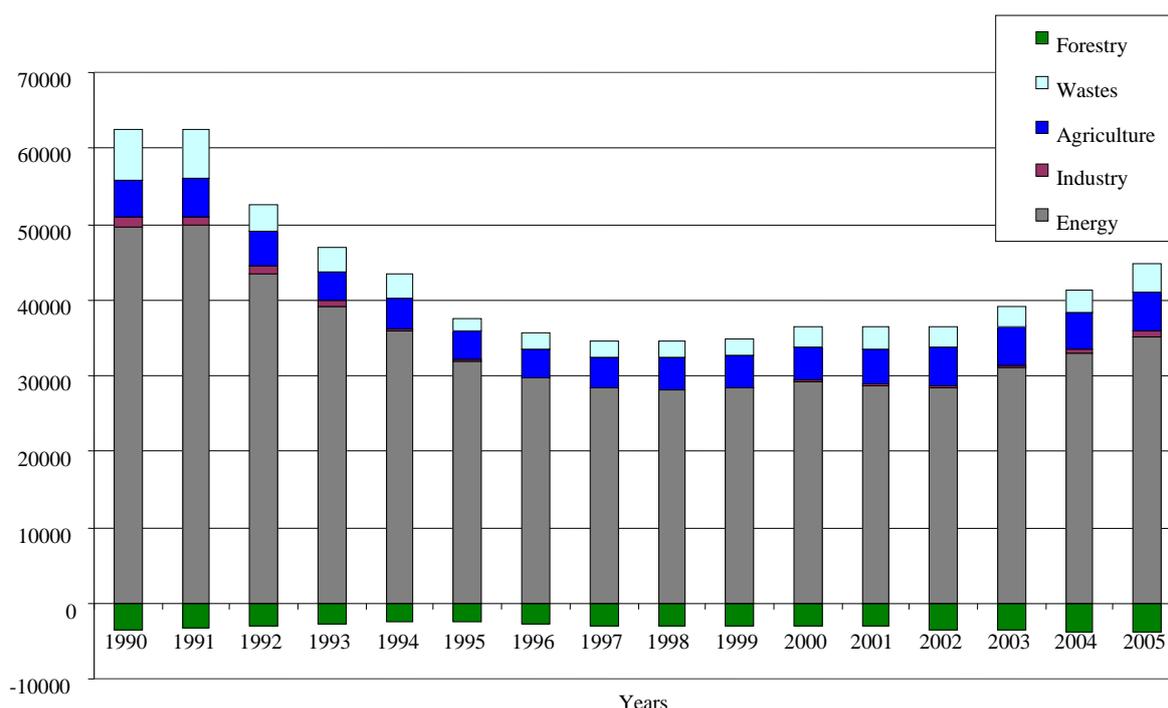
The major part of greenhouse gases is due to emissions generated in the energy sector. Certain activities have been undertaken to develop greenhouse gases inventory in Azerbaijan.

Figures displayed in table 3 come from GHG inventory.

There is no unique information system. The mechanism is as following: each entity submits information on used energy and gas emissions filling specific statistic form. The Statistics Committee collects the data and calculates fuel and energy balance. MENR calculates GHG based on IPCC methodology (1996-2000,2003).

As for all members of the WMO, Azerbaijan conducts hydro meteorological observations, forecasts, climate, agro climate and water resources assessment, and controls their trends and dynamics.

**Figure 4: Change dynamics of green-houses gases emissions and sinks by sector 1990-2005**



Twenty-six air quality monitoring stations are operating in eight cities: Baku, Ganja, Sumgayit, Mingechevir, Shirvan, Lenkeran, Sheky and Nakhchivan. The NDEM Central Analytical Laboratory analyzes air samples from nine monitoring stations in Baku. Seven regional analytical laboratories of Hydro-meteorological Service analyze air samples taken at 17 monitoring stations in other cities. 18 parameters are measured in total in the country.

Azerbaijan has provided forecasts for Climate Change in its second National Communication Report. Analyzes have been provided using PRECIS – 1.4 model. Due to provided analyzes for 2021-2050 the temperature is predicted to rise by 1,5C<sup>0</sup>-1,6C<sup>0</sup>. For period of 2071-2100 it will rise by 3-6 C<sup>0</sup>.

### **2.2.3. Hydro-meteorological monitoring**

The main objectives of hydro-meteorological monitoring are the following:

