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Working Group on Environmental Monitoring and Assessment

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**DEVELOPMENTS IN IMPROVING ENVIRONMENTAL OBSERVATIONS, DATA  
COLLECTION AND REPORTING**

**IMPLEMENTATION OF RECOMMENDATIONS ON MONITORING AND  
INFORMATION MANAGEMENT FROM COUNTRY ENVIRONMENTAL  
PERFORMANCE REVIEWS**

**Montenegro**

Note by the secretariat<sup>1</sup>

*Summary*

The paper presents the recommendation on environmental monitoring and information management to Montenegro that the Committee on Environmental Policy approved on 29 May 2007 at its fourteenth session, and describes the situation in the country with environmental monitoring and information management as it was at that time.

The Working Group is expected to review progress made by Montenegro in the implementation of this recommendation and to provide the country delegation with possible guidance on how to improve performance to this end.

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<sup>1</sup> Prepared on the basis of materials of the second Environmental Performance Review of Montenegro (ECE/CEP/135).

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## **RECOMMENDATION OF THE SECOND ENVIRONMENTAL PERFORMANCE REVIEW OF MONTENEGRO**

The Ministry of Tourism and Environment, in cooperation with relevant stakeholders, should complete the reform of the environmental integrated monitoring and information system. The Ministry should take the leading role in its implementation as well as responsibility for mobilizing the internal and external resources needed. The Ministry of Tourism and Environment should, in particular:

(a) Harmonize the environmental monitoring programme and reporting system with European Environment Agency standards;

(b) Clarify the responsibilities of the respective monitoring institutions for the implementation of the different parts of the integrated monitoring programme;

(c) Clarify the procedures and standards for providing, processing and disseminating information; and

(d) Revise current reporting policies and procedures in order to disclose to the public, on a regular basis, environmental information produced by monitoring actors and competent government organizations, including through the Internet.

### **I. ENVIRONMENTAL MONITORING**

#### **A. Legal and policy framework**

1. The 1996 *Law on Environment* (OG RM No. 12/1996), with latest amendments of 2002, creates a legal basis for environmental monitoring activities. The Law describes the content of the monitoring programmes, which include “the degree of pollution of air, water and soil, flora and fauna, climatic changes, ionizing and non-ionizing radiations, noise and vibrations, as well as the observance of the obligations as stipulated by international treaties and conventions”. In 2003, the country started the revision of its legislation with the objective of harmonizing it with European Union (EU) legislation. In this context, the legislative basis of environmental monitoring activities will be revised. However, for the time being, environmental monitoring continues to be carried out in accordance with past laws and regulations.

2. In March 2003, the Government adopted the *Agenda for Economic Reforms of Montenegro* for 2003 to 2006. Among a range of priority activities on the environment, the Agenda specifies the “development of a comprehensive environmental information and monitoring system”. For that purpose, tasks to be carried out have been underlined and their

implementation will require corresponding efforts and resources. In general, the Agenda envisages: the revision of State monitoring programmes and methodologies based on internationally-accepted criteria, the strengthening of the organizational structure and coordination among monitoring institutions, the updating of monitoring equipment, and the strengthening of analyses, data processing and research. However, a lack of resources makes achieving these goals unrealistic in the short term.

3. After the 2006 split of the State Union of Serbia and Montenegro, Serbia became the successor to the Union's previously ratified international treaties and conventions. As a sovereign country, Montenegro created a platform for involving itself in international monitoring programmes established to implement international conventions and started revising its legislative framework accordingly. Among the conventions stipulating comprehensive monitoring activities, the most important are the:

(a) *Convention on Long-range Transboundary Air Pollution;*

(b) *Convention on the Protection and Use of Transboundary Watercourses and International Lakes;* and

(c) *Revised Barcelona Convention for the Protection of the Mediterranean Sea against Pollution.*

4. Montenegro's monitoring institutions have already participated in some international monitoring programmes (e.g., the *Programme for the Assessment and Control of Pollution in the Mediterranean Region* (MED POL) within the *Barcelona Convention*, the *Cooperative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe* (EMEP) within the *Convention on Long-range Transboundary Air Pollution* (see Chapter 3 on Implementation of International Agreements and Commitments). Comprehensive improvement of the national environmental monitoring system is envisaged in the *National Strategy for Sustainable Development* (NSSD).

