

# Serbia and Montenegro – Country Report



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*In February 2003 the Federal Republic of Yugoslavia was restructured into a State Union consisted of two republics called Serbia and Montenegro. An agreement was also reached to hold a referendum in the Republic of Montenegro in three years (2006) on full independence.*

*Responsibilities for environmental management exist in both Republics as follows:*

*In the Republic of Serbia, with the Ministry of Agriculture, Forestry and Water Management, and the Ministry of Natural Resources and Environmental Protection;*

*In the Republic of Montenegro with the Ministry for Urban Planning and Environmental Protection;*

*At the State Union level, for the time being, there is no formal ministry responsible for environmental issues.*

## 1. Key Findings

- Basic monitoring of air, water and soils occurs in both republics, but network coverage is incomplete and technologies inadequate for modern reporting requirements;
- Cooperation between agencies within and between Republics is limited, and is constrained by archaic equipment and procedures;
- Technical environmental reports are published but no electronic mechanisms are utilised to disseminate data, and no legal basis yet exists regarding accessibility;
- Eighty four percent of NGOs felt authorities are not adequately responding to their requests, and 56 percent were dissatisfied with the range of topics available. Almost half found data “poorly presented” and suggested better tailoring toward end-users. Weekly updates via email and a mailing list for hardcopy resources were proposed.
- Priorities include strengthening the technical infrastructure (monitoring networks, staff access to IT equipment), capacity building, development of a single data exchange system and respective legal basis, and a State Union web portal;

## 2. Current Status of Environmental Information Systems

### *Data Collection and Management*

Many organisations are engaged in environmental monitoring in the Republic of Serbia and in the Republic of Montenegro. This means organisations at the State Union level are engaged in similar, sometimes overlapping activities.

The frequency and methodology of sampling depends on the media and the location. Air quality, for example, is frequently monitored through a network covering both Serbia and Montenegro managed by Hydro-Meteorological Institutes in each Republic, and consists of 25 meteorological stations (basic network), 28 measuring sites (as part of a local urban network monitoring specific air pollutants), and 14 measuring sites in industrial areas. At the same time, air quality monitoring is also carried out at pollutant emission sources by the polluter themselves, on an irregular basis, and reported every six months or annually, and confirmed through testing by local authorities. Monitoring of both surface and ground water quality is conducted via networks of 160 monitoring stations managed by Hydro-Meteorological Institutes in each Republic as well as at the State Union level. Analyses and reporting of arable soil and irrigation water is conducted in both Republics by the Institute of Soil, according to the Federal Law on Arable Land, in order to determine the levels of harmful and hazardous substances. Similar but unconnected systems are also in place for the monitoring of waste; hazardous substances; noise pollution; and radiation. While basic monitoring networks exist for most media, network coverage is not complete or adequately comprehensive.

The acquired data is delivered on a regular basis by the responsible institutions and stored within the responsible [environment] ministries in different formats, utilizing various applications, commonly Oracle and Microsoft Access. Some data is stored still in non-electronic format. The majority of OECD environmental indicators are tracked, but an integrated environmental information system does not exist in either Serbia or Montenegro. At the State Union level, the Institute for Informatics handles some data sets on air, water and soil quality, but this does not encompass all relevant environmental information. There is no comprehensive system therefore, electronic or otherwise, for the systematic collection, and dissemination of information on the environment.

#### *Interagency Cooperation*

Cooperation between agencies in either of the two Republics involved in environmental monitoring and management is limited, even where there are “parallel” networks (e.g. for surface/ground water). At the same time, cooperation between agencies within the same Republic is also limited. The primary problems with linking the systems is that data is stored in various formats, often archaic or proprietary and not easily exchangeable with other systems. Much exchange of information still typically takes place via telephone, fax and telex.

At the State Union level, the constantly changing political situation and shifting geopolitical boundaries of the last ten years has prevented formerly federal institutions from maintaining any standardised form of monitoring, exchange and reporting, and therefore, cooperation with institutions at the republic level. Currently there is no formal environment ministry at the State Union level. However, the Federal Statistics Bureau seeks to ensure that all government agencies have access to basic environmental data for their respective decisionmaking processes.