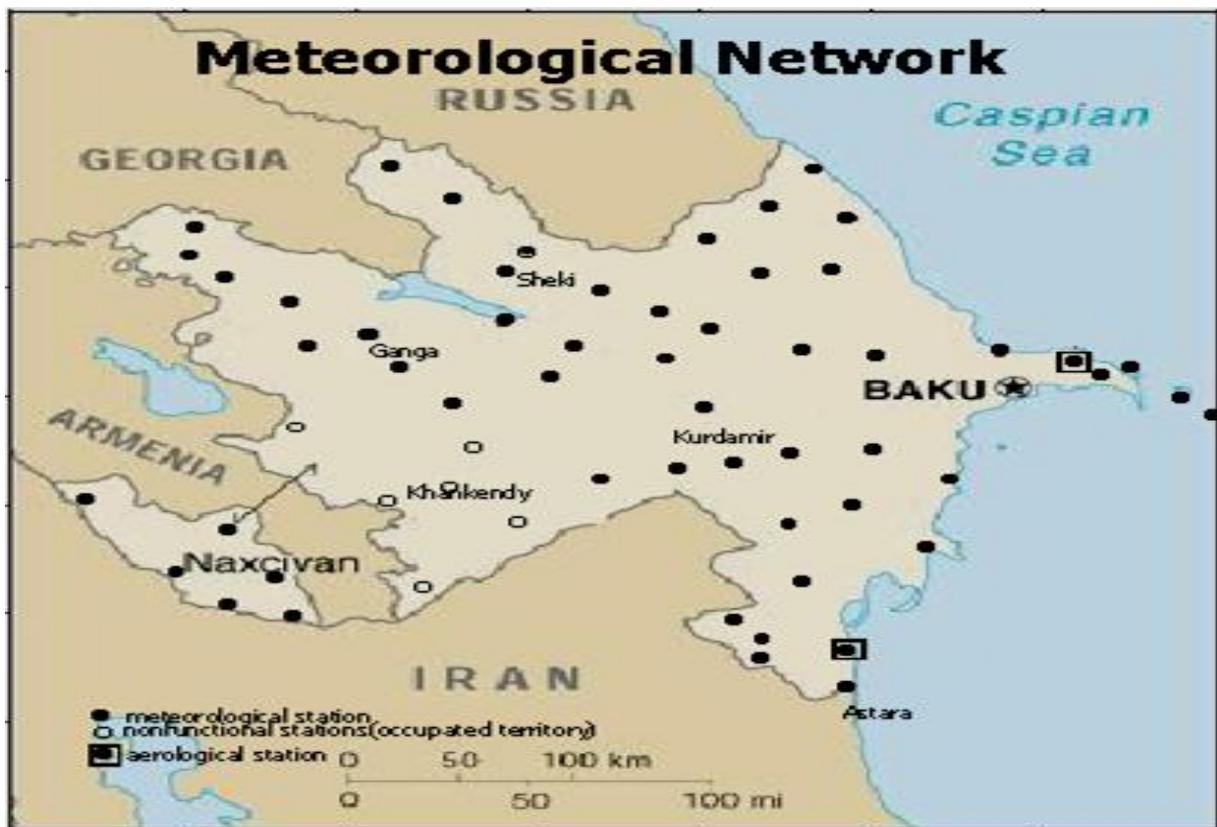
- ✓ Conducting monitoring
- ✓ Providing forecast
- ✓ Hydro-meteorological service
- ✓ Climate
- ✓ Conduct State Water Cadastre
- ✓ Fulfillment of international obligations

National Hydro-meteorological Department at the MENR is responsible for provision of such monitoring. It has regional departments in 11 regions of Azerbaijan. Hydro-meteorological network consists of 63 hydro-meteorological stations, 1 Aerologic station, 2 Meteorological radars, 10 Aero-meteorological points, 9 Sea points and 100 Hydrologic points.

Figure 5: Hydrologic monitoring network in Azerbaijan



Figure 6: Meteorological monitoring network in Azerbaijan



#### **2.2.4. Waste monitoring**

In Azerbaijan, there is a law on “Industrial and household wastes” entered into force 30 June 1998. In 2007, there were provided some amendments related to hazardous waste, transportation and definitions to this law. The definition of the waste by the law is provided below:

- industrial waste – substances, goods and materials formed during the process of production, agriculture activities, services and those that cannot be used in the place of formation, as well those that lost their consumption features during initial technological process fully or partially;
- household waste (solid waste) – substances and materials wasted from residential areas as a result of daily activities;
- hazardous waste - toxic, infectious, explosive, highly inflammable hazardous materials having danger to the population's health and the environment created directly potential threat.

There is a decision of the Cabinet of Ministers related to calculation of waste and also price estimation. It is estimated 0.14 AZN per m<sup>3</sup> for household waste. Total amount of waste per person is estimated as 0.004 m<sup>3</sup>. There is special statistical form filled by regional offices of state communal agencies and by private entities.

In Azerbaijan, there are 3 projects related to management of wastes. “Solid waste management project” is funded by World Bank. Under this project it is considered to renovate the Balaxani waste polygon. The second project is a regional project funded by EC and mainly focused on improvement of legislative base and strategy on waste management. The other project is funded by UNDP and aims to improve solid waste management by exploring multi-sector partnerships approaches thorough the development of necessary legislation and norms, undertaking waste composition and generation survey, establishment of National Solid Waste Data Bank and implementation of a local demonstration project.

Outdated technologies used in industrial entities and solid industrial wastes are still being the source of pollution of environment. The main problem for the industry is accumulated wastes. Due to report of State Statistical Committee for 2010 the amount of hazardous wastes in industrial entities of the country is about 1.6 million tons.

Assessments provided by MENR show that condition of storage of wastes in most entities does not meet the standards. In most cases, wastes are not isolated from the environment and just buried. Lack of specialized polygons in the country leads to contamination of the lands and negatively impacts the health of local population.

