WORKING GROUP ON ENVIRONMENTAL MONITORING AND ASSESSMENT

Fourteenth session
Geneva, 7-8 November 2013

Item 5 (a) and (e) of the provisional agenda

Submitted by Azerbaijan[1]

1. Please report on changes since October 2012 to legal and regulatory basis, programmes and plans on monitoring, assessment and information to public (elaboration of new laws, by-laws, plans or programmes). Please inform about legal and regulatory actions aiming at making the monitoring system for different environmental media a more integrated one.

Appropriate measures have been taken towards the implementation of "State Program on Poverty Reduction and Sustainable Development in the Republic of Azerbaijan for 2008-2015", "State Program on socio-economic development of regions of the Republic of Azerbaijan in 2009-2013", "State Program on reliable provision of population with food staffs in the Republic of Azerbaijan for 2008-2015", "State program on use of alternative and renewable energy sources in the Republic of Azerbaijan", "State Program on social-economic development of Baku City and its settlements in 2011-2013" and other programs during 2012.

I and II editions of "Red Book" of the Republic of Azerbaijan were published in 2013.

A bill regarding amendments to the Law of the Republic of Azerbaijan "On obtaining information about environment" has been prepared.

A bill regarding amendments to the Law of the Republic of Azerbaijan "On protection of Atmosphere" has been prepared.

2. Please report on changes since October 2012 to institutional arrangements adopted in your country for data exchange and sharing, indicating the designated institutions for coordination of the different monitoring networks. Please inform how these changes contributed to establishing a more integrated system of monitoring and to establishing a regular data flow.

3. Please report on your country's major modernization or upgrade actions of national monitoring networks since October 2012 for:

(a) Air:

[1] Prepared by Aytan Yusifova, Ministry of Ecology and Natural Resources

- Expansion or upgrade of the monitoring network (e.g.: new automated monitoring stations added to the network, new software launched at the stations, etc.);

- New parameters added for measurement (e.g. $PM_{2,5}$, As, Cd, Ni, PAHs, etc.);

- Implementation of internationally recognized reference sampling and measurement methods, if not done before;

- Other relevant issues;

  Taking into account requirements of provisions of "Rules for recognition and enforcement of international (regional) and inter-state standards, norms, rules and recommendations in the territory of the Republic of Azerbaijan" approved by Decree #26, 22 November 1998, of the President of the Republic of Azerbaijan, Technical Environmental Committee was created by the order of Ministry of Ecology and Natural Resources together with State Committee on Standardization, Metrology and Patent of the Republic of Azerbaijan, 29 July 2010.
  Technical Committee has prepared some standards.
  • "Protection of environment. Atmospheric air. Determination of concentration of sulfur dioxide (SO) on atmosphere by spectrophotometer method with pararozanil and tetra-mercuric-chloride" AZS 748-2013
  It can be used in other laboratories dealing with monitoring of environment, sanitary-hygienic and atmosphere air operating in territory of the country.
  It is defined to determine when the capacity of air sample is 10 liter in nearly 0.05-10 mg/m3 range of concentration of sulfur dioxide on atmosphere of standard residential areas.
  •"Protection of environment. Atmospheric air. Determination of ammonia on atmosphere by means of dofenol method.
  It can be used in other laboratories dealing with monitoring of environment, sanitary-hygienic and atmosphere air operating in territory of the country.
  It is defined to determine when the capacity of air sample is 10 liter in nearly 0,1-1 mg/m3 range of concentration of ammonia on atmosphere of standard residential areas.
  It is used to determine average daily concentrations.

(b) Water:

- Introduction of advanced monitoring techniques (automatic gauging stations, automated stations for warning of accidental pollution, etc.);

- New parameters added for measurement;

- Implementation of internationally recognized reference sampling and measurement (chemical analysis) methods, if not done before;

- Other relevant issues;
  Technical Committee has prepared some standards.

  • "8 parts dictionary made on quality of water". AZS İSO -6107-1- 2013, AZS İSO -6107-4- 2013, AZS İSO -6107-5- 2013, AZS İSO -6107-6- 2013, AZS İSO -6107-8- 2013
  "Quality of water –Dictionary" consists of 8 parts and 5 parts of this dictionary have been approved. Determinations in this dictionary have been made in order to establish standard terminology regarding characteristics of water. Terms in this dictionary may be similar to the terms of the glossaries issued by other international organizations, but their determinations would be different. Thus, they were considered for different purposes.
  • "Determination of ammonium ions in natural waters" AZS 751.1-2013
  In addition to being one of the main indicators characterizing quality of water, concentration index of ammonium ions is used to assess conditions of water reservoirs in hydro and microbiological researches. Increasing amount of ammonium ions indicates deterioration of sanitary conditions of reservoirs.
  • "Determination of suspended solids in natural waters" AZS 751.2-2013
  It is defined to determine suspended solids in natural and waste waters.
  • "Determination of oxygen solved in natural waters" AZS 751.3-2013
  Concentration of oxygen in water is indicator of oxidation-reduction potential and determines direction and speed of chemical and biochemical oxidation processes of organic and non-organic compounds.
  • "Determination of biochemical oxygen consumption (BOC) in natural waters" AZS 751.4-2013
  Determination of BOC -is made to value the amount of biochemical changeable organic compounds and characterize residential conditions of hydrobionts and quality of water in surface waters.
  • "Determination of alkalinity in natural water (HCO -)" AZS 751.5-2013
  Alkalinity is one of the important indicators of surface waters and characterizes number of hydro chemical and geochemical processes (chemical formation of water composition, soil erosion, creation of sedimentary rocks, as well as carbonate rocks etc.) on earth.
  • "Determination of specific electrical conductivity in natural waters" AZS 751.6-2013
  Specific electrical conductivity is one of the indicators assessing non-organic approximate concentration of electrolytes in water.
  • "Determination of chloride ion in natural waters" AZS 751.7-2013
  Increasing concentration of chlorides deteriorates the quality of water and makes it unusable for drinking water supply, restricts its utilization for other technical and economic purposes, as well as in the field of agriculture.
  • "Determination total roughness in natural waters" AZS 751.8-2013

High roughness, especially roughness of magnesium makes water unpleasantly taste, deteriorates organoleptic characteristics of water, and limits its use in steam power plants and other industrial technologies.