#### *Public Accessibility*

All existing environmental information is available to the public in both Republics, free of charge, unless it falls under a restricted disclosure regime. In most cases, only the direct costs related to the provision of the information can be charged. Information requests are

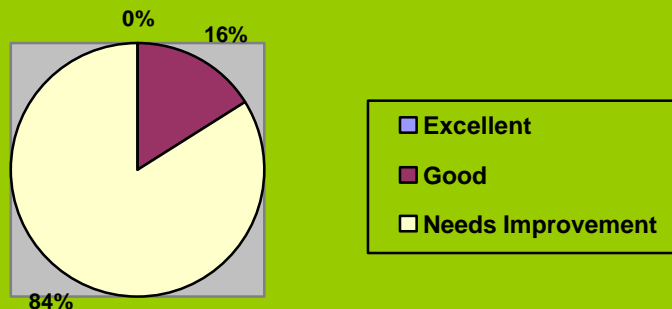
to be submitted to the relevant ministry or agency in written format, however, the procedures for requesting and providing information vary widely. A proposed Republic of Serbia law on environmental protection will mandate the provision of access to information according to international best practice and in line with the Aarhus Convention.

Environmental information is not typically published in electronic format, either on CD or through the Internet in either Republic. It is published in various paper formats and at different frequencies, depending on the media and agency. Air and water quality data in the Republic of Serbia, for example, is published by the environment ministry in the form of Yearbooks, besides an annual 'state of the environment' report, with between 500-1000 copies printed and distributed by post, or at meetings and seminars. The Republic of Montenegro on the other hand has yet to publish such annual assessments. At the State Union level, the Federal Statistical Bureau publishes a Statistical Yearbook and annual state of the environment report. The latter contains basic information on the state of various environmental media, collected from various sources.

The various agencies gathering environmental information have adopted individual approaches to presenting the data. Some is quite technical, accessible only to experts, while very little data is interpreted or presented in formats friendly to the general public. Raw data is seldom provided in electronic format, even in response to requests for such information.

## What NGOs had to say about the usefulness, accessibility and reliability of official environmental information

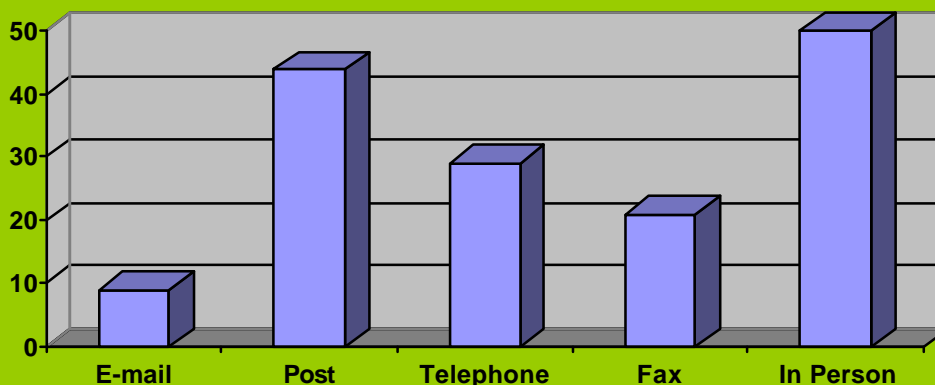
NGOs depend on current and reliable environmental information. Of those surveyed, 78 percent have requested information from a relevant ministry or authority at one time or another, and average nine requests per year. Eighty four percent felt that authorities are not adequately responding to their requests (see pie chart below). Forty six percent responded that they have been denied information at least once (citing a lack of information and/or person assigned to handle the request) and seven percent claimed that responses often never arrive. Thirty one percent felt responses were generally provided in time, and none had ever paid for environmental information. Eighty six percent of NGOs commented procedures were complex and time consuming and that staff were unwilling and unfriendly when providing assistance.