Azerbaijan has joined Basel Convention of UN on “Control of neutralization and trans-boundary transportation of hazardous waste” in 2001. In order to meet requirements of the Convention, MENR has provided some initiatives. As the on “Production and household wastes” had passed into the force before the joining the convention, in 2007 MENR has initiated the updates to the law and changes were accepted in 2007. Besides, it was prepared State Strategy for management of hazardous wastes, rules of identification of hazardous wastes, mechanism of inventory of hazardous wastes was created with production and afterwards approved by Cabinet of Ministers.

One of the projects implemented by MENR is the “Cleaning of the area from the mercury and construction of the polygon to bury hazardous wastes” project due to Contract signed between Azerbaijan Republic and International Development Association (IDA). The main goal of the project is to provide appropriate management of hazardous wastes in compliance with international norms and standards. The project is implemented in Sumgayit city at the contaminated areas of “Surface active Plant”. The polygon was constructed and started to function from 2004.

Due to the “State Program on improvement of official statistics in Azerbaijan - 2008-2012” the SCS together with MENR has developed and approved statistic form in compliance with Basel

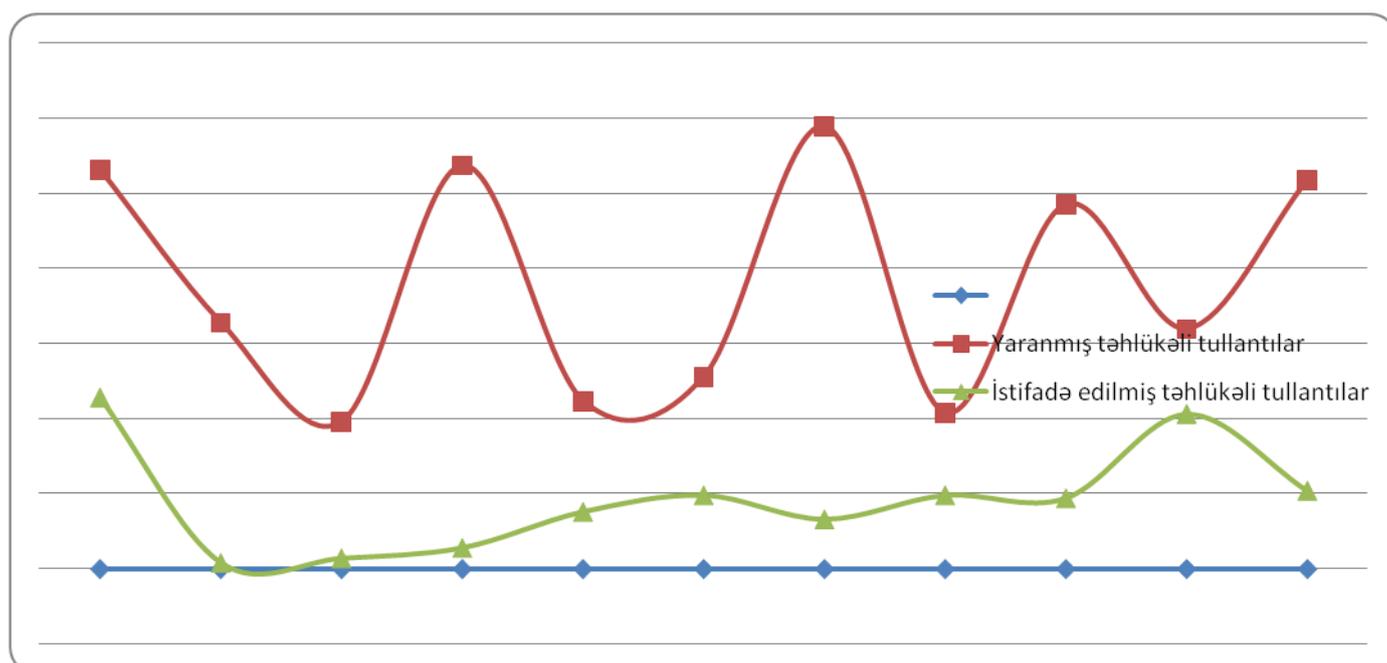
Convention. In 2008, it was proposed by MENR amendments in compliance with Basel Convention related to medical wastes and these changes were approved by SCS.

Currently works to prepare a project related to preparation of unique registration and reporting norms for development of database on wastes have been carried out. It is considered that such database will enable the precise register and reporting on hazardous wastes.

**Table 5: Dynamics of movement of hazardous wastes (thousands ton)**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Created hazardous wastes	26,6	16,4	9,8	26,9	11,2	12,8	29,5	10,4	24,3	16,0	25,9
Used hazardous wastes	11,4	0,4	0,7	1,4	3,8	4,9	3,3	4,9	4,7	10,3	5,2
Neutrilised hazardous wastes	-	-	1,0	9,7	1,0	0,04	26,0	1,2	8,6	6,9	27,4

**Figure 7: Dynamics of movement of hazardous wastes**



### 2.3. Environmental data and information exchange

The results of air quality monitoring are published in daily bulletins and submitted to the state bodies and other organizations including mass media. Simultaneously the information on the current state of air pollution and the air pollution forecast (24 hours in advance) are daily circulated through the Internet (<http://eco.gov.az>).

MENR's web site is bilingual – in the national and English languages. The Program on the marine environment of the Caspian Sea (section Caspian Resources), National Program of the ecologically sustainable social and economic development, National Program for restoration of forests and enlargement of forests area in Azerbaijan (section Environmental Policy) and some other are uploaded on the site.

