TWINNING PROJECT FICHE

Ministry of Ecology and Natural Resources of the Republic of Azerbaijan

1. Basic information

Programme: ENPI-Annual Action Programme 2012 for the Republic of Azerbaijan **(CRIS number: ENPI/2012/023411)**

1.1 Twinning number: AZ/15/ENP/EN/43

1.2 Title: Upgrading the National Environmental Monitoring System (NEMS) of Azerbaijan on the base of EU best practices

1.3 Sector: Environment

1.4 Beneficiary country: Republic of Azerbaijan

2. Objectives

2.1 Overall objective:

To improve environmental performance of Azerbaijan

2.2 Project purpose:

To strengthen environmental monitoring system ensuring provision of the high quality information that does support strategic environmental policy planning and compliance control

2.3 Contribution to National Development Plan/Cooperation Agreement/Association agreement/Action plan

2.3.1. EU-Azerbaijan agenda

After its enlargement in May 2004, the EU faced a new geopolitical situation and adopted the **European Neighbourhood Policy (ENP)**[1], which is a new framework for the relations with its neighbours. The ENP aims to go beyond the existing Partnership and Co-operation Agreements to offer neighbouring countries the prospect of an increasingly closer relationship with the EU with the overall goal of fostering the political and economic reform processes, promoting closer economic integration as well as legal and technical approximation and sustainable development.

The central element of the ENP is a bilateral **Action Plan (AP)**[2] which clearly sets out policy targets and benchmarks through which progress with an individual neighbouring country can be assessed over several years. The AP defines a considerable number of priority areas.

With regard to reforms in the environmental sector, the EU and the six Eastern partnership countries adopted a Roadmap at the autumn Eastern Partnership (EaP) 2013 Summit in Vilnius which aimed at monitoring the Eastern Partnership reform process including in the area of environment. To recognize the importance of environment under the Eastern Partnership, a flagship initiative focused on strengthening environmental governance was launched and allowed to extend to the partner countries the EU Shared Environmental Information System. In the EaP Riga

[1] http://eeas.europa.eu/enp/index_en.htm
[2] http://pao.az/en/newsfeeds/list-all-news-feed-categories/digital-library/other-related-eu-documents/74-euazerbaijan-action-plan/file

Declaration in May 2015 environment was stressed as one of priority areas for co-operation with the Eastern partners - regarded as being mutually beneficial from both an environmental and economic perspective.

The EU–Azerbaijan European Neighbourhood Policy Action Plan (ENP-AP) of 14 November 2008 sets out the following priorities to be pursued (Chapter 4.6.3.):

- Take steps to ensure that conditions for good environmental governance are set and start implementing them:
  - ✓ Ensure strategic planning of environment issues and coordination between relevant actors;
  - ✓ Improve procedures regarding access to environmental information and public participation, including implementation of the Aarhus Convention;
  - ✓ Prepare regular reports on the state of the environment;
  - ✓ Reinforce structures and procedures to carry out environmental impact assessments including adoption and implementation of relevant legislation;
  - ✓ Establish communication strategies on the benefits of environmental policy.

- Take action for prevention of deterioration of the environment, protection of human health, and achievement of rational use of natural resources in line with the commitments of Johannesburg Summit:
  - ✓ Develop framework legislation and basic procedures and ensure planning for key environmental sectors, including in particular as specified in the national environmental action plan air quality, water quality, waste management, nature protection and continue the process of convergence with European requirements;
  - ✓ Enhance training and expertise in the field of environment;
  - ✓ Enhance administrative capacities, including for the issuing of integrated permits as well as monitoring, enforcement and inspection;
  - ✓ Take steps to apply Integrated Water Resource Management, enhance prevention of pollution of trans-boundary water resources including through enhanced monitoring and the elaboration of an Action Plan.

The ENP-AP also includes co-operation tools, like Twinning, the Technical Assistance Information Exchange Office instrument (TAIEX) and the Support for Improvement in Governance and Management initiative (SIGMA) , which play an essential role in the achievement of the Action Plan priorities. In particular, the Twinning instrument, which provides for direct co-operation between EU and Azerbaijani public bodies to support institution building activities, has proved to be particularly efficient in policy areas where the expertise required by the beneficiary country exists mainly in the public sector.

2.3.2. Governmental policy and strategy

2.3.2.1 Legislation and strategic documents related to the project

The main relevant documents are:

2.3.2.1.1 Existing legislation and strategic documents

The Current State environmental monitoring system in Azerbaijan has been founded in 1999 with the **law on Protection of Environment**. This is a framework law that is laying legal basis for most of actions held in the field of environmental protection. Paragraph 17 of that law makes a reference to the environmental monitoring.

A **Statute On Rules of Conducting Monitoring of the Environment and Natural Resources** approved by the Resolution of the Cabinet of Ministers (No: 90, dated 1 July 2004) describes the main principles and organisational aspects of environmental monitoring in Azerbaijan. The rules establish the goals and basic requirements (frequency, number of observation points, etc.) for 12 types of monitoring activities that are valid today and which are strictly followed by institutions involved in the state monitoring process. The regulation refers to environmental monitoring of:

- ambient air;
- water bodies;
- land;
- mineral and raw material reserves;
- radioactivity;
- harmful physical impacts on the environment;
- waste;
- biological resources;
- protected areas;
- sanitary and epidemiological monitoring;
- monitoring of natural disasters.

The same legal act also sets the main foundations for the major institutions that are carrying out the environmental monitoring: the National Department of Environmental Monitoring (NDEM) and the Caspian Complex Monitoring Administration (CCMA). Both mentioned institutions are subordinated to the Ministry of Ecology and Natural Resources (MENR).

Azerbaijan has made significant efforts in harmonization of the environmental monitoring system with international practices. Azerbaijan, represented by experts from the MENR and the State Statistical Committee, has been participating in the process of the United Nations Economic Committee for Europe (UNECE) sustainable development and environmental indicators development[3]. As a result of long and thorough consultations, a list of sustainable development indicators has been introduced in Azerbaijan. These indicators are assumed to provide support for the decision making process.

There is legislation in place that is regulating various fields of environment: e.g. Water Code (1997), Law on ecological security (1999), Law on protection of ambient air (2001), Law on protection of human health (1997), Law on hydrometeorology (1998). These laws are relevant for quality standards of specific parts of the environment or for some aspects related to the monitoring process and the use of collected data.

2.3.2.1.2 Legislation and strategic documents under drafting

There are several laws under revision in Azerbaijan.

One of the prepared draft laws is a Law “On Environmental Impact Assessment”. This draft law is a revision of the existing legislation on environmental assessment of plans, programmes and policies (commonly known as Strategic Environmental Assessment, SEA), assessment of development projects (known as Environmental Impact Assessment procedures, or EIA, as abbreviation), some aspects of integrated permitting and smaller scale environmental screening procedures of existing

[3] Guidelines on the Application of Environmental Indicators in the countries of Eastern Europe, Caucasus, Central Asia (EECCA) prepared by UNECE Committee on Environmental Policy in collaboration of the European Environment Agency (EEA)

or planned activities. All these are covered in Azerbaijan by the term of “ecological expertise”. There is a debate about the final name of the law and the scope, but the majority of parties agree that there is a need to revise the existing law(s) and add new aspects of environmental control into the Azerbaijani legislation. This law is considered appropriate for that purpose.

The Law has significance to the environmental monitoring procedures for at least two reasons. First, detailed and quantified information on the state of environment is a crucial part of the environmental and/or social assessment process. In order to give a prognosis on the impact of the proposed plan or programme or development project to the environment, knowledge of current status is needed. Secondly, environmental monitoring provides information for the follow up of the assessment process. Information gathered by monitoring processes does allow assessing effectiveness of preventive and minimisation measures, effect of their implementation in order to control the process. The Law on Environmental Impact Assessment is ought to provide also more solid basis for environmental permitting. The environmental assessment report compiled during the expertise process is a consistent part of the environmental permit.

A detailed list of relevant laws and regulations is attached in Annex 2.

2.3.2.2 State Programmes

The reforms in the field of the proposed project are stated in:

- Development Concept “Azerbaijan – 2020: Outlook for the Future”, approved by the Presidential decree № 800 dated 29 December 2012
- State Program on Poverty Reduction and Sustainable Development in the Republic of Azerbaijan (SPPRSD) for 2008-2015, approved by the Decree of the President of the Republic of Azerbaijan N 3043 dated of 15 September 2008
- State Programme on development of official statistics during 2013-2017, approved by the Decree of the President of the Republic of Azerbaijan N 26 dated 21 December 2012

A. Azerbaijan – 2020: Outlook for the Future

As indicated in Section 11 (Environmental protection and ecological issues) of the Development Concept Azerbaijan – 2020, one of the main targets of the concept is to achieve sustainable socio-economic development from an ecological point of view. The implementation of the necessary measures will be continued in the future to protect biodiversity, neutralise the negative impact of the fuel-energy complex on the environment, eliminate the pollution of the sea and its basin and protect them, restore green areas and effectively protect the existing resources. Along with all other activities in the sector, the concept paper also states that comprehensive reforms will be carried out and the practical steps will be taken during the period covered by the concept:

- to improve the legislation on environmental protection in compliance with advanced international experience
- **to create effective monitoring and supervision mechanisms**

During the period covered by the concept a special attention will be paid to public awareness measures in order to develop international co-operation on the protection of the environment in the country and foster a culture of environmental protection.

B. State Program on Poverty Reduction and Sustainable Development in the Republic of Azerbaijan (SPPRSD) for 2008-2015

One of the nine **strategic goals** of the SPPRSD is the **improvement of environmental situation and ensuring sustainable management of environment** (Section 3.1: Strategic Goals).

As specified in the SPPRSD, environmental sustainability is a cross-cutting issue, and environmental concerns were taken into account in other sectors, particularly economic development and education. To achieve environmental sustainability, the Programme envisages implementing activities in the following priority directions along with others (Section 6.3: Environment):

- sustainable management of the atmosphere
- improving the legal and regulatory framework, monitoring systems and resources for environmental management
- increasing environmental education and awareness

As stated in the SPPRSD, under **improving the legal and regulatory framework, monitoring systems** and resources for environmental management, the **national legal regulatory framework on environmental protection will be brought in line with international regulations and standards, and the requirements of the conventions and treaties to which Azerbaijan is committed as well as the legislative framework will be improved** to better reflect the aims of environmental protection and effective use of natural resources.

C. State Programme on development of official statistics during 2013-2017

The collection of environmental and related socio-economic data as proposed by the UNECE, was adopted in Azerbaijan by **the Presidential Decree dated 21 December 2012, № 2621** on "**State Programme on development of official statistics during 2013-2017"**. The practical issues on implementation, collection and reporting of the sustainable development data, are regulated by the **Decree of the State Statistical Committee** of the Republic of Azerbaijan dated 27 May 2014, № 20/11s "**Environmental indicators system of the Republic of Azerbaijan**". These legal acts represent an attempt to modernise the environmental data collection system and provide a basis for reorganisation of the environmental monitoring system, expanding the scope of monitoring by integrating concept of drivers-pressures-state-impact-response (DPSIR) into the State environmental data management system. There are also gaps in the cause-effect based system that do not allow utilising the concept of DPSIR in its full capacity.

D. Draft Policy and Strategy Plan

Currently there are two draft documents developed by the MENR:

1. Draft Strategy of the Ministry of Environment and Natural Resources for 2015-2017

The Part 5 of the **draft Strategy** does address environmental monitoring and protection of ambient air. The actions foreseen are:

- Development of competent analytical laboratory, compliant with the ISO 17025 standard, adequately equipped, furnished and managed; securing future supply of maintenance service, laboratory supplies and tools.

- Development of continuous monitoring system to monitor of quality of ambient air in large cities to assess air quality, implementation of air quality standards according to the EU Air Quality Directive 2008/50/EU; development and implementation of the air monitoring programmes, integration of direct measurement and laboratory analysis data, increase of knowledge in the staff; improvement of data management, including Internet based data exchange.
- Development of integrated monitoring network of regions, including increase of regional capacity of measurements and analytical laboratories, development of local competence centres with equipment and staff.
- Increase of operational and mobile measurement capacity, use of portable equipment especially for emission monitoring, mobile equipment for ambient air and water quality control.

The draft strategy also mentions a need for better data integration and improvement of data flow for strategic decisions a need for increasing competence of the staff.

2. Draft Action Plan for improvement of the environmental situation and the efficient use of natural resources in Azerbaijan for 2015-2020

Improvement of the monitoring system and protection of atmospheric air are addressed in the **draft Action Plan**.

Three issues are mentioned for the **improvement of the monitoring system**:

- There is a need for quantitative and qualitative indicators describing the state of environment in the regions.
- The existing devices and equipment used for monitoring quality of the atmospheric air in large industrial cities do not meet the modern requirements.
- The information on the state of environment, (air, water, etc.) and of emissions shall be collected regularly in order to better protect the population health.

The main conclusions of the subchapter on **protection of atmospheric air** are:

- Prevention measures are needed to limit emissions from point sources (industry) and mobile sources (road traffic), such as installing equipment with more effective treatment capacity (industry) or improving fuel quality and consumption (road traffic).
- The efficiency of emission measurement from mobile and industrial sources needs to be increased.

2.3.3. International Conventions and Agreements

Azerbaijan has ratified and is a party to numerous environmental international agreements. The full list of international environmental agreements ratified by Azerbaijan is attached in Annex 3.

Here the reference is given to the UNECE Convention on Long-range Trans-boundary Air Pollution (LRTAP). Azerbaijan is a party to this international agreement and has recently started compiling a review on national air emissions together with the European Monitoring and Evaluation Programme (EMEP) specialists. The review highlighted serious data gaps, shortage of skills and lack of experience in systematic air emission evaluation and reporting.

3. Description of the project

3.1 Background and justification

3.1.1. Current situation in the environmental sector

The environmental management system of Azerbaijan was assessed by several external international experts and the results were published in various reports. The most recent review is the UNECE 2nd Environmental Performance Review, EPR (2011)[4].

The environmental sector is undergoing changes in Azerbaijan. The basics of the environmental protection management and administration system do have their roots back in the Soviet era. Due to that inheritance, some of the environmental quality standards are very strict and tough, and the fulfilment of these standards is difficult or impossible to control. The information gathered by the national environmental monitoring system is difficult to use for decision making. The environmental governance itself is under changes. The State and the MENR in particular, are favourable to the introduction of new integrated approaches but these new integrated approaches do not always match with the previous environmental management principles. To support the new approaches, a **modernisation of the environmental monitoring system** is needed.

National environmental monitoring system/network

The current design of the monitoring system is based on the "Statute on Rules of Conducting Monitoring of the Environment and Natural Resources" mentioned above in section 2.3.2.1. The NDEM and the CCMA are in charge of the implementation of this legal act.

At present, the centrally managed monitoring network of the MENR consists of 26 air pollution measuring stations, 29 water quality stations covering the main rivers and the Caspian coastal waters, 19 soil condition sites focusing mainly on industrial soil contamination, and the Central Analysis Laboratory. In parallel with this system, the environment and natural resource departments perform their own monitoring, as does Hydromet, the Ministry of Health, some research institutes the State Amelioration and Water Management Open Joint Stock Company of the Republic of Azerbaijan (SAWM OJSC), MES and Azersu Open Joint Stock Company.

See Section 4 (Beneficiary institution) below for detailed information.

The monitoring of ambient air pollution is conducted by the above mentioned 26 observation posts located in 8 large industrial cities of the country - Baku, Sumqayit, Ganja, Mingachevir, Shirvan, Nakhichevan, Lankaran and Shaki.

The monitoring network of surface water pollution consists of 72 observation posts, 65 vertical and 66 horizontal points. They are taking samples from 43 basic water objects, 27 rivers, 11 lakes, 4 water reservoirs and 1 harbour.

The monitoring works on the pollution of land are implemented in:

- anthropogenic waste – heavy metals (nickel, cobalt, lead, manganese, chromium, zinc, copper, tin, molybdenum, cadmium, vanadium, mercury) in the territory and surrounding areas of enterprises in the big industrial cities such as Baku, Sumqayit, Ganja, Mingachevir, Shirvan

[4] http://www.unece.org/environmental-policy/environmental-performance-reviews/enveprpublications/environmental-performance-reviews/2011/2nd-environmental-performance-review-of-azerbaijan/docs.html

- oil pollutants in the territory and surrounding areas of the oil and oil products enterprises in Shirvan, Salyan, Siyazan and the Absheron peninsula
- nitrates, phosphates, pesticides and herbicides of agricultural land in 24 administrative regions

The monitoring of environmental radioactivity consists of recording 3 times a day the radiation background in 41 observation points disseminated in all regions of the country.