## **B. Institutional framework**

5. Since 2002, the network of environmental monitoring institutions has not changed. However, the structure of the governing system passed through a substantial series of transformations, which is still ongoing. After the restructuring of the Government at the end of 2006, the new Ministry of Tourism and Environment (MTE) took over responsibility for environmental matters from the former Ministry of Environmental Protection and Physical Planning (MEPPP).

6. The institutional framework of monitoring activities comprises a number of institutions currently subordinated to different government bodies. The Hydrometeorological Institute (Hydromet), the Seismological Observatory, the Institute for Nature Protection, the Institute of Marine Biology, the Public Enterprise National Parks of Montenegro, the Centre for Ecotoxicological Research (CETR) and the Institutes of Public Health are key actors in the monitoring activities. They provide monitoring data to the MTE on a regular basis. All

institutions are supervised by the MTE except the Institutes of Public Health, which are subordinated to the Ministry of Health, Labour and Social Welfare.

### **C. Monitoring system**

7. The monitoring system covers air pollution (from stationary and mobile sources), surface and underground water, radioactivity, biodiversity, and soil pollution. Monitoring programmes are adopted by the Government. The Centre for Ecotoxicological Research, the Hydrometeorological Institute and the Institute for Nature Protection maintain the network of related monitoring stations. The MTE is responsible for the development of the key monitoring programmes in consultation with monitoring institutions. The funding for the programme components comes from two ministries: the Ministry of Tourism and Environment and the Ministry of Agriculture, Forestry and Water Management. According to national legislation, executors of different parts of the monitoring programmes have to be selected following tender procedures. However, there is no choice in the selection of monitoring institutions due to the lack of alternative institutions able to monitor the required environmental parameters. Given that tendering is obligatory, tenders are being organized annually, although the results are clearly predictable.

8. Lack of funding affects monitoring activities, which are therefore restricted in terms of the number of monitored parameters and frequency of sampling. It also affects the quality of the data and their processing. For instance, Hydromet's equipment is outdated and at the time of the EPR Mission, November 2006, its laboratories were still not accredited. An insufficient budget also limits the coverage of the monitoring network. Since 2002, funding of monitoring activities provided by the State budget has been increased. However, available resources are still covering only basic needs, mainly operational expenditures.

9. The Government is aware of the importance of an effective environmental monitoring system and therefore is coordinating related international technical assistance for the development of modern policies, capacities and equipment. One of the key outputs of EU technical and financial assistance on institutional strengthening, within the project managed by the European Agency for Reconstruction, is the establishment of an environmental protection agency (EPA), planned to become operational in 2007. Among its executive functions, the EPA is to be in charge of: monitoring the environment; processing, managing and reporting environmental data; and managing communication activities with international environmental organizations.

10. If the EPA is established, the proposed Department for Monitoring, Analysis and Reporting will be in charge of the overall steering of environmental monitoring activities and responsible for all environmental reporting. Thus, the Department would be responsible for establishment and administration of the under-development integrated monitoring programme. Processing of the monitoring data would be done by a third party on a contractual basis.

## **D. Monitoring programmes**

### **1. Water monitoring**

11. Since 2002, water monitoring programmes have been run by MTE (former MEPP), CETR and Hydromet. Water monitoring is performed on surface and underground water. The measuring network includes 36 stations on watercourses, 10 on lakes, 20 on underground reservoirs and 17 on the coast. CETR is equipped to measure 56 chemical and toxicological parameters and certain radiation measurements. It also undertakes specific research on ad hoc requests (e.g. wastewaters; contamination of water for drinking water supply and treatment installations; drinking water quality; and radioactivity in sea waters and marine biota). The Institute of Public Health is another body responsible for control of drinking water quality.