**The State Committee of Statistics** (<http://www.azstat.org>) is the central executive authority running state policy in the field of statistics and forming official statistics on the social, economic and demographic situation of country on the base of unified methodology. SCS has achieved great results lately. Almost all environmental information is gathered by this Committee.

Environmental data are annually published in the statistical publications "Environment in Azerbaijan" in 2 languages (national and English) in the latest publication for 2010. The information is based on the official statistical data of SCS and other ministries and organizations whose activity is connected with natural resources use, ecological control and environment protection.

The current statistical observation system provides collection of information on the following areas:

- ✓ Air protection;
- ✓ Protection of water resources and efficient consumption;
- ✓ Generation and movement of hazardous production and consumption wastes;
- ✓ Emission of hazardous substances to atmosphere by automobiles;
- ✓ Protection of forest resources;
- ✓ Hunting sector;
- ✓ Fishery;
- ✓ State natural protected areas and national parks;
- ✓ Environmental protection and expenses spent for efficient use of natural resources;
- ✓ Environmental payments;
- ✓ Geological exploration works.

Since 2004 the data on green-house gases emissions have been collected in the country according to the Kyoto Protocol. The data on green-house gases emissions from the stationary sources are collected by the state statistical bodies from enterprises according to the endorsed format. The obtained information is regularly published in annual statistical publications.

All environmental information goes to the computing center of the National Department for Environmental Monitoring of MENR for processing and further annual transmission to the State Information and Archive Database. The results of single measurements are used for preparation of urgent and operational information on drastic changes in pollution levels, as well as for the environmental state forecast. On the basis of the received information more than 30 types of bulletins are issued reflecting the state of the environment components. These bulletins are circulated via Internet (<http://eco.gov.az>), distributed among appropriate organizations and persons involved in decision-making.

The following annual publications are issued:

- on the state of air and precipitation pollution;
- on the state of surface water pollution;
- on the state of soils pollution;
- on the state of biological resources including forests.

NDEM submits to MENR annual reports on the results of its activity in the field of pollution monitoring of air, surface water, soils and monitoring of radioactivity and biological diversity. However the data are not uploaded in the Internet and not available to the public.

At present NDEM publishes four types of regular bulletins with monitoring results in the following environmental activities:

- air pollution and radiation level;
- pollution of surface water bodies;
- hydro-chemical state and pollution level of the trans-boundary Rivers Kura and Araz;
- Environmental pollution level in Azerbaijan.

These bulletins are distributed in MENR and submitted to the Administration of the President, Cabinet of Ministers, and Parliament, other ministries, state bodies and municipal authorities. Monitoring data are uploaded on the site of MENR.

NDEM receives on a regular basis monitoring data from other monitoring institutions in the country engaged in the environmental activities. Data are submitted according to formats

approved by MENR. In addition, it receives for checking statistical data reported by enterprises on their emissions into the atmosphere, discharges in the water bodies, generation and disposal of hazardous waste. However, there is no evidence that NDEM is linking data flows, received from various organizations, to identify cause-effect relationships or to develop a common environmental database which could be convenient and accessible to all interested state authorities and the general public.

The Centre of Epidemiology and Hygiene under the Ministry of Health manages the database with the monitoring results of air quality in residential areas and indoors, quality of bathing water and water used for drinking water supply, soil quality in residential areas, levels of noise, vibration and other physical impacts, radiation exposure and food quality. This database is not accessible to external use. The Centre does not publish monitoring data. At the same time, the Centre started the development of a data base that should provide possibility to assess environmental pollution impact on population health (<http://www.mednet.az>).

## 3. Content

### 3.1. Country reporting obligations

The first internationally accepted document on the protection of the environment and human health from adverse effects of POPs was a Protocol on POPs to Convention on Long-Range Trans-boundary Air Pollution. This Convention entered into force on October 03, 2003.

UN Stockholm Convention on POPs was declared open for signatures in 2001 and came into effect on May 17, 2004. The Republic of Azerbaijan ratified Stockholm Convention on POPs on December 9, 2003.

Apart from Stockholm Convention on Persistent Organic Pollutants other international commitments concerned with this area were accepted. Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters which is closely linked to all other international agreements was approved by the Parliament of Azerbaijan on 9 November 1999. Another document dealing with this area is UN Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal which was ratified by the Parliament of Azerbaijan on 16 February 2001.

In compliance with Basel Convention it is envisioned to make appropriate amendments and additions to the existing national legislation on waste management. To this end Ministry of Ecology and Natural Resources drafted a law and submitted it to the Cabinet of Ministers.

Another international document is the Rome Convention on "Plant protection" ratified by the Parliament of Azerbaijan on March 14, 2000. Yet another international agreement concerned with this area is the Helsinki Convention on the Trans-boundary Effects of Industrial Accidents which was ratified by Azerbaijan on May 4, 2004.

The Rotterdam Convention on Agreed Procedures of International Trade in Preliminarily Approved Pesticides and Various Hazardous Chemicals is an international agreement that is referred to in Stockholm Convention on POPs. Azerbaijan is now undergoing internal procedures to join this international agreement.