The organisations carrying out monitoring today are measuring and analysing the substances listed in the Resolution No 90 of the Cabinet of Ministries. The equipment and practices are based on standards that are decades old. The organisations are rather monitoring what they are used to and can monitor, than monitoring the substances, which are significant for the environmental quality or people's health. Environmental administration is not often using monitoring data in the policy making process.

Currently, the environment policy of Azerbaijan focuses on the implementation of international environmental conventions and the approximation of the National environmental laws to that EU legislation. The NDEM together with the State Statistical Committee (SSC) are leading the process of adopting of new standards.

3.1.2. Problems (direct and indirect) to be addressed

Environmental pollution concerns the whole world. It endangers stability of ecosystems and consequently of socio-economic balances.

At present, a number of environmental problems such as pollution of water basins as well as the Caspian Sea damages caused due to a change in the level of the Caspian Sea, in some cases ambient air pollution far above prescribed norm, decrease in biodiversity, land erosions and degradation, management of industrial and domestic wastes, require urgent solutions.

One of the principal ecological problems of Azerbaijan – the ambient air pollution – originates from heavy industrial enterprises especially in Sumgayit and Baku,and from oil exploration and oil refineries, incomplete management of associated gases , from burning of untreated household waste and from the flue gases from engines. The primary reasons are: outdated technology, malfunctioning or even lacking end-of-pipe pollution abatement equipment and use of low quality raw materials generating high pollution emissions and waste. Consequences of exposure to air pollution are considerable for human health, especially for vulnerable groups.

The report on the results of the Second Environmental Performance Review, published by the United Nations Economic Commission for Europe (UNECE) in 2011[5], indicates that the air quality monitoring network is underdeveloped and that the current national legal framework on air protection does not reflect the most recent internationally recognised developments in air quality assessment and management. The report is also highlighting legal, institutional as well as capacity problems in this field, the main ones being that the environmental monitoring system does not assist the decision making processes and does not provide relevant and timely information for immediate actions, for compliance control, for strategic planning and for assessing effectiveness of environmental policies.

[5] http://www.unece.org/?id=17343

3.1.3. Related gaps and needs

3.1.3.1 Legal needs (Primary and Secondary legislation)

The main current legislation is the **Cabinet of Ministers resolution** No 90; İt does not fully support the modern approach towards the environmental data use. It provides a framework for the monitoring system itself, but does not in full extent provide information on data that has to be collected. There is a list of main parameters that the state environmental monitoring system has to collect, but this does not meet the current needs of the data used for the design making purposes. There are major changes planned in the Azerbaijani environmental legislation with the new laws on ambient air protection, Environmental Impact Assessment and water protection. These are few examples of the legal acts that will stipulate new environmental quality standards as well. Full list of existing and draft legislation is given in Annex 2.

New draft laws are under discussion in the MENR and other ministries and their outcomes will definitely have an impact on the Twinning Project as new principles and quality targets will be set. However, it is not expected that the project will make a substantive contribution to the legislative process. Although the process is unpredictable, it is assumed that the new international environmental quality standards along with the monitoring principles will be adopted in the nearest future.

3.1.3.2 Institutional needs

As it was mentioned above in section 2.3.2, there are two major institutions subordinated to the MENR, the NDEM and the CCMA that are carrying out the environmental monitoring in Azerbaijan. Both of them are staffed, equipped, and managed. General work practices are relatively well developed. Their main shortcomings are related to the use of modern approaches, technology and techniques for environmental measurement, analysis, data management and analysis, as well as reporting.

Functional gaps and overlaps

In general, both monitoring institutions are complaining about **lack of resources**, including human resources. Each laboratory carries out monitoring and analysis of its own region Operative Monitoring Centre of the National Department of Environmental Monitoring is participating in the sampling and on the basis of citizen' complaints received from citizens through "hot line". There is **no clear division** between planned **regular long term environmental monitoring and short term monitoring** for emissions compliance check.

Consequently, there is a great need for carrying out a comprehensive review of functions and capacities of the departments, which are engaged in the data collection practice - using top down approach. Two directions require specific attention: (i) **separation of information for strategic decisions and** (ii) **of information for operational use**. Strategic decisions are mostly the responsibility of the Ecology and Nature Protection Policy division and operational information is used by the Environmental Protection Department. In addition to this, the identified users of environmental data are other institutions and the general public. Data for all the users is primarily collected by the NDEM and the CCMA. In order to eliminate duplications and fill the gaps in the system, the functions of those two bodies (including their two big laboratories) under subordination of the MENR shall be analysed. Other departments and institutions might also be identified, within the MENR, for their significant role and shall be included in the assessment.

In summary, optimisation of the laboratories within the Ministry is needed.

Data collection, analyses and processing

There are several problems related to the collection of high quality environmental information. Azerbaijan has amended its State strategic level environmental data collection system by adopting a set of environmental indicators suggested by the UNECE. There is also a number of international agreements which Azerbaijan has recently joined or which it is planning to join; consequently Azerbaijan either is already reporting, or is preparing itself for reporting to the secretariats of those conventions. In practice, the data collection and reporting are carried out within the MENR by the NDEM and the CCMA; both, and especially the NDEM, have difficulties in doing so, due to various reasons:

a. One of the shortcomings of the system is that the **communication of environmental information is slow.** For example, the monitoring and transfer of data takes far too long for operational decisions in the cases of exceedances of the limit values. The data on environmental quality is received long after the event occurrence which does not allow determining who is responsible for the pollution. Therefore, corresponding corrections in the environmental data transfer system shall be made. Data collection, processing and transfer shall be optimal for the purpose of data use. Data needed for medium and long term analysis could be transferred slower, but data crucial for immediate actions should be sent from monitoring bodies to decision makers without any delay.

b. The authorities, which collect the information, are **lacking skills** and there are some issues with the reporting formats. At present there are two big laboratories within the MENR: one under the NDEM and another under the CCMA. Methods used for analysing the samples are also not fully compliant with the new international standards; the equipment for analysis and the laboratory premises are old and in some cases obsolete; procedures are inadequate to provide high quality data. Portable equipment is rarely used, continuous measurement techniques are only applied in limited cases and resources of the laboratories are sometimes used inefficiently. All that makes it a necessity to revise methods according to which the environmental data is collected, analysed and processed.

c. Standard methodologies for assessment of completely **new areas** of environmental nuisance such as odour or environmental noise are required.

d. One of the greatest challenges is that the **environmental monitoring has to be integrated into the general environmental management system**. The data that is collected by the monitoring system shall have a value for strategic and operational decisions. This means that it shall provide information that is useful for the decision makers. These data users are the MENR for the strategic decisions, local and/or regional governments, and Environmental Protection Department for operational control.

Continuous Environmental Measurement System (CEMS)

Azerbaijan is currently using CEMS in a few regions for some environmental protection areas. The CEMS is mainly implemented for early warning systems, e.g. radiation levels measurement and reporting run by the NDEM. There is a high potential to develop CEMSs in other environmental areas, especially for operational control; in some fields the CEMS is the only sensible solution for controlling environmental quality and/or emissions. For example, the particulates are not monitored in the ambient air, instead, dust is collected at the monitoring sites and analysed later in laboratory. Therefore, it is merely impossible to take actions on pollution cases and the data is applicable only

for analysing pollution trends. For operational control, by the time the pollution is detected, the event is often over. There is almost no emission monitoring imposed in Azerbaijan. A few installations have installed measurement devices, but most of the reports on emissions and discharges from enterprises are based on mathematical calculations. **In order to improve the data collection and ability to use the monitoring data for decision making, the use of CEMS has to be promoted**. Prior to that, its role has to be established, its relevance for the decision making process (operational and strategic) explained and a systematic approach developed.

Environmental Data Management System and data reporting

The current environmental data management system is rigid and reporting is largely based on printed copies with only a few exceptions. Those exceptions are mostly related to online early warning systems, such as the online survey for radioactivity level. Electronic data collection and transfer would save human resources and allow efficient operational control.

Numerous data reports are compiled by the NDEM and the CCMA on daily, weekly, monthly and yearly basis and passed on paper to the listed authorities. Similarly they receive these data from other stakeholders on paper. Most of these reports are electronically prepared and are based on electronically collected data. Paper is used for reporting only.

The existing monitoring system is not an integral part of the environmental policy making process and of the everyday environmental management procedures. The monitoring data do not support the strategic decisions and do not give feedback on progress of these strategic decisions.

The link between monitoring activities and activities carried out by the various departments of the MENR needs to be reinforced and environmental monitoring data will have to support generation of preventive actions in the cases of non-compliance. As prerequisite, the decision makers will have to describe what kind of information, when and how, shall be presented in order to keep the monitoring system up-to-date and useful.

Data compliance control

Azerbaijan is attempting to impose stricter rules on polluters and implement the polluter pays principle. Part of that is measurement of polluting activities. The monitoring institutions carry out a certain part in the environmental compliance control. Practically, the environmental monitoring personnel are often involved in inspections, which are not relevant to the environmental or sanitary risk concerned. This leads to inappropriate use of resources. *The practice of compliance control and the issuance of environmental permits have to be reviewed and rethought.*

In general, the whole data flow chain needs to be revised, gaps identified for each ring of the chain and improvements suggested. This data flow shall support further data use.

3.1.3.3 Capacity building needs

The staff of the MENR are not used to modern approaches, technology and techniques for environmental measurement, analysis, data management and reporting.

Filling the above mentioned institutional gaps is only possible if the capacity of the concerned staff is sufficiently enhanced.

3.1.3.4 Other needs

Another important bottleneck is located in the laboratories of the NDEM and the CCMA. The laboratories are short of equipment and supplies and therefore the current quality of analysis is not completely meeting international standards.

The laboratories are not part of the inter-calibration scheme and rarely perform cross-calibration test. Only some areas of their activities follow standard procedures. Laboratory management systems are not fully implemented.

It is assumed that the project, from the perspective of environmental data and quality assurance needs, will analyse the capacities of the laboratories and propose schemes for changes - e.g. considering merge of the two main laboratories -, assist in creating the ISO 17025 compliant laboratory quality management system, etc. These actions shall enable the NDEM and the CCMA laboratories to perform international cross calibration activities.

3.1.4. Introduction to the project

The project will assist in clarifying the functions within the MENR with regards to environmental data collection, processing and reporting. It shall define clear roles and responsibilities of the various departments and institutions under the MENR (who is doing what) in synergies with other relevant projects and activities (see section 3.2: Linked activities). The Twinning Project should assess the functional capabilities of the two big laboratories within the NDEM and CCMA and propose recommendations for further reorganisation of the laboratory network within the Ministry.

The project shall assist in building up a system for environmental data collection, processing, transmission, analysis and communication that does provide high quality reliable information for operational control, as well as for the long and medium term strategic planning. Main focus of the Twinning Project is on the air governance.

There are two main areas to be covered by the project: (i) sampling, measurement and laboratory analysis practises and (ii) data handling and management, data processing and reporting.

i. The project team shall screen and analyse the current environmental sampling and measurement practices. Monitoring shall allow provision of information on the state of environment represented by the data on environmental quality and consecutive assessment of efficiency and effectiveness of the environmental policies.

   Main focus is on the ambient air quality assessment. Quality of the ambient air, especially in regards of content of priority pollutants has to be analysed according to the present EU standards. Azerbaijani standards are set to be harmonised with these. Basics of the standards and the monitoring system were already developed by the EU ENPI Air Governance project, completed in 2014. This Twinning Project shall assist in implementation of recommendations of that project (see below in page 14, section on linked activities).

   The project shall review environmental data collection system and assist in built up of high quality environmental data preparation system. The system shall consist of modern sampling, measurement and analysis methods, practices and techniques.

ii. The project shall assist the NDEM in applying integrated monitoring and reporting system. The project team will describe the procedures and processes for data collection based on the use of data by the environmental authorities in Azerbaijan. The project will assist in filling in the gaps in the existing monitoring and reporting system within the NDEM and other relevant departments of

the MENR. Introduction of new electronic data reporting formats and practices based on actual data needs (strategic and operational) is expected from the Twinning project.

Systematic and integrated approach shall be proposed by the project and this will be tested in practice. It is proposed that the integrated ambient air quality shall be the test area. The need for the air quality information is defined in the draft law on Atmospheric Air and it is expected that the project does assist in creation of the monitoring system for air quality governance. The air quality data will be based on the emissions calculations and shall be used for the operational control over polluting activities, including inspections. The other area of data use is strategic planning. It is expected from the project that it will assist in the establishment of strategic air quality data processing. The project shall support data collection and reporting for the Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP). Assistance in application of computer based analysis techniques such as computer modelling for air emission calculations for the EMEP reporting is expected from the project.

The project will also assist in clarifying the main areas of strategic and operational use of environmental data. Data collection and processing techniques in these broad areas differ significantly. As an example, for the operational use the data transfer shall be quick as the time is a critical factor to avoid damage to people, nature or property. Data for strategic level decisions is less time sensitive and the reports could be compiled and transferred at a lower pace.

iii. The Twinning Project should identify and address any shortcoming in the staff capacity of the NDEM and the CCMA as well as other departments of the MENR and the related institutions mentioned below in section 4. Although staff within both main departments – the NDEM and the CCMA – have benefited from previous projects which included some capacity building elements through workshops, training and study visits, the approach to training should be more structured and meet the needs of the MENR and other related institutions.

3.2 Linked activities

3.2.1. Other related EU activities

Majority of the EU funded environment oriented projects in Azerbaijan had a regional scope, covering a Black Sea and/or Caspian Sea region, or EU neighbouring countries. There have been a number of regional projects carried out over the past decades in the EECCA region. Hereby it is worth to mention larger scale project with more significant outputs and that have relevance to environmental data management and environmental monitoring in the order of their completion.

Ongoing regional programmes and projects

A. Environmental Protection of International River Basins Project (ENPI-EPIRB) Project[6]

Duration: February 2012 – December 2015

The project was designed to reinforce the current actions in environmental protection and water resources management, supported by previous EU funded trans-boundary projects in the region in terms of cooperation as well as convergence towards the principles of Integrated Water Resources

[6] www.blacksea-riverbasins.net

Management (IWRM) and the EU Water Framework Directive (WFD), by joint development of River Basin Management Plans (RBMPs) in selected pilot river basins of the wider Black Sea region.

The overall objective of the project is to improve water quality in the trans-boundary river basins of the wider Black Sea region, including **Azerbaijan,** Georgia, Moldova, Ukraine, Armenia and Belarus.

The specific objectives of the project are:

- to improve availability and quality of data on the ecological, chemical, and hydro-morphological status of trans-boundary river basins including groundwater;
- to develop River Basin Management Plans for selected river basins/sub-river basins according to the requirements of the WFD.

From the environmental monitoring viewpoint the project has been contributing to the increased capacity of the WFD compliant monitoring. It has reviewed current data and assessment tools availability, assisted in compilation of the WFD-compliant **monitoring programmes**, drafted **training programmes on monitoring** and **carried out laboratory QA/QC**.

So far the project has developed three guiding documents, which have relevance to the water monitoring:

- Guidelines for Groundwater Monitoring in the Pilot River Basins of Caucasus Countries (Armenia, Azerbaijan and Georgia);
- Surface Waters Monitoring Programme in the Central Kura River basin, Azerbaijan;
- Rapid Biological Assessment (RBA) based on analysis of benthic macro invertebrate communities.

The project has been making contributions in two major areas that have an impact on the Twinning Project. The biggest impact is the assessment of the NDEM and CCMA analytical laboratories. Foreign consultants have provided assistance in the introduction of new methods (e.g. the RBA mentioned above); laboratory capacities have been evaluated as well as some effort has been put into improving the laboratories QA/QC system. Another area where the results of the project might be relevant is related to the data use for strategic development as the integrated river basin approach is containing a component of programme of measures. Development of measures, monitoring progress and assessment of effectiveness and efficiency of the programme shall be based on adequate environmental data. Water related data processing is a part of the ENPI-EPIRB Project.

It is expected that the Twinning projects will strongly analyse and consider the related outputs of this projects to avoid future duplications and overlapping.

B. "Greening Economies in the European Union's Eastern Neighbourhood" (EaP GREEN) Programme (regional)

Duration: 2013-2016

The programme is financed by EU and jointly implemented by OECD, UNECE, UNEP, and UNIDO to assist the European Union’s Eastern Partnership countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine) in their transition to green economies by decoupling economic

growth from environmental degradation and resource depletion and by promoting sustainable consumption and production strategies.

The programme objectives are:

- Mainstreaming sustainable consumption and production (SCP) into national development plans, legislation and regulatory framework so that sound incentives are provided for development in line with policy commitments and good international practices, including those encouraged in the European Union;
- Promoting the use of the Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA) as essential planning tools for an environmentally sustainable economic development; and
- Facilitating the greening of selected economic sectors (manufacturing, agriculture, food production and processing, construction).