As regards the range of topics, 56 percent was dissatisfied, and requested better coverage of environment and health, radiation, GMOs, opportunities for public participation, industrial emissions, and basic environmental data for key media. Concerning the available documentation, 42 percent were satisfied while 28 percent were dissatisfied, and called for better access to environmental databases, policy and legislation, information on decisionmaking procedures, and state of the environment reports.

Eighty six percent found official information “somewhat up-to-date” and “informative,” but 42 percent found it to be poorly presented. Improvements suggested included better tailoring of the product to the end-user and understanding of his/her interests. All NGOs requested information to be updated on a weekly or bi-weekly basis, especially key environmental data as well as that concerning the Danube. As regards NGO preferences for receiving information, 42 percent wished to receive email updates on new information, while 70 percent wished to be part of a mailing list for hardcopy resources, including a bulletin and official reports.

Regarding the methods used to request environmental information, the following chart shows NGOs request environmental information from ministries in a variety of ways, commonly in person (50 percent) and by post (44 percent). Email was by contrast the lowest, at 8 percent. For the future, however, 86 percent of NGOs indicated an interest in being able to access information via the Web, and following update via email. One NGO requested to be able to access information within government offices, via simple procedures.



### 3. Obstacles and Challenges for the Future

Information systems are proprietary (separate and independent) and where utilising information technology, are incapable of being networked with each other for automated data exchange. Access to computer equipment and the Internet for receiving as well as disseminating information is limited within government institutions in either of the Republics. Furthermore, the state of the telecommunication infrastructure is not satisfactory to handle the advanced transfer of environmental data and processed information.

Funding for the development and maintenance of environmental information systems in either Republic is currently neither adequate nor consistent. Investments in strengthening and integrating the various systems are very much needed, and are estimated at EUR 10 million. This would realise the development of the respective networks, both technically and administratively and would ensure the development of the necessary databases.

Environmental information management and IT expertise is not consistently or widely available throughout the various agencies, including the Federal and Republic Hydro-Meteorological Institutes and the Federal Statistical Bureau, but is rather scattered.

Other notable challenges, listed in the National Action Plan overleaf, include:

- Poorly defined responsibilities, limited integration and cooperation;
- Lack of a clear legal basis;
- Shortage of expertise and technical know-how (IT, legal, information systems, statistics);
- Absence of an enforced framework for environmental reporting, benefiting neither decisionmakers and/or the public.

### 4. Needs and Priorities

**Technical infrastructure** including monitoring networks needs to be extended so as to provide a complete, timely and comprehensive assessment of environmental conditions across the Republics. The purchase of a number of automated monitoring stations could be helpful in the short term to realize the electronic relay of environmental quality data, while in the longer term, monitoring practice needs to be developed so as to comply with both international standards. Better IT infrastructure including GIS tools are required within government agencies managing environmental data to ensure efficient communication and data exchange amongst staff. The installation and application of Internet technology will enhance transparency and enable institutes to provide environmental information to the public in a timely fashion.

A **single data exchange system** is envisaged that would serve the State Union, republic and local level interests as well as those of the public, and would feed data into similar systems abroad. The heart of such a system would be a series of core databases for key environmental media and stresses, including the following:

- status of environmental media according to key qualitative indicators;
- emission sources and measurement results (polluter and pollutant registries);
- issued permits and authorisations related to the environment;

- protected plant and animal species and the state of biodiversity;
- protected sites and areas;
- discharge and movement of hazardous substances and bio agents;
- experts working on related issues;
- environmental plans and programs;
- national legislative acts, and international environmental conventions.

Accompanied by **institutional strengthening** in data reporting and storage, complete and effectively formatted data must be realized within the framework of a ‘modus operandi’ and new standards, to ensure harmonization and integration with international reporting requirements as well as local exchangeability. Organizations involved in environmental assessment within and between Republics must be coordinated, in order to strengthen each monitoring system and improve the linkages between them. This could happen through the joint discussion of a modus operandi that would mandate:

- clearly defined roles and responsibilities,
- standards for collection, transmission, and formal presentation of data and knowledge;
- planning for systems’ future development, considering international reporting standards.