The National Assembly approves the international conventions and assigns the responsible governmental agency to fulfill relevant obligations. MENR is the responsible governmental agency to undertake the fulfillment of the obligations. MENR assigns focal points for each convention and those specialists are playing the key role in implementation of considered activities and preparation of related reports. Azerbaijan provides regular reporting required under relevant obligations, but some delay may appear in submission of a few reports.

#### 3.1.1. Reporting under the global MEAs

Azerbaijan prepared several reports for the governing bodies of the MEA. In 2000 Azerbaijan prepared the First National Communication report to UNFCCC. In 2009 Azerbaijan prepared the second National Communication report to UNFCCC. In 2004 and 2010 Azerbaijan provided reports under the Convention on Biological Diversity in English ([www.cbd.int](http://www.cbd.int)). However, Azerbaijan failed in attempts to present two similar obligatory national reports in 2006 and 2008.

In 2006 the country submitted its third report on the implementation of the United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (UN CCD) (uploaded in Russian to the website: [www.unccd.int/cop/reports/centraleu/national/2006/azerbaijan-rus.pdf](http://www.unccd.int/cop/reports/centraleu/national/2006/azerbaijan-rus.pdf)).

Being a Party to the Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Azerbaijan submits national reports to the Secretariat of the Convention. The latest one for 2005 is published online at the Convention's website in English (<http://www.basel.int/natreporting>).

In 2010 the country submitted to the Secretariat of the Stockholm Convention on Persistent Organic Pollutants (POPs) the National Plan for implementation of the POPs inventory that covers the main sources of production, application and storage of POPs. At the same time, being the party to the Convention, Azerbaijan did not provide the national report that covered time period from 2003 through 2006.

Under the Ramsar Convention on Wetlands of International Significance Azerbaijan on a regular basis provides the national reports on implementation of the Convention requirements. The latest one for 2008 was provided in English and is online at the Convention website :<http://www.ramsar.org>.

In line with the provisions of the Convention on International Trade in Endangered Species of Wild Fauna and Flora Azerbaijan presents both annual and biannual reports on its activity. The recent reports were made for 2007 for 2003-2004, respectively. The text of the biannual report in English, is presented at the Convention website: <http://www.cites.org>.

Azerbaijan on a regular basis submits reports on implementation of the Agreement on the Conservation of Populations of European Bats, at this not being Party to the Convention on Migratory Species of Wild Animals. The latest report for 2009 is presented online at the website: [http://www.eurobats.org/documtns/national\\_reports.htm](http://www.eurobats.org/documtns/national_reports.htm).

In 2010 Azerbaijan, however, has not submitted its national report on the forest resources assessment to the UN Food and Agricultural Organization (FAO).

National information and reports on the implementation of multilateral environmental agreements submitted to the international organizations were not uploaded on the website of MENR, therefore they are not available for the public.

### **3.1.2. Reporting under the regional MEAs**

Azerbaijan is party to the six regional conventions and one protocol to the Convention on the Protection and Use of Trans-boundary Watercourses and International Lakes.

Aimed at the implementation of the requirements of the Convention on the Protection and Use of Trans-boundary Watercourses and International Lakes, Azerbaijan has prepared and presented in 2010 the Brief report in Russian in line with the Protocol on Water and Health. The report is online at the Convention's website: <http://www.unece.org/env/water/>.

At the meeting which took place in 2005 in Berlin under the aegis of the two Conventions on Protection and Use of Trans-boundary Watercourses and International Lakes and on trans-boundary effects of industrial accidents, Azerbaijan presented the report on prevention pollution of waters against pipeline accidents in Russian ([www.umweltbundesamt.de/anlagen/pipeline/vortraege/end\\_vru\\_shakhmarov.pdf](http://www.umweltbundesamt.de/anlagen/pipeline/vortraege/end_vru_shakhmarov.pdf)).

Being Party to the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters Azerbaijan on a regular basis is reporting on the progress made to the Meeting of the Parties to the Convention, as well as participates in the meetings of its working bodies. The latest report for 2008 in English, French and Russian is presented online at the Convention's web site: <http://www.unece.org/env/pp/>.

### **3.1.3. Reporting under the sub-regional MEAs**

Azerbaijan is Party to the Framework Convention on the Protection of the Marine Environment of the Caspian Sea.

Under the Convention the country in 2007 developed the National Caspian Action Plan for 2007-2017. This document is in English, and in addition to other materials, prepared at the national level, related to the issues on development of monitoring programmes of water quality, sediments, prevention of marine pollution from various sources, conservation of biodiversity and sea living resources, control of invasive species and on a number of other environmental problems, is uploaded to the web site: [www.caspianenvironment.org](http://www.caspianenvironment.org)

Each year, the Interstate Statistical Committee of the Commonwealth of Independent States (CIS STAT) provides data on environmental protection, which are placed in the annual statistical compilation issued in Russian and English languages. Information about the publications of the CIS-STAT is available at <http://www.cisstat.com>.

### 3.2. Description of environmental data availability

Data, published in publications disseminated inside the country (for instance, environmental bulletins) are comparable with data from other countries, when they are presented in absolute values (for example, data on emissions into the air basin, concentrations of pollutants in atmospheric air, water objects, soil), but they are not comparable with data of European countries, if they are presented in units and shares of maximum permissible concentrations. In particular, data on wastes are incomparable with data of EU countries as the wastes classification used is not matching the pan-European one.