In line with the EaP GREEN objectives, the programme's activities are structured around three components:

- *Governance and financing tools;*
- *Strategic environmental assessment (SEA) and Environmental Impact Assessment (IEA); and*
- *Demonstration projects.*

The project has significance from the viewpoint of improving the environmental assessment system in Azerbaijan. The project assists in the introduction of strategic assessment in Azerbaijan by the pilot study and several activities, including review of the currents system of SEA (August 2014), and has been helping to integrate the principles of strategic assessment in to the draft law on environmental impact assessment (state expertise). Environmental assessments that are managed by the Department of the Environmental Expertise at the MENR are a core part of environmental permitting/licensing system in Azerbaijan. Good quality data is essential part of decision making for SEA, EIA and environmental licensing.

Completed regional projects

C. Air Quality Governance project[7]

Duration: January 2011 – December 2014

The project supported participating countries in:

- improving their respective institutional and legislative frameworks in line with the European standards and implementing multilateral environmental agreements and conventions
- the cooperation between key stakeholders in the region and helped raising public awareness regarding air quality issues

The project has assessed status of air quality and air governance in Azerbaijan and has produced several documents that have significant relevance to the development of an air quality management system. The documents of high relevance are:

[7] www.airgovernance.eu

- A ***gap analysis*** for all countries including Azerbaijan, which can be found in the project's final report
- *A* ***strategy on air quality and air governance*** presented for adoption to the MENR in April 2014. The main objectives of the strategy have been incorporated into the new general environmental monitoring action plan.

The strategy includes numerous actions and outlines the indicators, which can be used for measuring its implementation. The three main components are:

- development and modernisation of air quality monitoring system
- improvement of air quality modelling and development of emission databases
- amendments to the existing legal acts and development of several new ones, all in line with the European air quality management related legislation
  - ✓ In general the 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, the Industrial Emissions Directive 2010/75/EU
  - ✓ More specifically the EU Air Quality Standards: Harmonizing with Directive 2008/50/EC on ambient air quality and cleaner air for Europe; The fourth Daughter Directive 2004/107/EC relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air; Decision 97/101/EC on the exchange of information and data from networks and stations measuring ambient air quality within Member States.
  - ✓ In relation to the mobile pollution sources: Regulation (EC) No 715/2007 of the European Parliament and of the Council of 20 June 2007; Commission Regulation (EC) No 692/2008 of 18 July 2008
  - ✓ Fuel quality legislation: Regulation (EC) No 715/2007 of the European Parliament and of the Council of 20 June 2007; Commission Regulation (EC) No 692/2008 of 18 July 2008;Regulation (EC) No 595/2009 of the European Parliament and of the Council of 18 June 2009

Changes have been proposed to the Azeri legislation. The proposed changes in air governance include continuous measurements for ambient air monitoring, use of computer modelling for pollution prediction, etc.

The results of this project are forming a solid theoretical basis for the Twinning Project.

A summary of the project recommendations is in Annex 5.

D. "Towards a shared environmental information system (SEIS) in the European Neighbourhood' (ENPI-SEIS) project[8]

Duration: December 2010 – March 2015

This project aimed at introducing European Union best practices in environmental governance in the Eastern Partnership. The project is a part of a larger long-term programme aimed at harmonisation of environmental data and improvement of data management capacity.

Coordination of the ENPI-SEIS project has been carried out by two National Focal Points (NFP) representing the Ministry of Ecology and Natural Resources (MENR) and the State Statistical Committee (SSC) of Azerbaijan. The same two NFPs for Azerbaijan have been engaged in the

[8] http://enpi-seis.pbe.eea.europa.eu

ENPI-SEIS project since its beginning in 2010. The result of the project is mentioned in the new environmental indicators system. In addition to that project a pilot action is taken within the NDEM to compile a report to the LRTAP Convention, using the EMEP recommendations.

E. Caspian Water Quality Monitoring and Action Plan for Areas of Pollution Concern[9]

Duration: December 2006 – May 2009

The project originates from the framework for the Caspian Environment Programme/Teheran Convention. The project addressed regular water quality monitoring of the Caspian Sea. The countries around the Caspian Sea have committed themselves to creating joint management structures for the environmental management of the Caspian, and including a Regional Water Quality Monitoring Programme as one of the specific activities.

This project assisted the littoral countries in:

- the design of a new Regional Water Quality Monitoring Programme, including agreement for key monitoring locations, harmonised methodologies, indicators, protocols and administration/management arrangements as well as data reporting and data exchange procedures; thereby the project contributed to an improved quality of the marine and coastal environment;
- the development of the pollution action plans for specific areas of pollution concern;
- collection, analysing water and sediment samples;
- an assessment of the relative strengths and weaknesses of the laboratories in the region through an inter-calibration exercise with international laboratories;
- an assessment of pollution areas of concern ("hot spots"), the updating of pollution assessments and the identification, prioritisation and costing of remediation actions;
- improvement of capacity through training and workshops.

The project made an in-depth assessment of current monitoring practices and capabilities of the environmental laboratories in the region. On the basis of the assessment an inter-calibration exercise was designed. Samples from the Caspian were sent for analysis to laboratories of the littoral Caspian countries, and to three international reference labs.

The results of the inter-calibration exercise allowed laboratories to prepare themselves for working with the samples they received from the cruises organised in every country. The cruises took place in the autumn of 2008.

A baseline inventory has been made of the land based pollution sources with (potential) impact on the Caspian. Sources have been prioritised and an activity schedule for preparation of pre-feasibility studies for selected priority sites has been prepared.

[9] http://iwlearn.net/iw-projects/596/workshops/synopsis-inception-workshop-for-the-project-201ccaspian-water-quality-monitoring-and-action-plan-for-areas-of-pollution-concer

There are two major outcomes of the project relevant to the Twinning Project: international laboratory cooperation, including inter-calibration, and a number of local actors trained under this project.

F. Upcoming European Union project – ENPI SEIS II

Duration: The indicative duration of the project is 60 months

There is a continuation planned for the project on Environmental Information Systems in the ENPI countries (see above the project D). The project "Implementation of the Shared Environmental Information System principles and practices in the Eastern Partnership countries (SEIS East)" is expected to start in December 2015.

The objective of the proposed project is to further support the implementation of SEIS principles and practices in the six Eastern Partnership countries, as a tool for improving the quality, availability and access to environmental information to the benefit of effective and knowledge based policy-making and to improve good governance in the field of the environment. The project will allow for the timely delivery of the partner countries' environmental reporting obligations (data flows) to the United Nations regional and global conventions and in producing the corresponding indicators with the required high quality.

Three main expected project results are:

(i) Improved implementation of international commitments related to environmental reporting in line with EU best practices
(ii) Improved capacities in the national administrations to produce, manage and use environmental statistics, data and information in decision-making in line with EU best practices
(iii) Preparation of regular State of Environment reports and indicator-based assessments in line with EU best practices

The ENPI-SEIS II project is aimed at strengthening the environmental data handling and reporting capacity within the ENPI countries, including Azerbaijan. The two projects do not overlap: (i) the ENPI-SEIS II is mostly concentrating on improving the national capacities related to environmental data management and provision/sharing in line with EU environmental practices, whilst (ii) the Twinning project is looking on initial data collection, processing and analysis. Therefore the projects are complementing each other and not competing. The Twinning project shall assist collection of high environmental quality data that will be used for national reporting. Briefly the ENPI-SEIS II project will be using, for some reports, environmental data, which is collected and processed with the assistance of the Twinning project. Although the scope of data is much wider for the national reporting and covers far more areas compared to the Twinning project.
The summary of the project is attached in Annex 6.

It is expected that both the regional project and the Twinning project will interact during implementation. Therefore, close coordination and cooperation with the envisaged National SEIS committee as well active participation of the project coordinator in the Twinning project Steering Committees should be ensured.

3.2.2. Related international initiatives

Other donor organisations financed several projects in the field of environmental protection (OECD, World Bank, Asian Development Bank, etc.). Environmental monitoring was usually not specifically addressed in these projects

There is no other significant ongoing projects on environmental monitoring.

3.2.3. Related national initiatives

There are no other major national initiatives identified.

3.3 Results

3.3.1. Result 1: Roles and responsibilities within the MENR in regards to environmental data collection, processing and reporting were revised and streamlined, organisational changes were elaborated and endorsed by the MENR

3.3.1.1 Description

The result is aiming at clarification of the functions within the MENR in regards to the collection of data, its analysis and processing as well as further use of reported environmental information.

One of the challenges for the project team will be to map out the main institutions involved in environmental monitoring, to clarify the needs of the organisations using the monitoring data, to assess the existing structures and their capacities thoroughly and to propose changes in order to eliminate duplications and fill the gaps in the system.

*During the contract negotiation period, the project team in close coordination with the EU regional **ENPI SEIS II project,** shall revise the key output indicators and relevant activities of the result and re-design them, based on the related achievements and planned activities envisaged under project (see section 3.2.1.E)*

It is important to stress hereby that the data collection and processing shall take into consideration not only the existing data uses, but also the expected environmental quality data, which will be largely based on the EU environmental quality standards. If the legislation to transpose the new quality standards is not in place by the start of the project, the project shall take into account the results of the relevant completed and ongoing EU projects on air and water governance.

The project team should prepare a restructuring plan according to the results of the functional analyses, including changes in the statutes and suggestions for revision of the job descriptions.

Activities to be implemented under this result will contribute towards the implementation of the proposed reforms which may optimise the functioning of each institution and strengthen as well as increase effectiveness and efficiency of the NEMS performance.

3.3.1.2 Key output indicator(s)

- Functional analyses of institutions and departments of the MENR involved to the environmental monitoring to define gaps and overlaps carried out recommendations for effective use of resources of the MENR and for improvement of decision making developed

- New organisational structure and restructuring plan to modernise departments and sectors responsible for environmental monitoring drafted and endorsed by the MENR
- Statutes for the new organisations drafted and endorsed by the MENR
- Job profiles and descriptions for relevant positions elaborated and endorsed by the MENR

3.3.2. Result 2: Environmental monitoring system was modernised with an enhanced data collection, processing, control and reporting system

3.3.2.1 Description

This result is designed to strengthen the institutional capacity of the MENR through:

- evaluation of the whole information flow chain, identification of gaps and upgrading/ improving an environmental data collection, analysing, processing, control and reporting process
- identifying a new data sources and expanding the scope of the data to be monitored
- performing a gap analysis of the Azerbaijani standards and required technical standards on sampling, measurement and analysis as minimum for air quality assessment and prioritisation of listed standards, drafting a work plan for further elaboration as well as upgrading the standards
- introducing a new internationally recognised indicators such as new air pollutants such as PM10, PM 2,5, etc.
- establishing computer electronic database(s) for the environmental data and introducing an Integrated Electronic Environmental Database Management System (IEEDMS)
- improving and streamlining of the laboratory capacity as well as developing an action plan for the laboratories to meet the ISO 17025 laboratory quality management standard as a further goal
- integrating Continuous Environmental Measurement Data with the Data collection system and upgrading reporting, communication and usage of the environmental data

3.3.2.2 Key output indicator(s)

- A gap analysis carried out and a list of technical standards required for sampling, measurement, testing and laboratory practises, which ensures a collection of high quality information on air, water and soil quality for compliance control, compiled
- A work plan for adoption of the technical standards drafted and submitted to the Technical Committee on Environmental Standards (the MENR and the SSC)
- Priority national standards aligned with the international ones and new (missing) standards for environmental data collection and processing, environmental monitoring put in line with the European Union requirements and other international agreements developed and endorsed by the MENR
- Technical specifications for laboratory upgrading, meeting the needs for compliance control with new environmental quality standards elaborated and endorsed by the MENR
- A detailed action plan to meet the QC/QA (ISO 17025 requirements) by the laboratory envisaged and endorsed by the MENR
- Revised standard operative procedures (SOPs) for the laboratory quality management system endorsed by the MENR
- Action plan compiled and endorsed for promotion of company self-monitoring and integration of the Continuous Environmental Measurement Data with the Data collection system
- Automatic monitoring stations, including their locations, specified

- At least, the following low cost or no cost freeware computer models installed:
  - ✓ Emission and pollutant dispersion models for air quality assessment acquired (preferably no cost or low cost models, e.g. US EPA Aeromod or similar)
  - ✓ Model for the emission inventory calculation (e.g. EMEP/ Corinair) for air emissions
- Simple (no cost) Electronic Environmental Database(s) established and operational
- Integrated Electronic Environmental Database Management System (IEEDMS) for environmental management purposes developed and in-use at the MENR.

3.3.3. Result 3: Capacity of the MENR in regards to environmental data collection, processing, analysis, reporting and communication was increased

3.3.3.1 Description

This result is aiming at building capacity of the MENR staff on integration of environmental data gathered by the monitoring into environmental management practices.

The Twinning Project should develop structured training programme and packages on the basis of the identified needs by carrying out training need analyses, developing trainings packages for both management and technical level staff, delivering awareness raising workshops, training sessions, including training the trainers, study visits and internships as well as elaborating a training manual to support the long term sustainability of the project.

3.3.3.2 Key output indicator(s)

- Awareness raising workshops (including an introduction to environmental quality standards set in the Air Quality Directive guidance on how to monitor compliance with the requirements of those environmental quality standards) based on the EU Acquis principles, delivered
- Training Needs Analysis carried out and report developed
- Training Programmes for the NDEM and the CCMA staff as well as departments and divisions of the MENR involved to the environmental monitoring developed and endorsed by the MENR
- Training manual elaborated and approved by the head of the administration
- Training packages elaborated and approved by the head of the administration
- 2 internships carried out for the environmental specialists involved in environmental reporting for the EMEP
- Study visits on environmental laboratory services and on-line monitoring experience with demonstration of automatic data collection, transfer and processing carried out
- At least 50 MENR staff trained through training sessions and on-the-job training in accordance with the new Training Programme
- At least 8 trainers trained

3.3.4. Result 4: Environmental data collection, processing, analysis tested in real cases and environmental information communicated

3.3.4.1 Description

This result is the practical implementation of the results 1 and 2. It is suggested that the Twinning Project will demonstrate in practice how to use environmental data in analysis, using modern computer based technologies, test and adjust them. As an example, the air pollutant dispersion modelling will give more accurate data on pollution levels on local and regional scale, using emission data, data that is retrieved from other databases and meteorological data. Modelling is

used for emission calculations on the national scale. Success of the modelling depends on the quality of the collected data.

3.3.4.2 Key output indicator(s)

- A programme for modelling developed based on new methodologies and procedures as well as introduced internationally recognised indicators and tested for:
- pollutant dispersion modelling for compliance control
- air emissions inventory and reporting for the EMEP reporting
- data flow in the IEEDMS
- Environmental data communication and dissemination strategy developed and endorsed

3.4 Activities

In order to meet the specific mandatory results of this project, the partners may agree on alternative or complementary activities and outputs to those identified in this section.

Project kick-off event

A meeting aiming at presenting the Twinning project to the main involved stakeholders shall take place at the beginning of the project implementation

Quarterly meetings of the Steering Committee

The SC meetings to be chaired by the MS PL and BC PL shall be organised every three months to review main achievements all activities carried out during the previous quarter he project achievements discussed and plan of activities for the next quarter discussed

Mid-term visibility conference

A conference shall present the main results achieved during the first year of the project and shall be organised not later than the fifth quarter of the project

The conference might be jointly organised with the ENPI SEIS II project for better awareness raising and addressing the complementarities between the two projects

Final conference (Project closing event)

A conference shall present the main results achieved during the project implementation and shall be organised before the conclusion of the project

Activities related to Result 1:

✓ Establishment of a senior level **Environmental Policy and Planning Working Group** chaired by a Deputy Minister or another appropriate Ministry of Ecology and Natural Resources senior manager (such as Head of Policy Department) with the RTA as one of its members and definition of rules of operations

A senior level Working Group, consisting from representatives of key beneficiary departments of the MENR and relevant stakeholders, including the national Focal Points of the upcoming ENPI SEIS II project as well as the RTA - is defined as a group formed by experts in the environmental field. The mission of the Working Group is to receive and utilise the results of the situational analysis of Azerbaijan's environmental monitoring sector governance system.
The main task of this Working Group will be to approve or to prepare the final draft of statutes of environmental monitoring department.