Other stakeholders - businesses, non-governmental organizations, universities, the general public and international expertise - should also be part of this development. Legal instruments can bind such developments, and should be actively implemented. Article 85 of the draft law on the System of Environmental Protection of the Republic of Serbia for example, mandates the establishment of a central environmental information system, through the Ministry of Natural Resources and Environmental Protection. The Republic of Montenegro has nothing similar as of yet.

**Human resources** need to be invested in, to ensure a widespread body of expertise in environmental information systems development exists in the Republics of Serbia and Montenegro. State-of-the-art knowledge should be developed and/or enhanced through joint trainings, in order to help define the contents of and maintenance of the above mentioned databases. Training of civil servants and NGOs on how to access and utilise environmental data and information, through various web services can raise awareness to the opportunities available for environmental publishing. The sharing of ‘best practice’ is also critical, and experts of the relevant organisations should participate in international projects, in order to gain expertise and where possible ensure “leapfrog development,” bypassing the past “mistakes” of the West. Cooperation with international organisations is a source of expert assistance and support.

Further details on priorities and actions as foreseen within the National Action Plan are detailed overleaf:

**Serbia and Montenegro – Action Plan for National Environmental Information Systems Development**  
*(prepared by Mihailo Gavric, Ministry of Environment, Jelena Beronja, NGO representative, Radoje Lausevic, REC Country Office)*

<b>PRIORITY NEEDS</b>	<b>CURRENT STATUS</b>	<b>FORESEEN ACTIONS</b>	<b>EXPECTED BENEFITS</b>	<b>INDICATORS OF SUCCESS</b>	<b>REQUIRED RESOURCES</b>	<b>MATCHING RESOURCES</b>	<b>TIME-LINE</b>
<b>Institutional establishment of environmental information system</b>	Responsibility for collection, processing and dissemination of information split among several state institutions, no effective system of coordination	Feasibility study for national environmental information system  Establish a 'Modus Operandi'  Establish an Environmental Agency in each Republic and train staff	Improved accessibility of information and vertical information flow  Efficient environmental information exchange	Completed feasibility study  Modus Operandi finalised  Environmental Agency established  Well trained staff	Human resources  Experienced trainers  Funds for feasibility study	REReP 1.7	2002-2003
<b>Legal framework</b>	Absence of any real body of relevant legislation, drafting in progress in both Republics  Aarhus Convention not signed	Draft laws on environmental information system and information access in both Republics, harmonised with EU standards  Host a campaign introducing the draft laws to the general public and adopted laws to the various agencies to ensure implementation	Integration with EU environmental reporting frameworks  Compliance with Aarhus Convention  User-oriented environmental information services	New laws and Aarhus convention's entry into force  Full compliance with EEA reporting standards  Satisfied end-users	Legal expertise  Financial resources for awareness raising campaigns	REReP 1.6 REReP 1.7 REReP 2.2  Finnish Ministry of Foreign Affairs	2002-2004
<b>Data collection and management</b>	Basic monitoring infrastructure in both Republics, but not comprehensive  No consistent monitoring of biodiversity  Lack of automated monitoring stations in both Republics	Development of consistent and comprehensive monitoring network  Purchase of several (5-6) automated measurement stations  Establishment of virtual binder/catalogue of data sources	More comprehensive data sets, following international standards  Improved integration of data across the two Republics  Substantial input	Virtual binder developed  Biodiversity monitoring network developed  AMS operational  Decisionmaker use of datasets/reports	Financial resources for purchasing necessary equipment	REReP 1.6 REReP 1.15 Environmental Resource Center (Japan Special Fund)	2002-2003