As already mentioned, basic environmental information is collected and published by SCS. Annual environmental statistical publications “Environment in Azerbaijan” contain the data on the state of the environment, rational use of the natural resources (<http://www.azstst.org>).

Statistical publications have the following chapters:

- land resources distribution by categories;
- reforestation in the forests of national importance;
- forest protection measures;
- basic characteristics of national parks and reserves;
- basic indicators characterizing water resources use, including types of the economic activity of enterprises;
- amount of water consumption by towns;
- basic indicators characterizing air protection and harmful impact on the atmosphere;
- pollutants emissions in the air from stationary sources (total, per ingredient and per economic activity);
- green-house gases emissions in the atmosphere from stationary sources;
- pollutants emissions from transport (total, per ingredient, per ton);
- pollution level of the atmosphere in towns;
- number of automobile transport;
- generation, disposal and utilization of hazardous waste (total and per ton);
- utilization of hazardous waste from enterprises (per ton);
- secondary raw resources:
- the state control for protection of land, water resources and atmosphere;
- environmental expenditures;
- investments in the environment protection and rational use of natural resources.

Other statistical publications are issued, such as “Azerbaijan in Figures” (500 copies), “Statistical Indicators in Azerbaijan” (450 copies), “Regions of Azerbaijan” (500 copies), “Transport in Azerbaijan” (180 copies), “Research of the Statistics related to the Environmental Impact on Health of the Population in Azerbaijan” (35 copies) which was published in the national and the English languages.

The State Statistical Committee applies step-by-step the UNECE Guidelines for the Application of Environmental Indicators in the Eastern Europe, Caucasus and Central Asia, included in the UNECE Guidelines on Environmental Indicators and based on them Assessment Reports (2007). Six indicators from these Guidelines were introduced in mandatory statistical reporting in the country in 2009. They include data for the indicator on trans-boundary movement of hazardous waste according to the classification of the Basel Convention and data on medical waste. These indicators are: Emissions of pollutants into the atmosphere, Greenhouse gas emissions, Household water use per capita, Land uptake, Waste re-use and Waste recycling.

MENR established a Department for dissemination of environmental information. It has compiled a list of institutions which should receive environmental information. This information MENR uploaded on its web site. In 2009 MENR published a book on the environmental policy of Azerbaijan in 2003-2008.

In connection with the accession to the Aarhus Convention in 2003 the Aarhus Information Centre was opened within the Ministry. In 2007 two more similar Centers were opened in Ganja and Gazakh.

MH of the Republic doesn't publish reports on the state of the population health and the environment. However, it regularly uploads to its website information on the quality of the drinking water and water used in recreational zones.

The results of a complex monitoring of the Caspian Sea are published in a weekly bulletin which is distributed among 14 state institutions. In addition, a monthly bulletin with monitoring data and a short information on the annual MENR activity is uploaded on its web site.

The Geological Exploration Service publishes a monthly bulletin on the state of ground water and issues an annual account on the results of ground water monitoring activities.

Data collected through the statistical reporting form "1 – environmental protection" are available to the general public in publications and on the website of the State Statistical Committee.

### 3.3. Description of environmental indicator availability

A comprehensive list of environmental indicators for Azerbaijan has been adopted by the Statistical Committee of Azerbaijan. The list of indicators is provided in below tables:

**Table 6: Environmental Indicators on Air emissions**

#	Name	Measurement unit	periodicity	Source of information	Data preparation program	Relation to UNECE JTF Core Indicators
1	2	3	4	5	6	7
<b>1.</b>	<b>Air protection</b>					
1.	<i>Air emission, cleaning and utilization</i>	ton	annual	"Report on air protection" number 2-EП (air)	By country, city, districts and type of economical activity	A1: Emissions of pollutants into the atmospheric air
1.1	Solid substances	-/-	-/-	-/-	-/-	
1.2	Gases and liquids	-/-	-/-	-/-	-/-	
1.2.1	sulfuric anhydride	-/-	-/-	-/-	-/-	
1.2.2	Carbon oxide	-/-	-/-	-/-	-/-	
1.2.3	Nitric oxide	-/-	-/-	-/-	-/-	
1.2.4	Hydrocarbon (volatile organic compounds)	-/-	-/-	-/-	-/-	
1.2.5	Volatile organic compounds	-/-	-/-	-/-	-/-	
1.2.6	Other gases and liquids	-/-	-/-	-/-	-/-	
2.	<i>Greenhouse effect gasses emission</i>	-/-	-/-	-/-	-/-	B6: Greenhouse gas emissions
2.1	Carbone	-/-	-/-	-/-	-/-	
2.2	Nitric 1 oxide	-/-	-/-	-/-	-/-	
2.3	Methane	-/-	-/-	-/-	-/-	
2.4	Hydrofluorcarbons	-/-	-/-	-/-	-/-	
2.5	Sulfur fluoride	-/-	-/-	-/-	-/-	
2.6	Perphlucarbones	-/-	-/-	-/-	-/-	
3.	Emission of other specific pollutant	-/-	-/-	-/-	-/-	
3.1	Benz(a)piren	-/-	-/-	-/-	-/-	
3.2	Sulfuric acid (by H <sub>2</sub> SO <sub>4</sub> molecules)	-/-	-/-	-/-	-/-	
4.	Source of atmospheric pollutants –	-/-	-/-	-/-	-/-	

	total					
4.1	The allowed limit of emission (ALE)	-/-	-/-	-/-	-/-	
	Including:					
4.2	Temporary agreed limit of emission (TALE)	-/-	-/-	-/-	-/-	
5.	Number of Gas cleaning and gas capturing systems to the end of the year – total	num	-/-	-/-	-/-	
	Including:					
5.1	Brought to use in reported year	-/-	-/-	-/-	-/-	