✓ Preparing and carrying out of a functional review (vision, mission, roles, functions) departments of the MENR involved in monitoring, permitting, compliance control, inventory and reporting

- ✓ Preparing of a plan for the restructuring of the monitoring, permitting, compliance control, inventory and reporting activities within the MENR based on the outcomes of activities mentioned under results 1 and 2 (first activity), and defining the roles, responsibilities, functions and tasks of each of the related department/sector
- ✓ Revising and drafting statutes of relevant departments/divisions
- ✓ Revising and updating the job profiles and job descriptions for relevant positions

Activities related to Result 2:

- ✓ Performing a gap analysis of the Azerbaijani standards and required technical standards on sampling, measurement and analysis as a minimum for the air quality assessment and prioritisation of listed standards
- ✓ Drafting a work plan for further elaboration (if needed) of standards listed as a result of gap analysis
- ✓ Aligning the priority national standards with the international ones on establishment of quality of environment (e.g. surface and groundwater, ambient air and soil, nuisances as noise, odour etc.), on sampling and measurement techniques, on sample taking, handling, transport, continuous measurement, etc. and elaborating new standards (if needed)
- ✓ Revision and assessment of the existing laboratory equipment in regards to the new environmental quality standards
- ✓ Drafting technical specifications for the required equipment
- ✓ Auditing laboratory quality management system against ISO 17025 standard
- ✓ Preparation of the action plan for QC/QA system
- ✓ Revising existing quality management documentation and drafting missing documents (e.g. SOPs)
- ✓ Integrating continuous environment monitoring data to the data management system
- ✓ Compiling an action plan to promote company self-monitoring
- ✓ Specifying locations for the automatic monitoring stations
- ✓ Selecting and installing low cost/no cost computer model for air pollutants dispersion modelling
- ✓ Installing the emission inventory model for reporting
- ✓ Carrying out of (i) hardware (inventory of existing equipment) and software (inventory of existing websites, intranets and databases) needs assessment; (ii) staff training needs assessment in ICT
- ✓ Prepare a comprehensive technical specification for the development and installation in MENR of the necessary software – Integrated Electronic Environmental Database Management System (IEEDMS) for environmental management purposes which can generate reports on the state of environment
- ✓ Procure the development and installation in MENR of the necessary software –an Integrated Electronic Environmental Database Management System (IEEDMS) on the basis of previous activity
- ✓ Prepare and precise specifications for the reorganisation and transfer of the existing data to the new IEEDMS
- ✓ Prepare the Standard Operating Procedures (SOPs) for the IEEDMS in conjunction with the User Manual provided by the software supplier

Activities related to Result 3:

- ✓ Carrying out a training needs analysis
- ✓ Developing training programmes and toolkits
- ✓ Delivering awareness rising workshops on environmental quality standards based on EU Directives

- ✓ Delivering trainings, including training for trainers (to enable them to carry out trainings for the private sector as well)
- ✓ Developing and carrying out internships for at least two persons involved in modelling of air emissions and dispersion and emission inventory according to the international agreements
- ✓ Developing and delivering study visits for BA senior levels and junior level staff

Activities related to Result 4:

- ✓ Designing a programme for testing in real cases, the whole chain from data collection to decision making/permitting/expertise/inspection, including application of computer modelling for air pollutants dispersion
- ✓ Supervising the implementation of programmes in the area of air quality assessment, emission and air quality data use by Expertise Department and/or Inspectors
- ✓ Designing a programme for testing in real cases the entire chain from data collection to reporting, including application of computer modelling for air pollutants
- ✓ Supervising the implementation of application of computer calculation and modelling programmes for emissions inventory for the EMEP reporting, preparation of the State of Environment reports
- ✓ Designing and implementation of the public awareness campaign, including publishing the environmental data on the MENR website

3.5 Means/ Input from the MS Partner Administration

The MS partner administration is expected to provide the Project Leader (MS PL) and Resident Twinning Advisor (RTA) as well as a team of short term experts to support them in the implementation of project activities.

The implementation of a Twinning project requires the Commitment of the two project Leaders, appointed in the MS and the BC administrations respectively. The MS Project Leader should be a high-ranking civil servant or equivalent staff commensurate with the requirement for an operational dialogue and backing at political level, therefore (s)he cannot come from an ad hoc mandated body. The MS Project Leader is not an adviser, he/she directs the implementation of the project.

The MS PL is the key link between the partners, acting at an overall operational and strategic level The MS PL is complemented by the RTA. The RTA is seconded and resides in the BC for the entire duration of the project. (S)he and co-operates day-to-day with the BC partners and the MS short-term experts (STEs). STEs will work in Azerbaijan on the basis of specific Terms of Reference (ToR) which will be designed by the RTA for each mission and approved by the together with the Beneficiary.

It has proved to be an advantage for the project implementation in previous Twinning projects when the MS has designated a senior STE to be responsible for each mandatory result/component of the project (i.e. a component leader) and to liaise with the respective component leader to be nominated by the BC PLA. The BCA will nominate counterparts to these key roles (see section 6.3).

The required MS experts must either be civil/public servants of the relevant MS administration or be permanent staff of authorised mandated bodies. All experts must comply with the requirements set in the Twinning Manual.

The nature of work for technical assistance abroad implies strong initiative, good analytical, interpersonal and language skills. All experts shall possess these qualities.

The RTA should be assisted by a full time project assistant for providing translation and interpretation services on a daily basis and for performing general project duties. The cost of the RTA assistant will be funded by the project. The recruitment procedure may be launched before the signature of the Twinning Contract but the RTA assistant may not start to work and corresponding costs will not be eligible before the start of the Twinning contract .

A full-time interpreter/translator may also be recruited in Azerbaijan and funded by the project. (S)he will perform most of the required interpretation/translation services. Whenever required and needed on a clear justified request, e.g. for simultaneous interpretation during seminars and workshops, additional interpretation may be procured and funded by the project. (S)he will provide day-to-day interpretation/translation to the RTA and project experts during meetings.

3.5.1. Profile and tasks of the Project Leader (PL)

The Project Leader (PL) from the MS should be a high-ranking civil servant or an equivalent senior manager in a MS national environmental body with sufficient work experience in the field relevant to the project.

The PL will supervise and coordinate the overall thrust of the project; (s)he will direct the project and will ensure that all the required strategic support and operational inputs from management and staff of the MS side are available. Together with the Beneficiary PL, (s)he will organise the Project Steering Committee (PSC) meetings. **The MS PL would continue to work in her/his MS administration but should devote a minimum of three working days per month to the project in Azerbaijan with an on-site visit to Azerbaijan at least every three months to participate in the project SC meetings.**

Profile:

Qualification and skills

- An university degree in environmental or another relevant discipline and experience in the national implementation of international instruments
- Good command of written and spoken English

General professional experience

- Preferably at least 7 years of professional experience at a senior management level in her/his MS public service in the environmental sector
- Experience in project management

Specific professional experience

- Broad knowledge of current EU-policies, existing structures and methods in the sector
- Experience in environmental strategy and/or policy making, environmental monitoring
- Experience in the ECCA countries and/or in EU environmental approximation process in an accession countries would be an asset
- Specific experience in the management of the implementation of international instruments would be an asset
- Experience in EU funded projects would be an asset

Tasks:

- Liaising with the BC Administration at the political level

- Overall co-ordination, guidance and monitoring
- Ensuring the direction of the project work
- Ensuring the achievement on time of the mandatory project results
- Ensuring the availability on time of MS-Short Term Experts and other MS resources
- Executing other administrative tasks

3.5.2. Profile and tasks of the Resident Twinning Advisor (RTA)

The Resident Twinning Advisor (RTA) seconded from the EU MS should have at **least five years' work experience as a staff member in a MS environmental administration**, working directly in the field of environmental strategy, data collection, control, state environmental monitoring. A network of functional contacts with related EU and Member State institutions will also be an asset. The RTA will be in charge of the day-to-day implementation of the Twinning project in Azerbaijan. (S)he should co-ordinate the implementation of activities according to a predetermined work plan and liaise with the RTA counterpart in Azerbaijan. **(S)he will reside for the entire implementation period of 27 consecutive months in Azerbaijan and work full-time for the project.** The RTA is expected to be actively involved in the implementation of all activities. (S)he should co-ordinate the project and have a certain level of understanding of all components.

Profile:

Qualification and skills

- A University degree in environment or another relevant discipline
- Good command of written and spoken English

General Professional Experience

- At least 5 years' experience in the environmental sector
- Experience in managing teams of experts
- Experience in developing, co-coordinating and conducting training programmes

Specific Professional experience:

- Familiarity with current EU-policies, existing structures and methods in the environmental sector
- Good knowledge of the institutional environment relating to the implementation and enforcement of relevant EU legislation
- Experience in conducting legal reviews would be an asset
- Experience in working in a different cultural environment would be an asset
- Experience in previous, current accession and neighbourhood countries or with similar projects would be an asset

Tasks:

- Day-to-day coordination and implementation of the project activities in Azerbaijan
- Preparation of Terms of Reference (ToR) for STEs' missions
- Managing secondment and input of short-term experts
- Arranging study tours to MS countries for the staff of the MENR and other involved administrations
- Substantial provision of own expertise
- Ensuring the coherence and the continuity of the inputs and the on-going progress

- Assessing continuously the Twinning Project at all stages and comparing actual progress with the specified benchmarks and time-frames
- Guaranteeing smooth implementation of the different activities
- Liaising with the BC Project Leader and RTA Counterpart on regular basis
- Liaising with the EU Delegation and the PAO of Azerbaijan
- Preparing interim, quarterly and final reports
- Reporting to the MS-Project Leader

3.5.3. Profile and tasks of the short term experts (STEs)

All required EU institutional and technical expertise will be covered by the short-term experts. The short-term experts should have good experience in the relevant subject matter. The STEs should be civil servants or staff members of the selected MS institution(s). They should have worked in the required fields for not less than 3 years and have appropriate qualifications and necessary skills to implement the above mentioned activities.
The exact number of STEs per activity should be agreed upon during the contract negotiations. There should be a pool of short-term experts to ensure smooth implementation of the project. The STEs should be identified during the negotiation of the contract.

Indicative fields of experience for the short-term experts:

- Environmental laws and regulations on environmental quality standards (especially ambient air quality, knowledge of other environmental areas (surface water, sea water, groundwater, soil) is an advantage
- Environmental policies and strategies
- Preparation of monitoring programmes
- Practical experience in environmental monitoring (sampling, measurement, analysis)
- Use of monitoring results in environmental reporting
- Institutional building
- Others (to be defined in the proposal and/or during the contracting phase)

Indicative profile of the short-term experts:

Qualification and skills
- Relevant university degree
- Good command of written and spoken English
- Working knowledge of Azerbaijani, Turkish or Russian would be an asset

General Professional Experience
- At least 5 years' proven experience in the relevant field

Specific professional experience
- Up-to-date knowledge and current experience in the respective field of project activity
- Project and training experience would be an asset

In addition to their missions in Azerbaijan, the STEs are expected to contribute actively in developing programmes for the study visits proposed in the project.

STEs' main tasks:
- Provision of their specific expertise

- Know-how transfer according to the ToR prepared by the RTA and BA
- Reporting on their missions

3.6 Reporting and monitoring

The MS Project Leader must draw up Interim Quarterly Reports and a Final Report. (S)he will be responsible for submitting them to the relevant authority.
For templates and requirements to reporting and monitoring, see the Twinning Manual.

Project Steering Committee (PSC)

The PSC will be convened at least every three months. The PSC will be chaired jointly by the MS PL and the BC PL. The PSC composition will be defined in the Working Plan according to requirements set in the Common Twinning Manual. Representatives from the PAO of the Republic of Azerbaijan and the EU Delegation, the RTA counterpart and BC PL as well as the RTA, MS PL and BC component leaders will participate in the PSC meetings. Observers from other institutions may be involved from time to time in cross-cutting issues. Representatives from other administrations or short term experts may also be invited, if necessary. The PSC will follow the achievement of the project results and the timely implementation of the project activities in order to identify and rectify any problems that may arise in the course of the implementation of the project.

The secretarial support of the PSC will be provided by the RTA and RTA Assistant, who will prepare the agenda of the meetings, the documents to be discussed as well as the minutes of the meetings.

The working language of the Project implementation will be English. Translation and interpretation will be provided where necessary and where permitted in the provisions of the Twinning Manual.

4. Institutional framework

The **Ministry of Ecology and Natural Resources of the Republic of Azerbaijan** is the beneficiary institution and will be responsible for the implementation of the project, as well as providing the co-ordination mechanism

4.1 Responsible authorities for environmental monitoring

The central executive body in charge of the implementation of the state policy on environmental protection and rational use of natural resources as well as **environmental monitoring** is **the Ministry of Ecology and Natural Resources of the Republic of Azerbaijan**.

As stated in its Statute, approved by the Presidential Decree of Azerbaijan Republic No: 583 dated 18 September 2001, its main functions in the field of environmental monitoring are as follows:

- To carry out the monitoring of studying and investigating the hydro-meteorological processes in atmosphere, in the basin of the Caspian Sea and in other reservoirs as well as in the land
- To investigate the impact of regional climate change and other global environmental problems on the population and economy of the country
- To establish the state monitoring system of the environment and natural resources
- To implement the accounting of underground water, surface, animals, flora, discovered natural resources deposits, state forestry cadastre and forest monitoring, as well as defined exchange of view and adaptation of hydro-meteorological information with foreign countries and international organisations
- To provide the use of latest experience on active impact on hydrometeorology, global monitoring of environment as well as hydro-meteorological process

The structure of the MENR is given in Annex 4.1.

The main direct beneficiaries of the project are:

- the National Department of Environmental Monitoring (NDEM); and
- the Caspian Complex Monitoring Administration (CCMA).

4.2 Other Azerbaijani stakeholders in environmental monitoring

A strong involvement of other departments and institutions of the MENR is crucial:

- Ecology Environmental Policy Division (Central administration of the MENR)
- Environmental Protection Department
- National Geology-Exploration Service
- National Hydrometeorology Department, including its 11 regional subdivisions
- Information and Archival Fund on Environmental Protection and Use of Natural Resources

Involvement of other institutions concerned with the collection and analysis of environmental data related to the environmental quality is recommended. It is foreseen that the IIEDMS should be designed primarily based on air emissions and air quality data, but it shall be open for incorporation of other modules. The IIEDMS must have an option to be expanded and include other fields of environment. Therefore, here, the Azerbaijani institutions responsible for data on water use and water quality are referred to for consultation on data related to water quality:

- The SAWM OJSC as the MES is an institution which is responsible for water use management in Azerbaijan. The state joint stock company provides various sectors of the economy with water, arranges exploitation of state-owned land reclamation and irrigation systems, ensures state control in water use and protection, removal of saline waters from reclaimed lands, arranges measures to combat against the flood and flood waters, prepares main scheme of complex use of surface water recourses and protection, prepares, together with relevant state bodies, basin and territorial schemes, ensures the use of trans-boundary water objects, inter-state joint use of land reclamation and irrigation systems, and acts as customer for the construction of irrigation and water objects. Among other things, the Azerbaijan Amelioration and Water Farm OJSC is responsible for data collection concerning the use of water.
- The State Agency for Water Reserves under the Ministry of Emergency Situations has been established by a Presidential order dated 25 February 2011. The Agency is an executive body providing reliable protection of state's major reservoirs, including its balance, performing control over the technical condition of the reservoirs in the country on a regular basis, monitoring the surface and ground water reserves, water facilities, hydraulic structures, water supply systems and carrying out the management improvements of water resources on the territory of the country.

  The Ministry of Emergency Situations (MES) coordinates activities in cases of emergencies. They are among those who receive the state of environment bulletins from the NDEM and the CCMA. Roles and activities of the MES and the MENR in cases of large accidents impacting environment (eg Seveso accidents) have to be assessed by the Twinning Project.

A senior level Working Group, consisting from representatives of key beneficiary departments of the MENR and relevant stakeholders will be created for the Twinning Project purpose (see above indicative activity under result 1).

4.3 Organisation of the Beneficiary Administration (BA) for the environmental monitoring

National Department of Environmental Monitoring (NDEM)

The NDEM is in charge of the determination of qualitative and quantitative indicators of physical and chemical pollutants, evaluation of real situation on the basis of analysis and forecasting, as well as studying of changes which may occur in fauna and flora world, which are bio indicators of environment.

There are **173 employees** in the **NDEM** of which:

- Central apparatus – 15
- Centre for monitoring of ambient air, soil, water, milieu, exogenous geological process and biological diversity – 37
- Operative monitoring and expeditions centre – 11
- Radio ecological monitoring centre – 7
- Data processing centre – 28
- Centre for Monitoring over the pollution of environment – 75

The detailed structure of the NDEM is given in the Annex 3.2.

