

WORKING GROUP ON ENVIRONMENTAL MONITORING AND ASSESSMENT

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Latest Developments in Environmental Monitoring and Assessment at the National, Subnational and Company Levels

Submitted by Montenegro¹

A. Modernization and upgrading of monitoring networks, especially those on air, water and soil quality (in terms of number of stations, automated measurements and parameters measured)

Air quality

By the air quality monitoring program for 2010, it is foreseen air quality monitoring at 4 stationary automatic stations located in Podgorica, Niksić, Bar and Pljevlja. The parameters that are to be measured: SO₂, O₃, CH₄, NMHC, THC, CO, NO, NO₂, NO_x, PM₁₀, BTX, PM 2.5, PAH, heavy metals, meteorological parameters, fluorides.

In the first half of 2009 measurements were performed on a single automated station in Podgorica, while the other three stationary stations were put into operation in the second half of 2009. This was the most important step in modernizing the monitoring of air quality in Montenegro.

Soil quality

In 2010, by monitoring program it is planned to test 88 samples of soil, sampled from 46 locations in 15 municipalities in Montenegro. These samples are analysed on presence of hazardous and harmful organic substances (cadmium, lead, mercury, arsenic, chromium, nickel, fluorine, copper, zinc and cobalt) and organic hazardous noxious substances (polycyclic aromatic hydrocarbons, polychlorinated biphenyls and trifenili, congeners of PCBs, organotins compounds and pesticides). Soil samples near the electric power substations are examined on the possible content of polychlorinated biphenyls. Sampling plan is done so that from a particular location are taken samples from at least five microlocations, of which is formed a composite sample to be analysed. As a control one, soil sample is taken from plots that are supposed to be out of roads as well as out of places reach with pollutants. Soil monitoring program in 2009 was based on examination of contaminated sites.

Surface and ground water

For creation and implementation of the monitoring program for surface and ground waters in Montenegro in charge is the Ministry of Agriculture, Forestry and Water Management. Agency for Environmental Protection does not participate in development of monitoring programs, it only receives data that come through its implementation.

¹ Prepared by [Milena Bataković, Environmental Protection Agency of Montenegro].

The network of stations for the quality of surface and ground waters covers 13 rivers with 66 measuring profiles and three natural lakes with 11 measurement profiles. The quality of surface waters in Montenegro is carried out at 5-6 monthly series, arranged in the period from June to October.

Groundwaters

The network is composed of nine measuring profile stations in the area of Zeta plain. The survey was carried out in 3-4 series, in the period from March to December.

Physical-chemical parameters which are determined: temperature, pH, electrical, suspended matter, the ratio of Ca / Mg, estimated saturation (% O₂), BOD₅, COD, iron, ammonia, chlorides, sulfates, phosphates, nitrates, nitrites, phenols, detergents.

Biological parameters which are determined: total colyform bacteria and total fecal bacteria.

Sanitary quality of sea water in public swimming areas

Program for the monitoring of sanitary safety of sea water at public beaches and its overall quality, covers a total of 13 microbiological and physical-chemical parameters at 85 sites in the period from May to October, two times a month.

Biological parameters which are determined: total koliformne colyform bacteria, fecal bacteria, Esherichia coli, intestinal Enterococcus.

Physical-chemical parameters that are determined: air temperature, water temperature (during sampling), salinity, pH, color, saturation of oxygen (% O₂), ammonia (mg / l), floating waste solids (descriptive) color and opacity (descriptive).

B. Development of inventories of air emissions, wastewater discharges and waste

The development of the project of LRTAP GHG inventory takes place in Montenegro at the moment. In particular, it highlights the project implementation at the national inventory of emissions to the level of integration and fulfillment of obligations related to the Convention on the Transboundary Air Pollution at large distances (LRTAP). In order to implement provisions of the LRTAP Convention, the data were collected and for 1990. Available data were obtained from the Statistical Yearbook, issued by the Statistical Office of Montenegro, and are related to demography, agriculture, livestock breeding, food and beverage industry and energy.

In the first national report on climate change the inventories for 2003 and 2006 are shown. GHG inventory for 2003 was done by applying the IPCC methodology with the sectoral approach and it was consistent with the inventory base year. GHG inventory for 2006 was made for the purposes of reporting to the LRTAP Convention, applying Corinair methodology. The emissions inventory for 2009 was done on both national and local level, which represents progress compared to the inventory in 2006.

Regarding waste statistics, Statistical Office (MONSTAT) collects data both from utilities and from industrial pollutants, on the basis of annual survey. Through a licensing system for handling and storage of hazardous waste as well as inspections that are done, Environmental Protection Agency of Montenegro established its own database, starting from 2009 year.

Statistics on wastewater discharge is responsibility of the Statistical Office of Montenegro (MONSTAT). It is done on the basis of data supplied by reporting units, i.e. municipality utility companies, on annual level.

C. Expanding monitoring of biodiversity, including forests

Biodiversity monitoring program in Montenegro has been implemented since 2000. Monitoring program of biodiversity includes the species and habitats that are protected at the international level, that are located on one of the following list: World Red List (IUCN), the European Red List, Resolution 6 Habitat Directive, the Berne Convention. Data obtained during the monitoring of these species should be very useful and for the implementation of the Natura 2000.

Ministry of Agriculture, Forestry and Water Management is responsible for overall management of forests as well as for monitoring. Permanent monitoring of the forests effect on the environment in Montenegro does not exist. Development of forest inventory in Montenegro is in the process.

D. Improvement of data handling, including data quality assurance and control standards and norms and database management

Environmental Protection Agency of Montenegro implements monitoring program on annual basis. Through tender procedures the Agency selects institutions for the the program realization. Institutions that are to carry out the monitoring program should ensure quality of data submitted to the Agency. Also, institutions that have the database related to the environment, are obligated to submit data to the Agency for Environmental Protection. Appropriate methodology for monitoring of the data quality will be established by the development of the National list of indicators.

E. Publication of environmental assessments at the subregional, national, subnational and project-based levels and the indicators used there in.

Montenegro has not yet published a report on the state of the environment on the basis of indicators. After drafting and adoption of national list of indicators by the Government of Montenegro, the reports on the environmental indicators based on an annual basis will be published.

F. Environmental reporting to the international community, especially to multilateral environmental agreements

Montenegro ratified the United Nations Framework Convention on Climate Change (UNFCCC) after succession 2006, i.e. after becoming a member of the Convention on 27th of January 2007 as a non-Annex 1 country. The Kyoto Protocol was ratified on 27th of March 2007 (Law on ratification was published in the Official Gazette of RM no. 7.17), and Montenegro became a member as Annex B country on 2nd of September 2007. Ratification of the UNFCCC and of the Kyoto Protocol, Montenegro joined the countries that share the concern and play an active role in international efforts to solve the problem of climate change.

The first national report of Montenegro on climate change under the United Nations Framework Convention on Climate Change (UNFCCC) was adopted 2010.

Gas inventories are realized as a liability under the LRTAP and UNFCCC.

SOER 2010

Environmental Protection Agency submitted reports on the Diversity, Flexibility Quality of surface water, Soil quality, State of biodiversity and Air quality, for the needs of the five-year report SOER 2010 of the European Environmental Protection Agency.

MEDPOL

As a signatory of the Barcelona Convention, Montenegro has an obligation to submit annually reports on the state of the marine ecosystems of Montenegro to the MEDPOL. The first report was delivered to the MEDPOL secretariate in 2009, while the other one for 2009 is in preparation.