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	Disparity of databases across several institutions		for future state of the environment reports				
<b>Information dissemination</b>	No electronic distribution of information, limited hardcopy circulation, request services poor according to NGOs	Strengthen technical capacities of state institutions for information dissemination in a variety of formats, based on surveyed user interests  Establish State Union Web portal  Host trainings for civil servants and NGOs for accessing and using environmental data and information through various web services, including established web portal	Improved public access to information through a wide variety of formats reflecting user interests or planned measures to this end	Web portal established, # hits, # downloads  Planned activities to develop other information sources relevant to user interests  Satisfied information consumers  Civil servants and NGOs capable of efficient IT use of various web services	IT experts  Web servers	REReP 1.15,  Environmental Resource Center (Japan Special Fund)	2002
<b>Use of information in policy and decision-making</b>	Insufficiently used owing to poor flow of information, weak presentation and constantly changing political context	Identify decision makers' information needs and plan a corresponding response  Adopt EEA environmental reporting standards	Improved decision making in accordance with environmental realities	Environmentally sound policies and decisions	Experts in statistical analyses  Software for statistical and GIS analyses	REReP 1.7	2002 onwards

*REReP 1.6: Continuation of Environmental Monitoring and Assessment in Bosnia and Herzegovina and FYR Macedonia and Extension to Croatia*

*REReP 1.7: Strengthening National Environmental Protection Agencies and their Inspectorates in the South Eastern European Region*

*REReP 1.8: Developing National Environmental Information Systems in the SEE Countries*

*REReP 1.15: Regional Environmental Information Portal for South Eastern Europe*

*REReP 2.2: Support Developing Strategies for Implementation of the Aarhus Convention in South Eastern Europe*

*REReP 2.3: Promoting Networking and Cooperation of Environmental NGOs: Establishment of Electronic Computer Networks on a National and Regional Level*

## Case Study on Donor Funding

### Objectives

Seed funding from the Netherlands Ministry of Foreign Affairs was invested into developing Serbia and Montenegro's environmental information system, based on the following objectives:

- Provide equipment to improve monitoring;
- Improve overall connectivity between authorities; and
- Increase dissemination of environmental information to the public.

Selecting air quality monitoring as a pilot activity, an automated monitoring device was purchased for the continuous monitoring of atmospheric SO<sub>2</sub> at a pilot station of the Hydro-Meteorological Institute in the Republic of Serbia. This station was fully equipped by the institute and now provides continuous data that is stored locally by them, along with other information on a range of air quality determinants (CO<sub>2</sub>, SO<sub>2</sub>, NO<sub>x</sub> and particle pollution).

To improve connectivity between authorities involved in environmental monitoring, an online Environmental Resource Center/Web portal was developed at: <[www.erc.org.yu](http://www.erc.org.yu)> to provide interactive access to environmental information contained within various state databases, including those referenced in Section 2 concerning environmental quality and environment-related information (see screenshot below). This is intended to ensure and demonstrate that data from existing monitoring and database systems can be made accessible to all stakeholders.



To improve the dissemination of environmental information to the public, an annual report containing basic environmental quality data on air, water, land and noise and details on how to access environmental information resources was published (500 copies) in hardcopy and online (pdf format) by the REC's Country Office, on behalf of the Secretariat of Environment of the City of Belgrade. Relying on the data collected by the Hydro-Meteorological Institute the national television network broadcasts information on environmental quality on a daily basis following the news at 22:00 hours. With a Serbian viewing audience of 23 percent, this has greatly increased environmental awareness.

### Expenditures

<b>ITEM</b>	<b>SUM (Eur)</b>
Computer equipment	5,600
Air monitoring device	6,000
Web portal design, launch and maintenance	9,000
Internet service provider costs	1,200
Annual report on environmental quality	4,800
Daily report broadcasted on national TV station	3,650
<b>TOTAL</b>	<b>30,250</b>

### *Benefits*

The air quality station now provides valuable data on the state of Belgrade air quality, useful for local short-term decisionmaking and planning. Besides enabling the management of air quality in accordance with current national regulations, this pilot also serves as a case-study for subsequent development of the air quality monitoring network and for other environmental media. The release of this data to the public has raised awareness to environmental issues. The Annual Report on environmental quality and Environmental Resource Centre with aprox.1000 hits per month also demonstrate how environmental information can be made effectively available to interested stakeholders.

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