The Caspian Complex Monitoring Administration (CCMA)

The CCMA is a significant department within the MENR as it has one of the two main state environmental analytical laboratories in Azerbaijan. It provides laboratory analytical services along with the NDEM. Considering that one of the project's aims is to increase the laboratory capacity, the CCMA together with the NDEM have to be assessed together for the sampling, measurement and, especially, the analytical services. Duplications and gaps of the analytical system have to be assessed based on both laboratories capacities.

There are **215 employees** in the **CCMA** of which:

- Central apparatus – 29
- Oil and gas extraction and exploration group – 5
- Fleet monitoring group – 3
- Khudat-Khachmaz monitoring group – 2
- Baku-Sumgait monitoring group – 4
- Neftchala - Salyan monitoring group – 2
- Lenkoran-Astara monitoring group – 2
- Background contamination control group – 4
- Information and database group – 5
- Ecological expertise group Group – 3
- Modeling and forecasting group – 4
- Chemicals division – 6
- Biology and Ecotoxicology division - 10
- Methodology division - 3
- Economy division - 18
- Technical division - 10
- Repair brigades - 8
- "Alif Hajiyev" Scientific Research group - 37
- "Aysel" vessel - 6

- Environmental control and protection of coastal waters - 53

Detailed structure of the CCMA is presented in the Annex 3.3.

4.3.1. Infrastructure and technical resources

There are two large laboratories for chemical and biological analysis of water, soil and air samples. These laboratories are subordinated to two different departments of the MENR: the CCMA and the NDEM.

The NDEM central analytical laboratory (the Centre for Environmental Pollution Monitoring) consists of analytical laboratories with seven sectors in Baku and two in districts (Gazakx and Beilagan). Out of the seven fields of activities of the Baku laboratory, five (air, precipitation, water, soils and measurement tools) have been accredited. Accreditation of the other two (radioactivity and microbiology) is pending.

The laboratory at the CCMA is mainly dealing with the analysis of water. There are some tasks duplicated in the work that the CCMA and the NDEM laboratories are performing.

Laboratory equipment is generally renewed with the support of international projects and there is a strong need for modernisation.

The lists of equipment for the two laboratories have been compiled by their staff and are attached (Annex 7).

The Ministry of Health operates a network of 64 analytical laboratories at district centres for hygiene and epidemiology. Only few of these laboratories are accredited.

5. Budget

The maximum budget allocated to this Twinning project is € 1,400,000

The Azerbaijani beneficiary administration will provide the RTA and other MS experts with office space in its main building in Baku, equipment and other provisions as stated in the Common Twinning Manual.

6. Implementing arrangements

6.1 Implementing Agency responsible for tendering, contracting and accounting

The Implementing Agency responsible for tendering, contracting and accounting is the European Commission represented by **the Delegation of the European Union to the Republic of Azerbaijan**.

The persons in charge of this project at the Delegation of the European Union to the Republic of Azerbaijan are:

Mr Jeroen WILLEMS
Head of Cooperation
Delegation of the European Union to the Republic of Azerbaijan
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Mr Ulviya Abdullayeva
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Website: http://eeas.europa.eu/delegations/azerbaijan

6.2 Main counterparts in the Beneficiary country

Programme Administration Office in Azerbaijan (PAO)
The person in charge of this project at the PAO is:

Mr Ruslan Rustamli, Director of PAO
Head of the Department on Cooperation with International organizations
Ministry of Economy and Industry of the Republic of Azerbaijan
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Tel.: (+994 12) 493 88 67 (ext. 2115)
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Mr Asiman Hashimli, PAO Manager
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E-mail: asiman.hashimli@economy.gov.az

Website: http://pao.az

Beneficiary Administration

The Beneficiary Administration has nominated its main counterparts to the MS PL and RTA:

Project Leader – Mr Nacmeddin Orucov
Department for Production Policy
Ministry of Ecology and Natural Resources
Baku, AZ1073 Azerbaijan, B.Aghayev str. 100A
Tel.: (+994 12) 538 12 70
Fax: (+994 12) 492 59 07
E-mail: n.orucov@gmail.com
Web: http://www.eco.gov.az

RTA counterpart – Ms Tarana Huseynova
Chief of sector, National Department of Environmental Monitoring (NDEM)
Ministry of Ecology and Natural Resources
Baku, AZ1033 Azerbaijan, H.Apiyev avenue 50
Tel.: (+994 12) 566 28 96
Fax: (+994 12) 441 51 23
E-mail: tarana.82@mail.ru
Web: http://www.eco.gov.az

During the negotiation of the contract phase of the project, the beneficiary administration will nominate leaders for each of 4 results/components

6.3 Contracts

Only one Twinning contract is foreseen for this project.

A new Financial Regulation applicable to the general budget of the European Union entered into force on 1st January 2013[10]. This implies several changes to the Twinning contract templates. An updated version of the Twinning Manual and of its Annexes, incorporating these changes, is in preparation and shall be published soon on EuropeAid website[11]. The Twinning contract, which

[10] Financial Regulation: Regulation (EC, Euratom) No 966/2012 of the European Parliament and of the Council of 25 October 2012 on the financial rules applicable to the general budget of the Union and repealing Council Regulation (EC, Euratom) No 1605/2002.
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:298:0001:0096:EN:PDF
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2012:362:FULL:EN:PDF

[11] Rules of Application: Commission Delegated Regulation (EU) No 1268/2012 of 29 October 2012 on the rules of application of Regulation (EU, Euratom) No 966/2012 of the European Parliament and of the Council on the financial rules applicable to the general budget of the Union.
http://ec.europa.eu/europeaid/where/neighbourhood/overview/twinning_en.htm

shall be signed as a result of the present procedure shall follow the templates of the updated Twinning Manual and Annexes.

7. Implementation schedule (indicative)

7.1	**Launching of the call for proposals:**	December 2015
7.2	**Start of project activities:**	November 2016
7.3	**Workplan duration:**	27 months

8. Sustainability

The Twinning project will have to seek sustainable solutions and approaches based on the adoption of best practices and thus prepare the grounds for Azerbaijani enhanced compliance with the selected EU Environmental Acquis, (the chapters related to the quality of ambient air, quality of waters and horizontal legislation) and specifically best European practices in the field of environment.

Sustainability is highly dependent of the commitment of the Beneficiary Administration. Therefore the nomination of a responsible person within the Beneficiary Administration, for each component of the Twinning project, is highly recommended. This person will coordinate and promote the activities during the implementation of the project. The "**component leader**" will then ensure, for her/his component that the actions and work of the MENR are in line with the results of the projects after its completion. Besides, in the final report, twinning partners will include specific recommendations and strategies for consolidating and safeguarding the achievement of mandatory results in the beneficiary administration.

To ensure sustainability, Beneficiary Administrations should be provided with the training materials (all handovers) in both languages, English and Azerbaijani. That means that a budget for the translation of Guidelines, Handbooks, Glossaries, Methodology Manuals, etc. developed within the project should be foreseen.

9. Cross-cutting issues

9.1 Equal opportunity

The proposed project will comply with EU equal opportunity policies. Equal treatment of women and men in project implementation at all levels will be one of the most important principles in the project management and implementation. The beneficiaries are already equal opportunity employers. In particular, great attention will be given to the equality principle in the training of personnel and the recruitment of the STEs. Of course, appropriate professional qualifications and experience will be the main decisive factors in personnel recruitment and evaluation but, subject to that, both women and men will have identical prospects.

9.2 Environment

The principle of implementation of this Twinning project is based on a paperless work environment. This means, in particular, minimising paper use during project implementation by the maximum feasible use of e-mails and, if available, project web-site and/or project electronic data base for co-operation between partners. Documents are automatically saved in electronic format.

10. Conditionality and sequencing

There are no other requirements on sequencing, except for those mentioned in the relevant activities.

List of the abbreviations

BC	Beneficiary Country
CCMA	Caspian Complex Monitoring Administration
CEMS	Continuous Emissions Monitoring System
CLRTAP	Convention on Long-range Trans-boundary Air Pollution
CoM	Cabinet of Ministers
DPSIR	driving force-pressure-state- impact-response framework
EaP	Eastern Partnership
ECD	European Commission Delegation
EEA	European Environment Agency
EECCA	Countries of Eastern Europe, Caucasus, Central Asia
EIA	Environmental Impact Assessment
EMEP	Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe
ENP	European Neighbourhood Policy
ENP AP	European Neighbourhood Policy Action Plan
ENPI	European Neighbourhood and Partnership Instrument
EPR	Environmental Performance Review
EU	European Union
GIS	Geographical Information System
GIS	Geographical Information System
IED	Industrial Emissions Directive
IEEDMS	Integrated Electronic Environmental Database Management System
IMPEL	Network for the Implementation and Enforcement of Environmental Law in European Union
IPPC	Integrated Pollution Prevention and Control
ISO	International Organization for Standardization
IWRM	Integrated Water Resources Management
MENR	Ministry of Ecology and Natural Resources
MES	Ministry of Emergency Situations
MS	Member State
MS PL	Member State Project Leader
NDEM	Department of Environmental Monitoring
NFP	National Focal Point
NIP	National Indicative Programme
OJSC	Open Joint Stock Company
PAO	Programme Administration Office
PCA	Partnership and Cooperation Agreement
PM_{10}, $PM_{2,5}$	Particulates, air pollutants
PRTR	Protocol on Pollutant Release and Transfer Registers
QC/QA	Quality Control, Quality Assurance
RBA	Rapid Biological Assessment
RBMP	River Basin Management Plan
RTA	Resident Twinning Adviser

SAWM	State Amelioration and Water Management
SCP	Sustainable Consumption and Production
SEA	Strategic Environmental Assessment
SEIS	Shared Environmental Information System
SIGMA	Support for Improvement in Governance and Management
SOP	Standard Operating Procedures
SPPRSD	State Program on Poverty Reduction and Sustainable Development
SSC	State Statistical Committee
STE	Short Term Expert
TAIEX	Technical Assistance Information Exchange Office
ToR	Terms of Reference
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environmental Programme
UNIDO	United Nations Industrial Development Organisation
US EPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds
WB	World Bank
WFD	Water Framework Directive

ANNEXES

1. Logical framework matrix
2. List of relevant Laws and Regulations (existing and draft)
3. List of international environmental conventions and agreements
4. Organigrammes of the MENR and its relevant departments
5. Extract from the Final report: National Strategy on AQAM, March, 2014 “Air Quality Governance in the ENPI East Countries”
6. Summary of the regional EU funded ENPI-SEIS II project
7. List of laboratory equipment

ANNEX 1: Logical Framework Matrix*

Upgrading the National Environmental Monitoring System (NEMS) of Azerbaijan on the base of EU best practices	Programme name and number: **ENPI AAP 2012 (CRIS Number: ENPI/2012/023411)**	**AZ/15/ENP/EN/43**
Ministry of Ecology and Natural Resources	Contracting period expires: **Total budget: € 1,400,000**	Disbursement period expires:

	Objectively Verifiable Indicators	Sources of Verification	Assumptions
Overall objective:			
To improve environmental performance of Azerbaijan	• Environmental indicators according to the UNECE recommendations and enforced in Azerbaijan by the Regulation of the SSC (decree of the SSC from 27 May 2014, No 20/11s) are collected and presented to the public	• Website of the MENR	
• **Project purpose:**			
To strengthen environmental monitoring system ensuring provision of the high quality information that does support strategic environmental policy planning and compliance control	• More detailed and accurate (quality) reports on environmental indicators • More detailed and quality environmental permits • More effective inspection	• Reports submitted to the secretariats of international conventions • Environmental permits issued • Environmental inspection reports	• Political willingness and continuous commitment of national authorities • Full commitment of the government to ensure that the project results are reached • Effective co-ordination between the various project components and effective cooperation within MENR Departments • Government allocates the necessary funding to sustain any increased budgetary support to staffing and operating costs of the monitoring service
Mandatory Results:			
1. Roles and responsibilities within the MENR in regards to environmental data collection, processing and reporting were revised and	• Functional analyses of institutions and departments of the MENR involved to the environmental monitoring to define gaps	• Project reports • A copy of the organisational structure	• Access to facilities and documentation

streamlined, organisational changes were elaborated and endorsed by the MENR	and overlaps carried out recommendations for effective use of resources of the MENR and for improvement of decision making developed • New organisational structure and restructuring plan to modernise departments and sectors responsible for environmental monitoring drafted and endorsed by the MENR • Statutes for the new organisations drafted and endorsed by the MENR • Job profiles and descriptions for relevant positions elaborated and endorsed by the MENR	• A copy of the draft statutes	
2. Environmental monitoring system was modernised with an enhanced data collection, processing, control and reporting system	• A gap analysis carried out and a list of technical standards required for sampling, measurement, testing and laboratory practises, which ensures a collection of high quality information on air, water and soil quality for compliance control, compiled • A work plan for adoption of the technical standards drafted and submitted to the Technical Committee on Environmental Standards (the MENR and the SSC) • Priority national standards aligned with the international ones and new (missing) standards for environmental data collection and processing, environmental monitoring put in line with the European Union requirements and other international agreements developed and endorsed by the MENR • Technical specifications for laboratory upgrading, meeting the needs for compliance control with new environmental	• Project reports • A copy of the list of standards • A copy of the workplan • A list of laboratory technical specifications • An action plan on laboratory improvement • Parts of the data management system present • Installed computer models • Database	• Government allocates the necessary funding to sustain the normal functioning of the monitoring activities including transport, communication, supplies and IT • Structures to carry out the supervision of field activities are effective • Adequate cooperation between the MENR and the SSC

	quality standards elaborated and endorsed by the MENR • A detailed action plan to meet the QC/QA (ISO 17025 requirements) by the laboratory envisaged and endorsed by the MENR • Revised standard operative procedures (SOPs) for the laboratory quality management system endorsed by the MENR • Action plan compiled and endorsed for promotion of company self-monitoring and integration of the Continuous Environmental Measurement Data with the Data collection system • Automatic monitoring stations, including their locations, specified • At least, the following low cost or no cost freeware computer models installed: ✓ Emission and pollutant dispersion models for air quality assessment acquired (preferably no cost or low cost models, e.g. US EPA Aeromod or similar) ✓ Model for the emission inventory calculation (e.g. EMEP/ Corinair) for air emissions • Simple (no cost) Electronic Environmental Database(s) established and operational • Integrated Electronic Environmental Database Management System (IEEDMS) for environmental management purposes developed and in-use at the MENR		