12. The Hydromet monitoring network includes 40 hydrological stations and 36 stations measuring water quality indicators. In 2005 and 2006 Hydromet installed modern equipment at five hydrological stations (HS): HS Podgorica, HS Fraskanjel on Bojana River, HS Plavnica on Skadar Lake, HS Duklov mostly on Zeta River, and HS Bijelo Polje on Lim River. Hydromet is striving to gradually install new equipment that is able to perform measurements of the quantitative water parameters and to deliver data in real time.

13. The Institute of Marine Biology, which is part of the University of Montenegro, monitors a number of organic pollutants and biological components (seaweeds, benthic biocenoses, microbiota, bio-toxins, etc.) and some specific water phenomena caused by pollution (e.g. eutrophication of coastal seawaters) for the purpose of scientific research.

14. One of the Government's key objectives is to achieve the consistent implementation of water quality monitoring in accordance with the *European Union Water Framework Directive*.

### **2. Air monitoring**

15. The establishment of a national network for monitoring of air quality in accordance with EU standards is prescribed in the draft *Law on Air Quality*. Currently, the MTE is responsible for the development of the *Programme on Air Quality*.

16. Hydromet's and CETR are the two institutions equipped to carry out the air monitoring programme in Montenegro. The Programme envisages the 24-hour measuring of air parameters on 27 measuring stations in 17 towns. The list of measured components includes SO<sub>2</sub>, NO<sub>x</sub>, O<sub>3</sub>, NH<sub>3</sub>, phenols, H<sub>2</sub>S, F, particulate matters, heavy metals and their compounds, radionuclides, POPs, PAHs and a few other parameters. CETR is equipped with a mobile laboratory and carries out measurements of ambient air quality and the impact of mobile sources of pollution. Hydromet is involved in international air quality monitoring programmes such as the *Global Atmosphere Watch* (World Meteorological Organization), MED POL and EMEP.

17. In March 2007 Montenegro ratified the *Kyoto Protocol*. The monitoring and assessment of greenhouse gases emissions from industrial and other sources are of high importance for the

country. As part of the ratification preparatory process, a draft greenhouse gases inventory has been prepared.

### **3. Waste and soil monitoring**

18. As was the case in 2002, there is no waste inventory or monitoring system in the country. However, some programmes include specific research focused on the environmental impact of wastes. The *Law on Waste Management* (OG RM No. 80/2005) provides for the inventory and management of all legal and illegal landfills.

19. As part of the *National Environmental Monitoring Programme* the *Soil Monitoring Programme* is implemented on an annual basis. Within the programme, measurements of samples are to be taken from 92 locations near landfills and from other potential pollution sources of heavy metals, pesticides, PCBs (polychlorinated biphenyls), PCDDs (dibenzo-p-dioxins), mineral oils and other organic pollutants.

### **4. Biodiversity monitoring and research**

20. The biodiversity monitoring programme is a part of the *National Environmental Monitoring Programme*, for which the implementation is also financed by the State budget.

21. The Institute of Nature Protection is keeping an inventory of protected areas and provides research services on nature protection. The Institute of Marine Biology carries out monitoring and research programmes on the biological resources of the continental shelf and slope of the Montenegrin Coast. Cadastres of plants and animals as well as their habitats and ecosystems are the responsibility of the Public Enterprise for National Parks.

22. The Forest Management Directorate within the Ministry of Agriculture, Forestry and Water Management and its 15 local management units maintains forest cadastres.

23. A more integrative biodiversity monitoring programme will be put in place after the adoption of a new law on nature protection expected by the end of 2007.

### **5. Radioactivity monitoring programme**

24. A network of measuring stations to monitor environmental radioactivity over the territory has been defined by the *Ordinance on Systematic Examination of Contents of Radionuclide in Environment* (OF FRY No. 45/1997). At these stations, dose rate measurements and measurements of contamination with radioactive pollutants of air, water (rivers, lakes, and sea), soil, solid and liquid precipitation, drinking water, foods and feeding stuffs, flora and fauna, construction materials, and other items for general consumption and in particular at the workplace, are being regularly conducted.