- "Determination of transparency in natural waters" AZS 751.9-2013

In other words, transparency of water is related to light conductivity capacity of water, its color and turbidity.

- "Determination of smell in natural waters" AZS 751.10-2013

Life activities of aquatic organisms, biochemical decompositions of organic substances in aerobic and anaerobic conditions, entering volatile-smelling substances which appear as the result of chemical reaction of existing components in water basins and water treatment, as well as waste waters of chemistry, metallurgy, oil processing, light industry and other industrial enterprises to water environment determines the smell of water.

- "Determination of sulphates in natural waters" AZS 751.11-2013

Information on concentration of sulphates is needed to determine changing of water composition and use coverage of waters.

- Determination of chlorophyll-a in natural waters

Concentration of chlorophyll-a depends on eutrophication range of surface waters. Besides other indicators of active biomass, determination of concentration of chlorophyll-a gives clear idea about its amount and potential activeness of photosynthesis in water plants.

- Taking macro-benthos organisms in rivers

The main negative effect of floating pollutants to the rivers, lakes, water reservoirs, as well as coastal and marine waters is that they change structure and functions of ecosystems. Basic information required for the classification (excellent, good, moderate polluted, contaminated and the worst one) of water facilities is obtained as the result of biological monitoring.

- Determination of chemical oxygen consumption (COC) in natural waters

It is considered the amount of organic compounds (5 and more O /l) existing in surface waters.

(c) Soil:

- Introduction of a policy-determined definition of 'contaminated sites' that present unacceptable risks under local soil contamination monitoring, if not done before;

- New sites under monitoring of local soil contamination in accordance with the applied policy-determined definition;

- New parameters added for measurement under diffuse soil contamination monitoring;

- Implementation of internationally recognized reference sampling and measurement methods for diffuse soil contamination monitoring, if not done before;

- Other relevant issues;
  Technical Committee has prepared some standards.
  • Quality of land – Laboratory methods to determine micro-biological respiratory of land. AZS İSO 16072-2013
  This Standard describes methods to determine breathing of aerob, un-neutralized land. These methods are due to determine consumption of oxygen and releasing of carbon, in both cases, after substrate addition (modeled substrate respiration), before the substrate has been added (global respiration).
  • Quality of Land – establishment of control programs and its management. AZS İSO 16133-2013
  Control is the process of repeated observations for the purposes of one and more components of environment according to plans prepared in space and time using comparable methods for revival of environment and obtaining information.
  • Quality of Land – characteristics of the land regarding its effects on population. AZS İSO 15800-2012
  Characterizing land and territories for effects on population is carried out all over the world. They are usually planned and implemented by consulting companies and expert organizations. Information obtained in classification of land is used to assess effects on population.
  • Quality of Land – Indicators regarding ecotoxicological characteristic of soil and soil materials. AZS İSO 15799-2013
  Most of existing ecotoxicological test methods (bio- tests) which are due to the international standards has been compiled in order to reflect ecotoxicological potential of test substances when they were added to soil and soil materials.

4. Please report on new developments in your country system for monitoring of biodiversity since October 2012:

- New biodiversity targets and related indicators (based on sound science and methodological best practice) for measuring the progress on achieving the targets added to the system;

- Other relevant issues;

  Creation of Samur-Yalama National Park. According to #2518 Order of the President of the Republic of Azerbaijan, 5 November 2012, Samur-Yalama National park was built in 11772,45 ha area, preparation of administration plan of National Park, formation of administration and the staff, and creation of infrastructure of the Park is being implemented nowadays.
  It has been approved by #929 Decree regarding "Regulations on Samur-Yalama National Park of the Republic of Azerbaijan, 25 June 2013, of the President of the Republic of Azerbaijan.

5. Please report on new, major developments or improvements in your country national system for data management since October 2012:

(a) Inventories:

- Developments in collection and computerized storage of data (application of new software);

- Development of on-line databases for public access to processed data, especially through interactive map-based visualizations;

- Other relevant issues;

(b) Developments in data quality assurance and control:

- Introduction of new procedures, if any, for collection of data that were assessed as insufficient;

- Introduction of new procedures, if any, for using data sets if more than one data set exists or for identifying inconsistencies for considerable changes in time series data;

- Application of software for logical control of data;

- Changes, if any, in procedures for data validation;

(c) Developments in assessment and modeling (trends, health or socio-economic effects, compliance with limit values/policy targets, as applicable);

6. Please inform about modern technologies implemented since October 2012 for dissemination and presentation of environmental information such as internet-based tools, GIS or other software e.g. showing real time data on environmental media pollution.

For implementation of the Decree #429, 23 May 2011, of President of the Republic of Azerbaijan "On Some measures in the field of organization of e-services provided by

state bodies", e-services section has been created in web-page of Ministry of Ecology and Natural Resources, names of all e-services provided by the Ministry and the list of documents required for rendering these services have been showed, e-variants of application and contract forms, as well as projects of administrative regalements of e-services have been installed and citizens are provided for free use of this section.
Ministry of Ecology and Natural Resources is implementing 18 e-services.
Electron services of Ministry of Ecology and Natural Resources have integrated to the "Electronic Government" portal.