3. Capacity of the MENR in regards to environmental data collection, processing, analysis, reporting and communication was increased	• Awareness raising workshops (including an introduction to environmental quality standards set in the Air Quality Directive guidance on how to monitor compliance with the requirements of those environmental quality standards) based on the EU Acquis principles, delivered • Training Needs Analysis carried out and report developed • Training Programmes for the NDEM and the CCMA staff as well as departments and divisions of the MENR involved to the environmental monitoring developed and endorsed by the MENR • Training manual elaborated and approved by the head of the administration • Training packages elaborated and approved by the head of the administration • 2 internships carried out for the environmental specialists involved in environmental reporting for the EMEP • Study visits on environmental laboratory services and on-line monitoring experience with demonstration of automatic data collection, transfer and processing carried out • At least 50 MENR staff trained through training sessions and on-the-job training in accordance with the new Training Programme • At least 8 trainers trained	• Report on training needs for all target groups • Reports on the delivered trainings and workshops with involvement of relevant MENR staff and other institutions	• Adequate logistics • Willingness of trained staff to apply EU best practices and principles
4. Environmental data collection, processing, analysis tested in real cases and environmental	• A programme for modelling developed based on new methodologies and	• Project reports • Updated information on	• Government support the qualified staff in the monitoring service and avoid

information communicated	procedures as well as introduced internationally recognised indicators and tested for: • pollutant dispersion modelling for compliance control • air emissions inventory and reporting for the EMEP reporting • data flow in the IEEDMS • Environmental data communication and dissemination strategy developed and endorsed	website available	frequent turnovers of the qualified staff • Government allocates the necessary funding to sustain the normal functioning of the monitoring activities including communication and IT
	Means	**Costs**	
General management and visibility actions			
✓ Kick-off meeting ✓ Quarterly meetings of the Steering Committee ✓ Mid-term visibility conference ✓ Final conference	✓ Adequate logistics provided by the BA ✓ MS PL, RTA, 2 project assistants and STEs ✓ BA PL, RTA Counterpart, BA staff involved to the project		
Activities to achieve result 1:			
✓ Establishment of a senior level **Environmental Policy and Planning Working Group** chaired by a Deputy Minister or another appropriate Ministry of Ecology and Natural Resources senior manager (such as Head of Policy Department) with the RTA as one of its members and definition of rules of operations			
✓ Preparing and carrying out of a functional review (vision, mission, roles, functions) departments of the MENR involved in monitoring, permitting, compliance control, inventory and reporting ✓ Preparing of a plan for the restructuring of the	✓ RTA, 2 project assistants and STEs ✓ RTA Counterpart, BA staff involved to the project		

monitoring, permitting, compliance control, inventory and reporting activities within the MENR based on the outcomes of activities mentioned under results 1 and 2 (first activity), and defining the roles, responsibilities, functions and tasks of each of the related department/sector ✓ Revising and drafting statutes of relevant departments/divisions ✓ Revising and updating the job profiles and job descriptions for relevant positions			
Activities to achieve result 2:			
✓ Performing a gap analysis of the Azerbaijani standards and required technical standards on sampling, measurement and analysis as a minimum for the air quality assessment and prioritisation of listed standards ✓ Drafting a work plan for further elaboration (if needed) of standards listed as a result of gap analysis ✓ Aligning the priority national standards with the international ones on establishment of quality of environment (e.g. surface and groundwater, ambient air and soil, nuisances as noise, odour etc.), on sampling and measurement techniques, on sample taking, handling, transport, continuous measurement, etc. and elaborating new standards (if needed) ✓ Revision and assessment of the existing laboratory equipment in regards to the new environmental quality standards ✓ Drafting technical specifications for the required	✓ RTA, 2 project assistants and STEs ✓ RTA Counterpart, BA staff involved to the project ✓ Private sector involvement		

equipment ✓ Auditing laboratory quality management system against ISO 17025 standard ✓ Preparation of the action plan for QC/QA system ✓ Revising existing quality management documentation and drafting missing documents (e.g. SOPs) ✓ Integrating continuous environment monitoring data to the data management system ✓ Compiling an action plan to promote company self-monitoring ✓ Specifying locations for the automatic monitoring stations ✓ Selecting and installing low cost/no cost computer model for air pollutants dispersion modelling ✓ Installing the emission inventory model for reporting ✓ Carrying out of (i) hardware (inventory of existing equipment) and software (inventory of existing websites, intranets and databases) needs assessment; (ii) staff training needs assessment in ICT ✓ Prepare a comprehensive technical specification for the development and installation in MENR of the necessary software – Integrated Electronic Environmental Database Management System (IEEDMS) for environmental management purposes which can generate reports on the state of			

environment ✓ Procure the development and installation in MENR of the necessary software –an Integrated Electronic Environmental Database Management System (IEEDMS) on the basis of previous activity ✓ Prepare and precise specifications for the reorganisation and transfer of the existing data to the new IEEDMS ✓ Prepare the Standard Operating Procedures (SOPs) for the IEEDMS in conjunction with the User Manual provided by the software supplier			
Activities to achieve result 3:			
✓ Carrying out a training needs analysis ✓ Developing training programmes and toolkits ✓ Delivering awareness rising workshops on environmental quality standards based on EU Directives ✓ Delivering trainings, including training for trainers (to enable them to carry out trainings for the private sector as well) ✓ Developing and carrying out internships for at least two persons involved in modelling of air emissions and dispersion and emission inventory according to the international agreements ✓ Developing and delivering study visits for BA senior levels and junior level staff	✓ RTA, 2 project assistants and STEs ✓ RTA Counterpart, BA staff civil servants of other state bodies as well as private sector partners involved to the project		✓ Adequate logistics provided by the BA ✓ Adequate cooperation between state bodies as well as private sector partners involved to the project
Activities to achieve result 4:			
✓ Designing a programme for testing in real	✓ RTA, 2 project assistants and STEs ✓ RTA Counterpart, BA staff involved to the		

cases, the whole chain from data collection to decision making/permitting/expertise/inspection, including application of computer modelling for air pollutants dispersion ✓ Supervising the implementation of programmes in the area of air quality assessment, emission and air quality data use by Expertise Department and/or Inspectors ✓ Designing a programme for testing in real cases the entire chain from data collection to reporting, including application of computer modelling for air pollutants ✓ Supervising the implementation of application of computer calculation and modelling programmes for emissions inventory for the EMEP reporting, preparation of the State of Environment reports ✓ Designing and implementation of the public awareness campaign, including publishing the environmental data on the MENR website	project		

This Logical Framework Matrix is tentative. The Twinning partners shall revise the content of the Logical Framework Matrix, mainly measurable indicators / benchmarks basis of commonly agreed activities and outputs during the drafting of the work plan for this project

ANNEX 2: List of relevant Laws and Regulations (existing and draft)

Main adopted laws, basis for the environmental monitoring:

- **Law of Azerbaijan Republic on the Protection of the Environment** No. 678-IQ. (08/06/1999). The law is a basis for the existing state environmental monitoring system in Azerbaijan. Paragraph 17 of the law refers to the sub-law that stipulates which kind of environmental monitoring has to be carried out in Azerbaijan.

  This law is a framework law which addresses the following issues:
  - The rights and responsibilities of the State, the citizens, public associations and local authorities;
  - The use of natural resources;
  - Monitoring, standardisation and certification;
  - Economic regulation of environmental protection;
  - State Ecological Expertise (SEE) (in international terms: EIA);
  - Ecological requirements for economic activities;
  - Education, scientific research, statistics and information;
  - Ecological emergencies and ecological disaster zones;
  - Control of environmental protection;
  - Ecological auditing;
  - Liability for the violation of environmental legislation; and
  - International cooperation.

- **The Cabinet of Ministers resolution** No 90 of 1 July 2004**. A Statute On Rules of Conducting Monitoring of the Environment and Natural Resources.** This regulation sets the basis for environmental monitoring system in Azerbaijan. That is a legal Act that describes main principles and organisational aspects of environmental monitoring in Azerbaijan today. The rules establish the goals and basic requirements (frequency, number of observation points, etc.) for 12 types of monitoring:
  - atmospheric air,
  - atmospheric precipitation and deposition,
  - water objects,
  - land,
  - mineral and raw material reserves,
  - radioactivity,
  - harmful physical impacts on the environment,
  - waste,
  - biological resources,
  - protected areas,
  - sanitary and epidemiological monitoring,
  - monitoring of natural disasters.

  This legal act also sets foundations for the major institutions that are carrying out the environmental monitoring - the NDEM and the CCMA.

- **Law of the Azerbaijan Republic on Access to Environmental Information** No. 270-IIQ. 12/03/2002. This legal act describes which environmental information shall be made publicly available and accessible, as well as the types of information with limited access.

It establishes the classification of environmental information; if information is not explicitly classified as “for restricted use” then it is made available to the public. Procedures for the application of restrictions are described. The law aims to incorporate the provisions of the Aarhus Convention into Azerbaijan Law.

- The Minister of Ecology and Natural Resources **decree** No.610/u of 8 November 2007, approved **a form for submission by regional departments of the MENR of information on environmental conditions**. Accordingly, each department is submitting to the NDEM quarterly reports covering sources of air and water pollution and of the waste generation in the region, quantitative and qualitative parameters of emissions, and state of land and biological resources.

Another framework law:

- **Law on ecological safety**, **Law of Azerbaijan Republic on Ecological Safety** No. 677-IQ (adopted on 08 June 1999). Together with the Law on the Protection of the Environment this law is one of the cornerstones of the Azerbaijani environmental legislation. Its purpose is to establish a legal basis for the protection of human life and health, society and the environment, including atmospheric air, space, water bodies, mineral resources, natural landscapes, plants and animals from natural and anthropogenic dangers. The law assigns the rights and responsibilities to the State, citizens and public associations in ecological safety, including information and liability. The law also deals with the regulation of economic activity, territorial zoning and the alleviation of the consequences of environmental disasters.

Sectoral laws that have significance from the viewpoint of environmental quality standards:

- Law on protection of ambient air. **Law of Azerbaijan Republic on Air Protection** No. 109-IIQ (adopted on 27 May 2001). Establishes the legal basis for the protection of ambient air, thus implementing the constitutional right of the population to live in a healthy environment. It stipulates the rights and obligations of the authorities, legal and physical persons and non-governmental organisations (NGOs) in this respect, sets general requirements for air protection during economic activities, establishes norms for mitigating physical and chemical impacts to the atmosphere, establishes rules for the State inventory of harmful emissions and their sources and introduces general categories of breaches of the law that will trigger punitive measures.
- Law on protection of human health. **Law of the Azerbaijan Republic on Protection of Public Health** No. 360-IQ (adopted on 26 June 1997). Sets out the basic principles of public health protection and the health care system. Introduces the “polluter pays principle”. The law assigns liability for harmful impact on public health, stipulating that damage to health that results from a polluted environment shall be compensated by the entity or person that caused the environmental damage.
- **Law on hydrometeorology** (adopted on 17 April 1998), 13.02.1999 - Presidential Decree on the Application of the Law on Hydrometeorological Activity.
- The Water Code of the Azerbaijan Republic. **Water Code of Azerbaijan Republic** (approved by Law No. 418-IQ) (adopted 26 December 1997). Regulates the use of water bodies, sets property rights and covers issues of inventory and monitoring. The Code regulates the use of water bodies for drinking and service water, as well as for medical treatment, spas, recreation and sports, agricultural needs, industrial needs and hydro energy, transport, fishing and hunting, discharge of waste water, fire protection

and specially protected water bodies. It provides guidance for zoning, maximum allowable concentrations of harmful substances and basic rules of industry conduct.

- **A System of Standards for the Environment Protection and Improvement of Natural Resources Utilisation. Industrial Enterprise Ecological Certificate Fundamental Regulations**, GOST 17.0.0.04-90. 01/07/1990. The MENR issues ecological documents on the environmental impact of the potentially polluting enterprises. The documents include maximum allowable emissions, maximum allowable discharges, and an "ecological passport." The last item is specific to countries of the Former Soviet Union and contains a broad profile of an enterprise's environmental emissions and environmental impacts, including resource consumption, waste management, recycling, and the effectiveness of pollution treatment. The basic idea is similar to the integrated permitting; enterprises develop the draft passport themselves, often together with the State Ecological Expertise report and submit the draft passport to the MENR for approval.

Relevant laws and regulations approved in 2014:

- "**Environmental indicators system of the Republic of Azerbaijan**" has been confirmed by the **Decree of the State Statistical Committee** of the Republic of Azerbaijan dated 27 May 2014, № 20/11 and is based on the **Presidential Decree dated 21 December 2012, № 2621.** It is also based on the "State Program on development of official statistics during 2013-2017" and the Guidelines on the Application of Environmental Indicators in the countries of Eastern Europe, Caucasus, Central Asia (EECCA) prepared by UNECE Committee on Environmental Policy in collaboration with the European Environment Agency.

Legislation under drafting process:

- **An Environmental Impact Assessment (SEE)**. This draft law is revising existing legislation on environmental assessment of plans, programmes and policies (commonly known as Strategic Environmental Assessment, SEA), development projects (known as Environmental Impact Assessment procedures internationally, or EIA, as abbreviation), some aspects of integrated permitting and smaller scale environmental screening procedures of existing or planned activities. All these are covered in Azerbaijan by the term "ecological expertise". The law is significant from two points of view. Firstly, the detailed quantified information on the state of environment is a crucial part of the assessment process. In order to give a prognosis on the impact of the proposed plan, programme or development project on the environment, knowledge of current status is needed. Secondly, following up on the assessment process, the monitoring of the impacts related to the project has to be proposed and implemented in order to control the process.

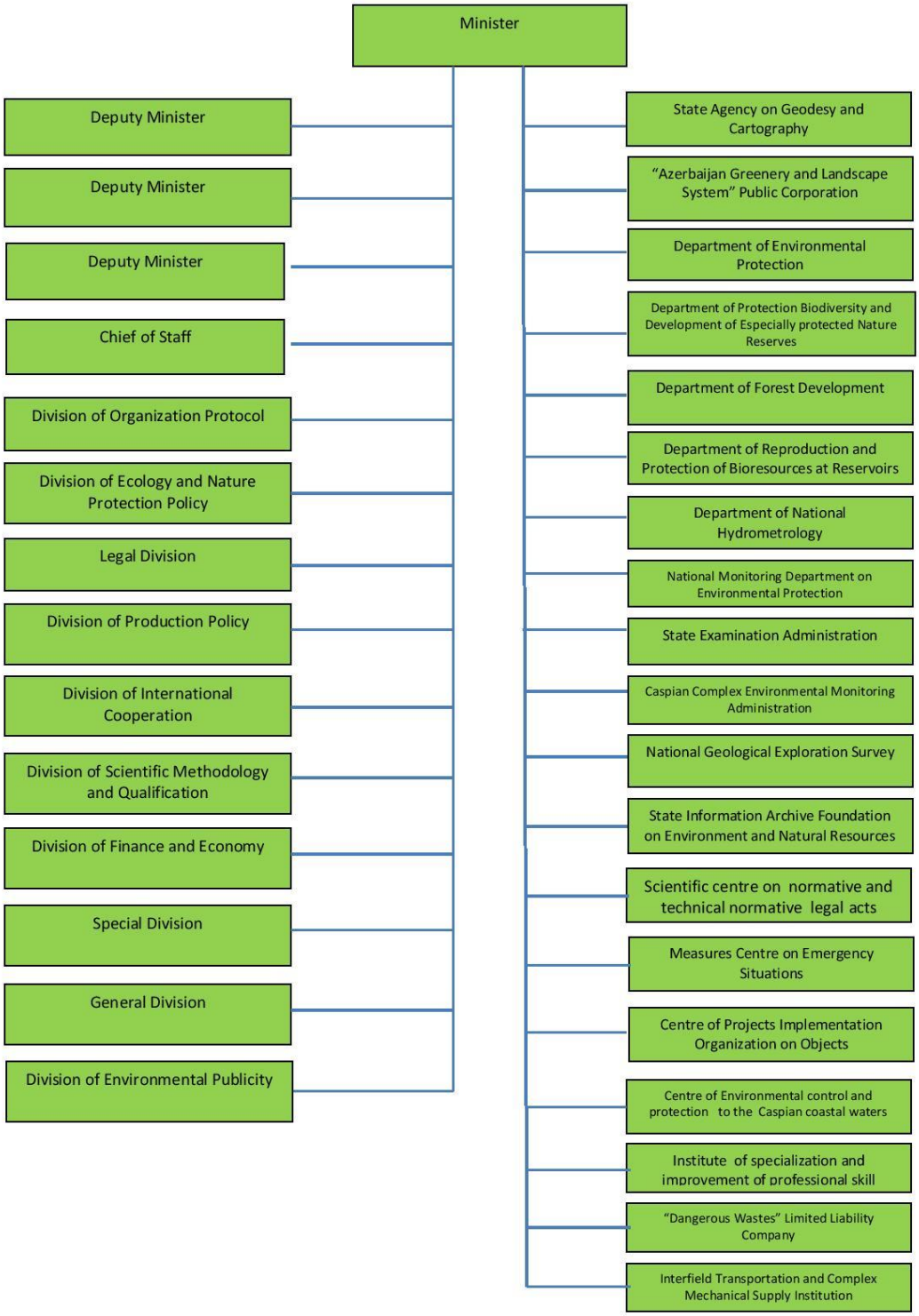
ANNEX 3: **1. List of international environmental conventions and agreements**

Year	Convention/Agreement	Year of ratification in Az	Ratified
1948	International Union for Conservation of Nature (IUCN)	2015	Yes
1951	International Plant Convention	2000	Yes
1957	(GENEVA) European Agreement – International Carriage of Dangerous Goods by Road (ADR)	2000	Yes
1971	(RAMSAR) Convention on Wetlands of International Importance Especially as Waterfowl Habitat	2001	Yes
	1982 (PARIS) Amendment		
	1987 (REGINA) Amendments		
1972	(LONDON) Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter	1997	Yes
	1978 Amendments (incineration)		
	1980 Amendments (list of substances)		
1973	(WASHINGTON) Convention on International Trade in Endangered Species of Wild Fauna and Flora	1998	Yes
1973	(LONDON) Convention for the Prevention of Pollution from Ships (MARPOL)	2004	Yes
	1978 (LONDON) Protocol (segregated ballast)		
	1978 (LONDON) Annex I on Prevention of pollution by oil	2004	Yes
	1978 (LONDON) Annex II on Control of pollution by noxious liquid substances	2004	Yes
	1978 (LONDON) Annex III on Hazardous Substances carried in packaged form	2004	Yes
	1978 (LONDON) Annex IV on Sewage	2004	Yes
	1978 (LONDON) Annex V on Garbage	2004	Yes
	1978 (LONDON) Annex VI on Prevention of Air Pollution from Ships	2004	Yes
1979	European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR) Annex A Provisions Concerning Dangerous Substances and Articles Annex B Provisions Concerning Transport Equipment and Transport Operations	1999	Yes
1979	(BERN) Convention on the Conservation of European Wildlife and Natural Habitats	1999	Yes
1985	(VIENNA) Convention for the Protection of the Ozone Layer	1996	Yes
	1987 (MONTREAL) Protocol on Substances that Deplete the Ozone Layer	1996	Yes
	1990 (LONDON) Amendment to Protocol	1996	Yes
	1992 (COPENHAGEN) Amendment to Protocol	1996	Yes
	1997 (MONTREAL) Amendment to Protocol	2000	Yes
	1999 (BEIJING) Amendment to Protocol	2012	Yes
1989	(BASEL) Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal	2001	Yes
	1995 Ban Amendment		