25. Besides regular radioactivity monitoring, the preparation of a radon map for Montenegro is being carried out by the Centre for Ecotoxicological Research under the initiative of the Ministry of Tourism and Environment. Also, in order to detect and report on radioactive contamination of the environment as a result of transboundary transport, the

Hydrometeorological Institute measures the absorbed dose of gamma radiation in the air in Žabljak and Herceg Novi. Measurements are taken periodically using methods prescribed by the *Rulebook on Network Determination* and the *Programme on the Performance of Meteorological Stations of National Interest* (OG SFRY No. 50/1990), and the authorized bodies are informed accordingly.

## II. ENVIRONMENTAL INFORMATION PROCESSING, EXCHANGE AND DISSEMINATION

26. Existing legislation does not explicitly give a definition of environmental information, so this definition has to be inferred from the 1996 *Law on Environment* and from some other legal and policy documents. In general the existing legislation includes information on the state of the environment, on environmental legislation and regulations, and on environmental programmes and activities.

27. Information processing and dissemination procedures have not changed since 2002. Monitoring institutions provide data on the continuous monitoring of air, water, radioactivity, biodiversity, and soil to the MTE and other ministries on an annual basis. For instance, data on water and soils are transmitted to the Ministry of Agriculture, Forestry and Water Management. The Sector for Environmental Protection has kept monitoring data from 1999 onwards.

28. The annual national *Report on the State of Environment* is based on the data from the monitoring of air pollution, surface and underground water, biodiversity, soil pollution and radioactivity. This Report is prepared by MTE and adopted each year by the Government. According to the *Law on Environment*, local authorities are also obliged to prepare reports on the state of the environment over their respective territories and to submit them to the MTE, an obligation that they have not fulfilled up to now. *Reports on the State of the Environment in Montenegro* are posted on the MTE website in the national language.

29. Due to a lack of capacity, neither the MTE nor the Statistical Office of Montenegro (MONSTAT) can issue environmental reports that would have been produced on the basis of internationally-recognized indicators. The Environmental Unit of MONSTAT, which has one member of staff, collects raw data and issues statistical reports on the environment in four areas, namely water, energy, air and wastes. Statistical data are collected from relevant public bodies and published in annual and three-year reports. Statistics presented on MONSTAT's website<sup>2</sup> include only a restricted number of indicators for water and energy sectors and do not reflect the real environmental situation in the country.

30. During the few past years, the former MEPPP invested a significant amount of money into Information, Communication and Technology (ICT) equipment. Improvements were made possible in particular due to the opportunities provided by foreign technical assistance programmes. The staff was trained accordingly. The current Ministry has inherited the technical capacity for managing data and processing information. However, environmental institutions still do not fully utilize opportunities that the Internet provides for disseminating information. Most institutions have websites, including a government portal, but their web pages provide access to

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<sup>2</sup> <http://www.monstat.cg.yu/EngMeniGodisnjiPodaci.htm>



a modest set of information. The updating of information is irregular and some sites even show outdated data. Availability of the information in English is limited although it is supposed to be available to international donors or organizations.

31. The Government's Public Relations Bureau created and maintains the MTE website. In cooperation with the European Environment Agency, a Montenegrin environmental web portal has to be developed as part of the European Environment Information and Observation Network so that important environmental information under State responsibility can be made available to the public. However, as of December 2006, the section of the European Environment Information and Observation Network (EIONET) website on Montenegro<sup>3</sup> was not displaying any information.

32. Results of the monitoring research are published in scientific newspapers. For example, *Studia Marina* publishes papers devoted to the monitoring of and research on the marine environment of the Montenegrin coast.

33. The current environmental information system does not correspond to modern requirements and to international standards for environmental indicators, and needs to be reformed. The need for a modern integrated information system is reflected in policy documents, such as in the *Agenda of Economic Reforms for Montenegro for 2003 to 2006* (adopted in 2003) and the NSSD. As part of this system, the procedures and programmes for exchange and distribution of information among national and local authorities, governmental and non-governmental organizations and businesses have to be developed and improved. Such programmes will encourage public participation in decision-making on the environment. The establishment of an integrated information system with adequate sub-systems (cadastre, physical planning, urban planning, and infrastructure) is envisaged but has not begun.

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<sup>3</sup> <http://www.eionet.europa.eu/Countries/Montenegro>