<b>2.</b>	<b>Emission hazardous substances to the atmosphere by transport</b>					
1.	Hazardous substances emission to the atmosphere by automobiles – total	Thousa nds ton	annual	“Report on hazardous substances emission to the atmosphere by automobiles” number 2-TG (air-transport)	By countries and cities	A2: Ambient air quality in urban areas
1.1	Carbone oxide	-/-	-/-	-/-	-/-	
1.2	Nitric oxide	-/-	-/-	-/-	-/-	
1.3	Hydrocarbon	-/-	-/-	-/-	-/-	
1.4	Specific emissions	-/-	-/-	-/-	-/-	

**Table 7: Environmental Indicators on Water**

<b>3.</b>	<b>Water use</b>					
1.1	Water taken from natural sources	Thousa nds m <sup>3</sup>	annual	“Report on water use” number 2-TG (water)	By country, city, districts and type of economical activity	C8: Freshwater abstraction
1.2	Water from underground water resources	-/-	-/-	-/-	-/-	
1.3	Water used - total	-/-	-/-	-/-	-/-	
	including:					
1.3.1	<i>Drinkable and for household use</i>	-/-	-/-	-/-	-/-	C9: Household water use per capita
1.3.2	Production/processing	-/-	-/-	-/-	-/-	
1.3.3	Irrigation	-/-	-/-	-/-	-/-	
1.3.4	Water supply in agriculture	-/-	-/-	-/-	-/-	
1.3.5	For other purposes	-/-	-/-	-/-	-/-	
1.4	Wasted slop water – total	-/-	-/-	-/-	-/-	
	including					
1.4.1	Surface water recourses	-/-	-/-	-/-	-/-	
1.4.2	Unclean slop water	-/-	-/-	-/-	-/-	C16: Polluted (non-treated) wastewaters
1.4.3	Normative clean water	-/-	-/-	-/-	-/-	
1.4.4	Cleaned water till normative limit	-/-	-/-	-/-	-/-	
1.5	<i>Periodic re-use water supply</i>	-/-	-/-	-/-	-/-	C11: Reuse and recycling of freshwater
1.6	Water wasted	-/-	-/-	-/-	-/-	C10: Water losses

**Table 8: Environmental Indicators on Waste**

<b>4. Wastes and its movement</b>						
1.	Existing waste at the beginning of the reporting year	tons	yearly	Form number 2- TG (wastes)	By type of economical activity and industrial cities	
2.	Wastes formed at the entity during reported period	-//-	-//-	-//-	-//-	I33: Waste generation
3.	Wastes received from other entities	-//-	-//-	-//-	-//-	
3.1	Wastes imported from other countries	-//-	-//-	-//-	-//-	I34: Transb. movements of hazardous wastes
4.	Wastes used at the entities	-//-	-//-	-//-	-//-	
5.	Totally neutralized wastes	-//-	-//-	-//-	-//-	I36: Final waste disposal

The above-presented environmental indicators are calculated based on summary information generated by the National Statistical Committee, which performs the sectoral (including water, air and wastes) analysis of primary environmental data received from the physical entities. Samples of Statistical reports are provided in Annex 5.

## 4. Analysis of strengths and weaknesses for SEIS implementation

At present, there is no organizational structure and coordination of monitoring and environmental data collection performed by various institutions. It is necessary to establish an institutional structure for cooperation and coordination of activities of ministries and agencies on issues of environmental monitoring and information. Information on environmental protection is not properly used. In addition, information from different sources in the same sector sometimes differs from each other. Information and data stored in the state information database and archives are mostly not in electronic form and not easily accessible to the users including the general public

Regarding air monitoring and information, a system is in place but there is a need for development of a unique shared information system. There are the same problems in inventory data collecting related to air pollution. The air quality standards should be revised and harmonized with those applied in the EU (at least for major pollutants – PM10 , PM2.5, sulphur dioxide, nitrogen dioxide and nitrogen oxides, carbon monoxide, lead, benzene and ground level ozone).

Regarding water monitoring and information system there is a need for development of a unique flexible information system that everybody can use for improvement of water management in the country. Besides, mechanisms for dialogue between the different water stakeholders should be created.

Regarding waste monitoring, there is no unique information database which makes difficulties in calculation. The legislative framework for waste management was significantly improved by the implementation of several new legislative norms aimed at hazardous waste management, municipal waste management and clarification of responsibilities for specific waste.

SEIS may create a favorable condition for unique database and indicators to be used by different organizations. Indicators may be approximated to international standards during implementation of SEIS. Besides, SEIS may increase capacity and understanding of responsible organizations in environmental data monitoring and reporting.