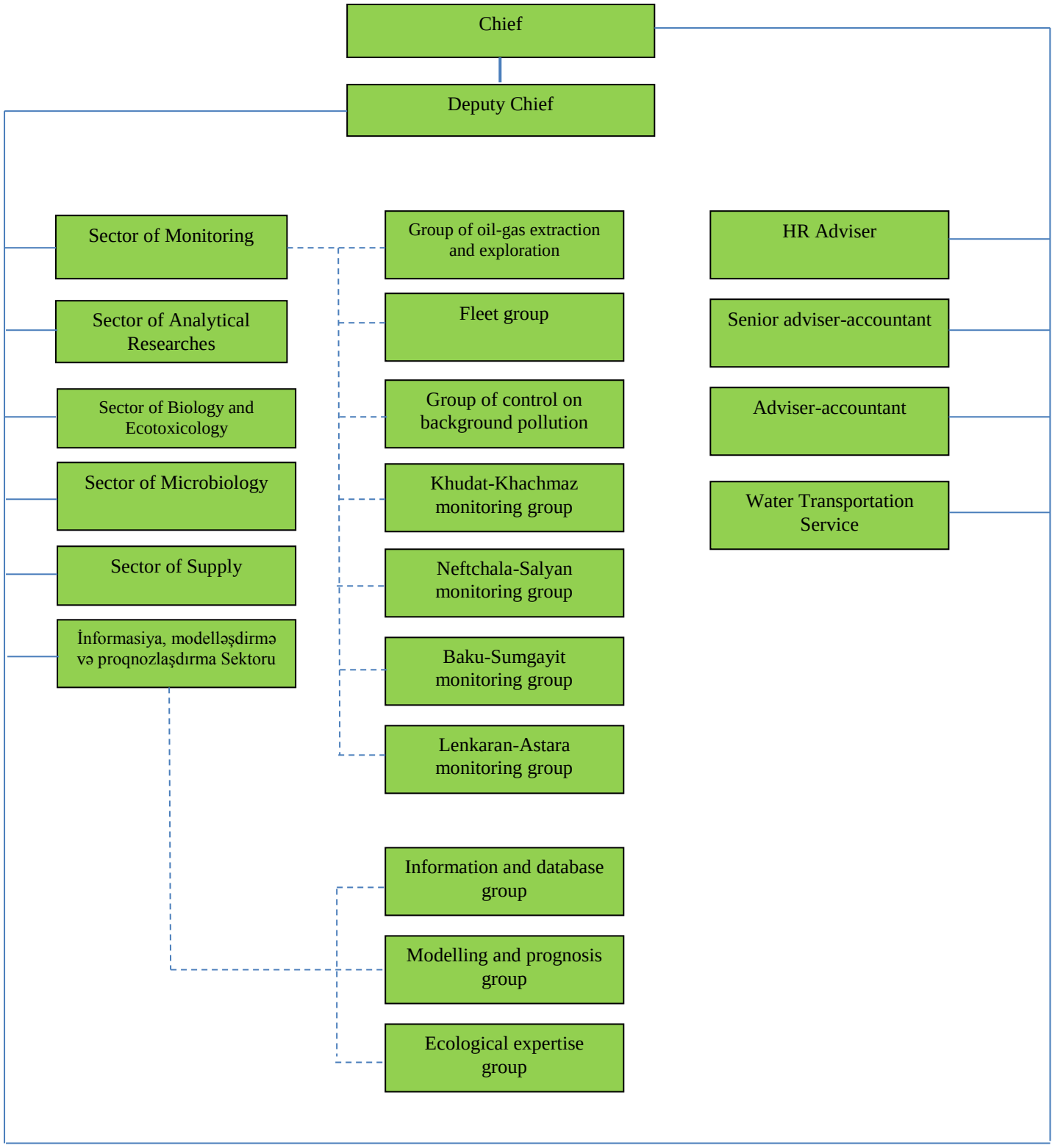
Year	Convention/Agreement	Year of ratification in Az	Ratified
	1999 (BASEL) Protocol on Liability and Compensation		
1992	(RIO) Convention on Biological Diversity	2000	Yes
	2000 (CARTAGENA) Protocol on Biosafety	2005	Yes
1992	(NEW YORK) Framework Convention on Climate Change	1995	Yes
	1997 (KYOTO) Protocol	2000	Yes
1994	(PARIS) Convention to Combat Desertification	1998	Yes
1979	(GENEVA) Convention on Long-range Trans-boundary Air Pollution (LRTAP)	2002	Yes
	1984 (GENEVA) Protocol - Financing of Co-operative Programme (EMEP)		
	1985 (HELSINKI) Protocol - Reduction of Sulphur Emissions by 30%		
	1988 (SOFIA) Protocol - Control of Emissions of Nitrogen Oxides		
	1991 (GENEVA) Protocol - Volatile Organic Compounds		
	1994 (OSLO) Protocol - Further Reduction of Sulphur Emissions		
	1998 (AARHUS) Protocol on Heavy Metals		
	1998 (AARHUS) Protocol on Persistent Organic Pollutants	2003	Yes
	1999 (GOTHENBURG) Protocol to Abate Acidification, Eutrophication and Ground-level Ozone		
1991	(ESPOO) Convention on Environmental Impact Assessment in a Transboundary Context	1999	Yes
1992	(HELSINKI) Convention on the Protection and Use of Transboundary Watercourses and International Lakes	2000	Yes
	1999 (LONDON) Protocol on Water and Health	2002	Yes
1992	(HELSINKI) Convention on the Transboundary Effects of Industrial Accidents	2004	Yes
1994	(LISBON) Energy Charter Treaty	1997	Yes
	1994 (LISBON) Protocol on Energy Efficiency and Related Aspects	1997	Yes
1995	(ROME) The Rome Consensus on World Fisheries. Adopted by the FAO Ministerial Conference on Fisheries.	2013	Yes
1998	(AARHUS) Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters	1999	Yes
	2003 (KIEV) Protocol on Pollutant Release and Transfer Register		
2000	(FLORENCE) The European Landscape Convention	2011	Yes
2001	(STOCKHOLM) Convention on Persistent Organic Pollutants	2004	Yes
2003	(TEHERAN) Framework Convention for the Protection of the Marine Environment of the Caspian Sea	2006	Yes
2011	(AKTAU) Protocol Concerning Regional Preparedness, Response and Co-operation in Combating Oil Pollution Incidents	2012	Yes
2012	(MOSCOW) Protocol for the Protection of the Caspian Sea against Pollution from Land-based Sources and Activities	2014	Yes
2014	(ASHGABAT) Protocol for the Conservation of Biological Diversity		

ANNEX 4: Organigrammes of the main environmental monitoring authorities: the NDEM and the CCMA of the MENR

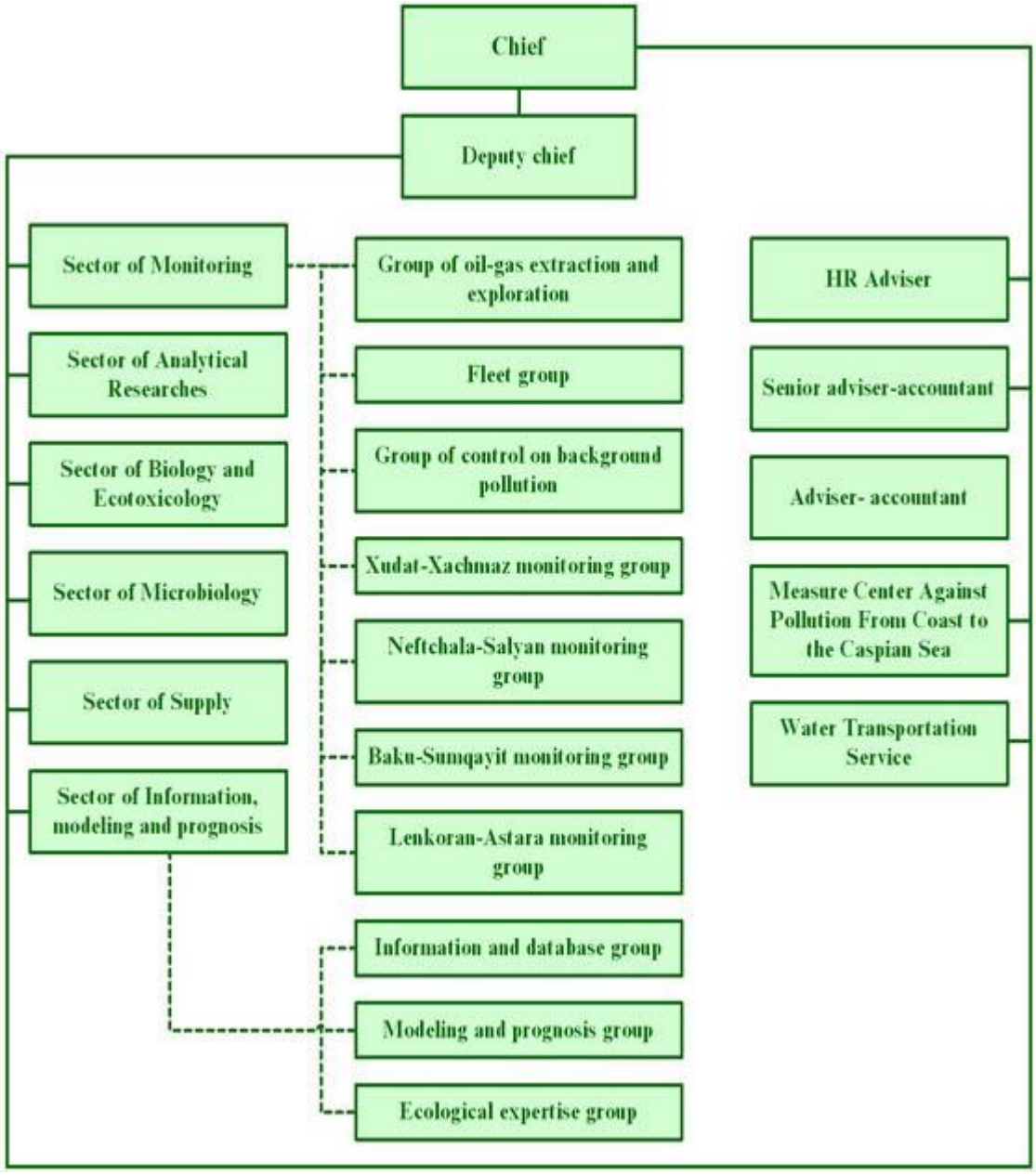
4.1 Central Administration Structure



4.2 The National Department of Environmental Monitoring



4.3 Caspian Complex Monitoring Administration



ANNEX 5: Extract from the Final report: National Strategy on AQAM,
March, 2014 "Air Quality Governance in the ENPI East Countries"

Recommendations

This draft National Strategy lays down several short-term air quality objectives and a national long-term air quality objective. In addition, institutional objectives along with a set of recommendations for reaching them have been proposed. This chapter summarises the above recommendations and outlines a number of indicators, which can be used for measuring implementation of the strategy.

In the field of development and modernisation of air quality monitoring system it is recommended to:

- revise the air quality standards and harmonise them with those applied in the EU (A1)[12];
- approximate current air legislation to EU directives and upgrade legislative normative
- base in line with new adopted air quality standards (A2);
- build capacity of the Air Quality Department and National Monitoring Department of
- MENR (A3);
- collect environmental monitoring data into an electronic online data base (C1);
- upgrade monitoring network with automated monitoring stations (D1);
- Improve public access to monitoring data through dissemination of real time information (E1).

In order to measure success of implementation of these recommendations, the following indicators can be applied:

- proportion of environmental monitoring data, available online (%);
- proportion of automated air quality monitoring stations within the national air quality monitoring network (%);
- proportion of air quality monitoring stations, providing real-time monitoring data to the public (%).

Regarding improvement of air quality modelling and development of emission databases, it was suggested to:

- improve institutional capacity for air pollution dispersion modelling (F1) and for emission inventory (G1);
- introduce advanced air quality assessment methods (F2);
- develop modern normative base for air pollution dispersion modelling in line with the EU legislation (F3);
- establish a comprehensive framework for collection and, where necessary,
- dissemination of metadata or detailed information about the emission sources and environmental conditions (F4, G4);
- ensure resources sufficient for preparing a digital map of pollution sources in Azerbaijan (F5);
- adopt new guidelines for calculation of the emissions from stationary and mobile sources (G2);
- introduce modernised methodology of emission inventories covering also small businesses, households and diffused sources of emissions and advanced

[12] Here and later the reference is made to the main text of the final report: National Strategy on AQAM, March, 2014.

methodology of assessment of emissions from mobile sources (G3);
- review the system of administrative sanctions and fines for noncompliance of air pollution limit values with the aim to make it more consistent, proportionate and efficient (H1);
- develop detailed rules for environmental monitoring by enterprises (H2);
- develop the database accessible to all interested public authorities and the general public (H3).

Success of the above-mentioned recommendations can be measured with the following set of indicators:
- number of licences for advanced air pollution dispersion models, available in Azerbaijan;
- availability of point source emission metadata in electronic form (% from all enterprises, reporting emissions of air pollutants);
- proportion of enterprises, having their emission limit values set available in electronic
- geo-referenced form (% of all enterprises, obliged to calculate emission limit values);
- proportion of enterprises, carrying out their environmental monitoring in line with the
- Guidelines for Strengthening Environmental Monitoring and Reporting by Enterprises in Eastern Europe, Caucasus and Central Asia endorsed at the 2007 “Environment for Europe” Ministerial Conference (% of enterprises, carrying out their own environmental monitoring programmes).

Finally, the draft National Strategy recommends significant amendments to the existing legal acts and development of several new ones, all in line with the European air quality management related legislation. It is recommended:

- Revise the air quality standards and harmonise them with those applied in the EU (A1)
- Establish performance criteria for emissions form mobile sources (A4)
- Improve economic tools encouraging the reduction of emissions from stationary sources, related to fuel quality and economic tools for motor transport (B2)
- Develop criteria for monitoring system and reference methods (D2)
- Develop modern normative base for air pollution dispersion modelling in line with the EU legislation (F3)
- Develop emission limit values and emission levels associated with the Best Available
- Techniques for industrial sectors (H4)

In order to measure success of implementation of these recommendations, the following indicators can be applied:
- Legislative acts on the new air quality standards approved
- Number of the legislative acts on air quality monitoring system
- Conduction of air pollution dispersion modelling based on the new legislation
- Legislation on pollution from industrial sectors approved

Next steps

It is obvious that preparation of Strategy on Air Quality Assessment and Management is only the first step. Final revised version of the Strategy Document will be submitted to the MENR for further consideration. Following this, MENR will submit Air Quality Strategy to the Cabinet of Ministers for further actions.
As other important next step, all relevant stakeholders involved to the stakeholder consultation process during preparation of the current strategy should consider proposed recommendations in their sectoral strategies and plans in order to achieve proposed short-

term and long-term objectives.

ANNEX 6: Summary of the regional EU funded ENPI-SEIS II project

Implementation of the Shared Environmental Information System principles and practices in the Eastern Partnership countries (SEIS East)

The project will look into ensuring the following:

- Greater commitment and ownership with Memoranda of Understanding/Letters of Intent between the European Environment Agency and the Governments;
- More emphasis on practical implementation, hands-on training, and demonstrating with examples how improved environmental data can be used in policy-making;
- Better inter-institutional coordination with formal SEIS working group at national level or a dedicated coordinating institution;
- Better alignment to country needs through the national work plans, more regular expert visits, and dedicated national coordinators in each of the beneficiary countries;
- Active engagement of stakeholders, including civil society.

1.1. Complementary actions

The ENP East project serves to help the countries aggregate data and indicators from a range of different sources and other initiatives. Outputs of ongoing regional and bilateral projects should be used as input for enhancing data availability on the topics covered.

As mentioned in the ***Regional context*** under section 1.1, the focus of the EU-funded regional cooperation in the 2015-2019 perspective will, apart from SEIS, be clustered around the following priorities: water management, green economy and climate action, and regular dialogue will be ensured with the partners implementing these actions. The data and information generated by the currently ongoing thematic regional projects[13] will be considered in the implementation of the proposed activities. Training and capacity building activities in the priority areas would be implemented jointly with these projects to the extent possible.