**Table 9: Constraints in information management of Azerbaijan**

Legislation	<ul style="list-style-type: none"> <li>• concepts and contents of integrated database on the state of environment not defined;</li> <li>• gaps in consideration of environmental legislation within sectoral legislative frameworks</li> <li>• absence of regulations on sharing and exchange of environmental information between stakeholder organizations</li> </ul>
Technical capacities	<ul style="list-style-type: none"> <li>• absence of integrated data warehouse for environmental data,</li> <li>• absence of information network between stakeholders in environmental field,</li> <li>• lack of electronic databases,</li> <li>• lack of monitoring devices and equipment,</li> <li>• lack of permanent technical service and calibration of available monitoring equipment</li> </ul>
Monitoring	<ul style="list-style-type: none"> <li>• there is no bio-monitoring,</li> <li>• absence of a system for permanent monitoring of wastes,</li> <li>• absence of self-monitoring by organizations (during industrial processes),</li> <li>• absence of permanent monitoring of biodiversity including forests,</li> </ul>
Reporting	<ul style="list-style-type: none"> <li>• fragmented reporting systems,</li> </ul>

## 5. Recommendations and conclusions

The Ministry of Ecology and Natural Resources of Azerbaijan considers that for sound and sustainable management of environment and natural resources, there should exist an effective system of environmental monitoring, data processing and dissemination among the state institutions and general public in Azerbaijan. Therefore, participation in the ENPI–SEIS Project is seen as vitally important for the country and priority issues for introducing and implementing an EU-compatible Shared Environmental Information System in Azerbaijan should address the following recommended assistance activities:

- Provide assistance for further development of environmental indicators for Azerbaijan and approximation to the international standards (UNECE, EEA, UNEP, WHO);
- Provide staff training and capacity building in the fields of water, waste and ambient air pollution monitoring, data collection, storage, processing and analysis for environmental assessments;
- Provide legislative advice for introducing modern environmental standards and normative acts in the fields of water management, controlling ambient air pollution and sound waste management in consistence with EU and other international standards;
- Provide technical and methodological assistance for developing, testing and implementing integrated environmental database on surface and coastal water resources including water quality/quantity and use, as well as forecasting (modeling) of water availability/scarcity for different economic sectors of Azerbaijan;
- Provide technical and methodological assistance in developing electronic inventory and reporting forms for industrial air pollution sources that will be used both by monitoring department and analytical units of the Ministry of Ecology, as well as industrial enterprises for self-monitoring and effective accountability against ecological inspection to guarantee consistent information flow for key government stakeholders and general public;
- Provide methodological and technical assistance in improving legislation and normative acts of waste management in Azerbaijan;
- Provide technical and capacity-building support in improving waste inventory; developing special database application for uniform waste accounting system in Azerbaijan;
- Provide intensive staff training to learn international experience and adopt advanced technologies on sorting, inventory and utilization of wastes; Assist national institutions responsible for waste management in awareness-raising among government organizations, municipalities, industry, mass media, schools and general public in the field of sustainable waste management, waste minimization, recycling, reusing, etc.;
- Provide technical and capacity building support, including modern software and climate modeling tools, intensive staff training sessions on data collection and processing techniques for Greenhouse Gas inventory and Climate Change assessment reports for relevant units of the Ministry of Ecology and Natural Resources and State Committee of Statistics of Azerbaijan;

As a conclusion, it should be mentioned the importance and usefulness of ENPI-SEIS project is fully perceived by all governmental actors. This was observed during all bi-literal and multi-literal meetings during country visit in July 2011. The above-mentioned recommendations are representing their point of view and they are all open to closely collaboration.



**Section II. Greenhouse gases effect**

Row code	Code of polluting substances	Polluting substances	Atmospheric emissions		Emissions normative of polluting substances	
			During repoted period	In previous year	Permitted limit of emission	Temporarily agreed limit of emission
A	1	B	2	3	4	5
201		Carbon (CO <sub>2</sub> )				
202		Nitrogen 1 oxide (N <sub>2</sub> O)				
203		Methane (CH <sub>4</sub> )				
204		Hydro-fluorcarbons (HFK)				
205		Sulpherfluorid (SF <sub>6</sub> )				
206		Perfluorcarbons (PFK)				
207						

Annex 2: Statistical forms for environmental data collection (water quality)

Section II. Floated water and its quality

Thousand m<sup>3</sup>

Row Code	Name of recipient	Codes				Distance from recipient km	Total	Water objects							By relief	
		Type of recipient	Recipient entity	Quality category of water	Water object			Total	o cümlədən:				Total	including:		
									Cleaned due to norms in cleaner settings	Polluted		Percolation, exhalation areas		Collectors		
										Mechanic	Biologic				Without cleaning	Not enough cleaned
A	B	C	Ç	D	E	1	2	3	4	5	6	7	8	9	10	11
2.1.																
2.2.																
2.3.																
2.4.																
2.5.																
2.6.	Permitted															

Row code	Composition of water floated into water facilities, tons																Metals, kgs			
	OBT	OKT	SAM	Oil products	Dependent substances	Minerality	HSO <sub>3</sub>	SO <sub>4</sub>	Cl	NO <sub>2</sub>	NO <sub>3</sub>	Ca	Mg	Na+K	NH <sub>4</sub>	Fe	Cu	Al	Zn	
	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
2.1.																				
2.2.																				
2.3.																				
2.4.																				
2.5.																				