Dialogue with the currently ongoing projects in ***the Black Sea region*** (in particular, EMBLAS 2) and the Black Sea Commission Secretariat will be also ensured as appropriate, targeting specifically Georgia and Ukraine. Given that these two countries have AAs, including the MSFD implementation, the development of marine indicators in support of preparation of Black Sea regional assessment will have to be in coherence and consistent with corresponding process in the other Black Sea region countries not covered by the ENI instrument and in particular with the MSFD.

Links will also be maintained with ***the EU Delegations*** in the beneficiary countries to act as focal points for communicating and ensuring coordination with other relevant – particularly bilateral – initiatives implemented in the countries.

The ***Eionet*** support and expertise will play a key role in the implementation of the proposed activities, in particular in capacity building and transfer of experience in application of relevant practices, tool and systems used in EU/EEA context, where the EEA will ensure regular dialogue on the execution of ENP East project activities with its 39 member and cooperating countries during regular Eionet National Focal Points meetings taking place

[13] **See landscape of projects under the Eastern Partnership Environmental Governance and Climate Change Prevention Flagship at: http://ec.europa.eu/enlargement/neighbourhood/pdf/riga/20150518_flagship_env.pdf http://capacity4dev.ec.europa.eu/env-east/dashboard**

three times a year. Eionet expertise and knowledge is particularly central to the 2014-2015 project 'Increased collaboration with the EEA and further implementation of SEIS' in five ENP countries (InSEIS), which targets Moldova from the Eastern Partnership countries. The good practice examples of this cooperation with Eionet will be further continued with all six Eastern partnership countries in a structured and coordinated manner.

2. Objectives and expected results

The overarching objective of the project is to support the further implementation of the Shared Environmental Information System (SEIS) principles and practices in the six Eastern Partnership countries.

The specific objective is to strengthen the regular production of environmental indicators and assessment as a contribution towards knowledge-based policy-making and good governance in the field of the environment. This will result in improved national capacity related to the provision of environmental data and information in line with national and EU environmental legislation and practices.

The main project **results** will be:

I. Improved implementation of regional/international commitments related to environmental reporting in line with EU/EEA best practices;

II. Improved capacities in the national administrations to manage and use environmental statistics, data and information in support to decision-making in line with EU/EEA best practices;

III. Preparation of regular State and Outlook on the Environment reports (SOER) and indicator-based assessments in line with EU/EEA best practices.

3. Countries covered by the action

The countries covered by this activity are the six Eastern Partnership's countries, namely: Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine.

ANNEX 7: List of laboratory equipment

7.1 List of the available equipment and devices at the National Environmental Monitoring Department (NDEM)

№	Name and brand of the equipments and devices	Number	Date of Production	Purpose and status	Note
1.	Phytoplankton net tow-Idromar	1	2010	Plankton sampling, operational	project
2.	20μm net tow	2	2010	Plankton sampling, operational	project
3.	Zooplankton net tow	1	2010	Plankton sampling, operational	project
4.	Camera Idromar	1	2010	Plankton calculation, operational	project
5.	Camera Idromar	1	2010	Zooplankton, calculation, operational	project
6.	Zooplankton calculation camera	1	2010	Zooplankton, calculation, operational	project
7.	Microscope XDS3+Optikam PRO3	1	2010	Observation of microorganisms, operational	project
8.	Microscope B600T+Optikam PRO3	1	2010	Observation of microorganisms, operational	project
9.	Ekman Binge Idromar	1	2010	Sampling frame, operational	project
10.	Van Veen-Idromar (scope shape)	1	2010	Operational	project
11.	İdromar biological dredge	1	2010	Dredge, operational	project
12.	Standart gölməçə toru	1	2010	Sampling frame, operational	project
13.	Sampler - İdromar	1	2010	Sampling frame, operational	project
14.	Ələk dəsti, Retsch	3	2009	Sample washing	project
15.	Microskope, SZM-2	1	2010	Observation of microorganisms, operational	project
16.	Accu, iG200-2C	1	2010	Operational	project
17.	Pu 14409 anod kab. B5.5m	1	2010	Lowering sampling net into the water, operational	project
18.	Pu13021 single-key anod cab. B4	2	2010	Lowering sampling net into the water, operational	project
19.	Vertical water model. Idromar	2	2009	Sampling, operational	project
20.	100 m rope gear Idromar	1	2010	Lowering sampling net into the water, operational	project
21.	Indicator disc, Seedi-Idromar	2	2010	The study of water clarity, operational	project
22.	Multiparametric probe - Idromar IP 165D	1	2009	Determination of psysical quality of water, operational	project

№	Name and brand of the equipments and devices	Number	Date of Production	Purpose and status	Note
23.	Spektrofotometer Lambda-35	1	2003	Biogenic pollution, out of order	
24.	"Multi 340i" device	1	2003	pH,O2 ,conductivity,operational	
25.	Electric conditioning system BK-150	1		Out of order	
26.	Fume hood	3			
27.	Drying cabinet Shafa	2		Temperature,out of order	
28.	Spektrofotometer CF-26	1	1980	Biogenic pollution,out of order	
29.	Analytical scale-Kren-ABJ 220-4M	1	2004	0-200q,operational	
30.	Water purification system Millipore (mod elix3)	2	2010	Operational	project
31.	Portable Turbidimeters HANNA	1	1998	Turbidity, operational	
32.	Pipette Eppendorf H3111000173	1		Operational	
33.	Portable wireless power transmission system	1		Electric conductivity and salinity of the water, operational	
34.	Scale BLKT-500	1	1987	0-500q weight, operational	
35.	Device ABU-6c	1		Swilling, operational	
36.	Spektrometer "Shmadzu"	2		Operational	
37.	İonometer "Ekotest"	2	2002		
38.	Oksimeter "OXİ-3301"	2	2002		project
39.	Thermostat for oct analysis	2		Operational	
40.	Distiller, Distilyator DL-4	2		Operational	
41.	Analytical scale A-250A	2		Operational	project
42.	Technical scale T-50R	2			project
43.	Conductometer "Cond 340i"	2		electric conductivity , operational	
44.	6150 AD dosimetric device	2			
45.	Compressor TA-18	1		Out of order	
46.	Thermostat	1		Out of order	
47.	Compressor SL-2800	2			
48.	Sentrifuqa	2			
49.	Radiometr CRP-0027	2			
50.	Spektrophotometer, Specord 205	1	2005	Ammonium, nitrate, phosphates, sulphates, operational (suction pipe is running short)	

№	Name and brand of the equipments and devices	Number	Date of Production	Purpose and status	Note
51.	pH meter, pH 3310	1	2010	Hydrogen ion,operational	project
52.	Conductivity meter Hi-9033	1	1996	electric conductivity , operational	
53.	Thermostate - Shafa	1		Drying of reagents,operational (termorequlyatoru işləmir)	
54.	Drying Oven - CHOL	1	1988	For drying containers, operational (Thermoregulator is out of order)	
55.	Ionometer İ-115	1		Hydrogen ion, out of order	
56.	Swilling device АВУ-1	1	1983	Determination of analysis, operational	
57.	Ionometer EV-74	3	1985	Determination of hydrogen ions,out of order	
58.	Ionometer EV-74	1	1981	Determination of nitrate ion, operational	
59.	Rotary Evaporator 1m-2	1	1987	Out of order	
60.	Photocolorimetric KFK-2	6	1983-1996	Ammoonium, nitrate, sulfate, phosphate, humus determination, out of order	
61.	Centrifuge, Sentrifuqa OC-6m	1	1985	İşləmir	
62.	Centrifuge, Sentifuqa ОПН-3	1	1985	Operational	
63.	pH-meter	1	1982	Determination of hydrogen indicator, out of order	
64.	Aquadistiller “Akvadisitilyator”	1	1980	Out of order	
65.	Thermostat "Shafa"	1		For drying containers, out of order	
66.	Laboratory scale VLKT-500	1	1988	For measuring samples and reagents, operational	
67.	pH, pH 3310 SET 2	1	2010	Out of order	project
68.	Gamma-Betta Spectrometer MKC-1315	1	2006	Determination of radionuclides Sr,Cs,K, operational	project
69.	Dosimeter,DRQ 01-T1	1	1991	Measurement of gamma rays, radiation measurement, operational	
70.	Analytical scale VLKT-500	1	1986	Weight operation, operational	
71.	Fume hood, HS	1	2004	Cleaning burnt samples, operational	

№	Name and brand of the equipments and devices	Number	Date of Production	Purpose and status	Note
72.	Washing box for a workplace , B12-NJ	1	1969	Washing lab containers, operational	
73.	Water and gas equipments, SQL	1	1988	Carrying out analyses in a laboratory, operational	
74.	Sampling equipment , NG	1	2003	Sampling, operational	
75.	Radiometer , RUB-01 P1	1	1988	Measurement of activity of Betta,out of order	
76.	Dosimetdr , İMD -1	1	1990	Measurement of gamma rays, out of order	
77.	Dosimetdr, DRQ	1	1991	Measurement of gamma rays, out of order	
78.	Radiometer , Beta	1	1991	Measurements, out of order	
79.	Device , MPXL	1	1986	Mobile lab, out of order	
80.	pH - meter , PRL	1	1986	pH identification, out of order	
81.	Radiometer , SRP-88	1	1992	Measurement, out of order	
82.	Mufel oven , SNOL	5	1986-1989	Burning samples, out of order	
83.	Gas analyser , 623 UH-02	1	1986	Determination of hydrocarbons, out of order	
84.	Gas analyser , 645 XL-01	1	1987	Determination of nitrogen oxides, out of order	
85.	Spectrophotometer , СФ-46	1	1987	Determination of the concentration of contaminants, out of order	
86.	Photoelectrolorimeter , КФК	1	1976	Determination of the concentration of contaminants, out of order	
87.	Photoelectrolorimeter , КФК-2	2	1983-1987	Determination of the concentration of contaminants, out of order	
88.	Gas analyser , Паллдий 3	1	1990	Determination of carbon monoxide, out of order	
89.	Gas analyser , ГАНК-4	1	2003	The determination of the composition of the gas, out of order	
90.	ГАНК-4 chemical cassettes of gas analyser	12	2003	The determination of the composition of the gas, out of order	
91.	ГАНК-4 sensors installed inside gas analysers	5	2003	The determination of the composition of the gas, out of order	
92.	Gas analyser , АНКАТ 7654-01	1	2003	CO,NO2,SO2 identification	

№	Name and brand of the equipments and devices	Number	Date of Production	Purpose and status	Note
93.	Technical scale , ВЛКТ-500	1		Weight operation, out of order	
94.	Ionomer , U-130	1	1990	Determination of the concentration of hydrogen ions, out of order	
95.	Voltmetr , ВВ-44	1	1978	Voltage measurement, out of order	
96.	Oscilgraphe , C-49	1	1979	Repair of equipments, out of order	
97.	Generator , Г-5-54	1	1985	Repair of equipments, out of order	
98.	Fume hood	3	1970-1980	Room air ventilation, operational	
99.	Laborator post	9	1970-1980	Air sampling,operational	
100.	Varian 400 GS/MS/MS	1	2005	Determination of pesticides for water and soil samples, out of order	
101.	Berghaf Speedwave MWS-3	1	2005	For extraction of soil, needs repair	
102.	Zeenit650 Atom absorption	1	2008	Determination of heavy metails in water and soil samples, operational	
103.	DİONEX-1100 İon chromatograph	1	2011	Determination of cations and anions in air samples, operational	
104.	Agilent Technologies 7890A GC	1	2011	Determination of pesticides, operational	
105.	АН-2	1	2004	Identification of oil and petroleum products, operational	
106.	ИКН-025	1	2002	Identification of oil and petroleum products, out of order	
107.	Millipore Elix 3	1	2009	Distilled water, needs repair	
108.	AAS S-112	1		Out of order	
109.	Arc generator DQ-2	1		Out of order	
110.	Gas-liquid chromatograph 3101	1	1980	Out of order	
111.	IQ- spectrometer Specord-80	1	1979	Out of order	
112.	İnteqrator	1		Out of order	
113.	Microphotometer İFO-451	1		Out of order	

№	Name and brand of the equipments and devices	Number	Date of Production	Purpose and status	Note
114.	Spetrometr SPEK	1		Out of order	
115.	Spectrometer MAS-50	1		Out of order	
116.	Spectrograph İSP-30	1		Out of order	
117.	Spektroyekt SPP-2	1		Out of order	
118.	Spectrograph DFS-452	1		Out of order	
119.	Chromatograph 1109	1		Out of order	
120.	Chromatograph SVET-500	2		Out of order	
121.	Chromatograph SVET-464	1		Out of order	
122.	Hydrogen generator	1		Out of order	
123.	Coal-electrode penetrating equipment	1		Out of order	
124.	SVET-500m	1		Out of order	
125.	Digital temp. BOP measurement device with screen	1		Out of order	
126.	Spectrometer	1		For analysis of petroleum products, out of order	
127.	Analytic scale	4		Out of order	
128.	Technical scale	2		Out of order	
129.	Svantek -947	1	2001	Noise, vibration, operational	
130.	Protek-3201	1	2002	Electromagnetic waves, lack of computer support	
131.	DKQ-01D	1	2005	Radiation, operational	
132.	İdentifinder	2	2009	Radiation, operational	
133.	6150 AD 6/H	1	2004	Radiation, operational	
134.	PŞ-250	1	2002	Soil sampling, operational	
135.	PPA-01M-01-Alfarad	1	2002	For the study of Rn, operational	
136.	AM-5 M silfon aspirator	1	2002	Manual aspirator (pump), operational	
137.	Gasanalyser PQA-7	1	2002	Dangerous gases analyzer, out of order	
138.	Kaskad-512.2	1	2002	gas analyser, out of order	
139.	Expert-001-2	1	2002	PH-metr: ionometer, stationary lab., operational	
140.	Environmental Monitornq system USA	1	2006	For ambient air patterns, maintenance date has expired	
141.	PE-61 Magnetic stirrer	1	2001	Operational	
142.	GPS	1	2004	Stasionar lab., operational	

№	Name and brand of the equipments and devices	Number	Date of Production	Purpose and status	Note
143.	PF-12R “Diqar”	1	2002	Refrigerator, Preventive maintenance is necessary	
144.	Multivision (O2 measurer)	1	2008	Operational	
145.	Sediment sampling	1	2001	Operational	
146.	Ankat – 7664 micro gas analyser	1	2013	Operational	
147.	Mufel oven, KHOD	1	2011	Burning samples, operational	
148.	Washing box for a workplace, 7BP1	1	1969	Washing laboratory containers, operational	

7.2 List of the operational devices in the laboratory of Caspian Complex Environmental Monitoring Administration

s/s	List of available devices	Production date	Features
1	KFK-3- 01 Russia	1992	Determination of biogenic substances
2	KFK-2 Russia	1988	Determination of synthetic surface-active substances
3	Hach lange DR 2800 portable device	2006	Biogenic substances, sulfates, etc.
4	Clorine eXact universal mobile device USA	2010	Determination of residual chlorine
5	Electronic scale KERN ARJ 220-4 NM, Germany	2006	
6	Electronic scale KERN ARJ 220-4M,Germany	2006	
7	Electronic scale ВЛКТ 500q	1980	
8	Microwave oven Russia	2008	
9	Spectrofotometr Genesys 20 4004/4		
10	Hİ 93717 Hanna German brand	1999	Determination of phosphates
11	Hİ 93733 Hanna German brand	1999	Determination of ammonium ion
12	Hİ 93728 Hanna German brand	1997	Determination of nitrates
13	Hİ 93708 Hanna German brand	1997	Determination of nitrites
14	HI 98202 Hanna German brand	2014	Sodium ions

15	Hİ 991001 Hanna German brand	2014	pH Determination
16	Ionomer 130 Russia		pH Determination
17	Hİ-3864 Hanna German brand	1988	Determination of phenols
18	Thermostat (20^0C) Russia	1978	
19	AH -2 device Russia	2004	Determination of petroleum products
20	Gas chromatograph Dani ABŞ		Petroleum Hydrocarbons
21	Solomer “Hİ 9034”	2005	Determination of salinity
22	Oximeter “Hİ 9145”	2005	Determination of dissolved oxygen
23	Water analyzer Horiba U 10		Physical and chemical indicators
24	Electronic scale “Sortorius”	2003	
25	Bio Trak 4250, Austria	2006	Microbiological analyzes
26	Autoclave MELA tronic 23, Austria	2006	Moist heat sterilization
27	UV-box, BIOSAN Latvia	2006	Dry heat sterilization
28	Electronic scale KERN EW 222-3NM, Germany	2005	