

## **Bulgaria – Country Report**



### **1. Key Findings**

- Many government organisations, including non-environmental are involved in monitoring, but data storage formats vary and 40 percent remains in hardcopy
- Diverse media (web, bulletins, info centres, email) are used to distribute environmental information at little or no cost
- Current database systems are built around diverse technical platforms, resulting in a plethora of incompatible data, seldom processed into user-friendly information
- Enhancing the technological backbone, improving the accessibility of useful information, and training and retaining qualified staff are future priorities
- Seventy percent of NGOs felt authorities do not sufficiently respond to requests. One NGO felt the range of topics and documentation available were unsatisfactory, and requested updated information online, details on decisionmaking procedures, and a regular hardcopy bulletin of news

### **2. Current Status of Environmental Information Systems**

#### *Systems for Data Collection and Management*

The Executive Environmental Agency (EEA), a branch of the Ministry of Environment and Waters, is the primary body responsible for the collection, processing, storage and publishing of environmental information. It is responsible for the National Automated Environmental Monitoring System (NASEM), a network of monitoring stations and datasets that track air quality, surface and ground water quality, soils, forests, ionizing and non-ionizing radiation, waste, and transport noise. The Agency's 15 Regional Inspectorates of Environment and Waters (RIEW) collect and maintain local data. The

inspectorate in Rousse, for instance, monitors compliance with air quality standards along the border with Romania as well as Danube water quality.

Monitoring data is obtained from both automated stations and by conventional sample-taking. After reliability assessment, it is manually or automatically transmitted to local databases. Approximately 60 percent of environmental information is stored electronically in a variety of formats, the remainder in hardcopy. Three types of software are used: MS Access, d-Base and Oracle. Following the necessary processing, the electronic information is transferred via telex to a centralized database at the executive agency. The frequency of update varies widely: air quality databases are updated daily; gamma-background in real time; water quality and radiation monthly, quarterly and annually; soil, waste and noise quality annually; and pollutant emissions every six months. The use of Geographic Information Systems (GIS) to store data in spatial form is limited, as most databases are not suitably structured, and because of a lack of digital data (topographic, hydro-geological, and so on).

The environment ministry also maintains registers on permits issued related to waste generation, water use, fines imposed for environmental pollution, environmental impact assessment reports etc.

#### *Interagency Cooperation*

Other Ministries and agencies independently monitor selected environmental media as it relates to their areas of interest. The Ministry of Health for example assesses pollution's impact on human health and monitors drinking water quality, air pollutants, and urban noise. The Ministry of Agriculture and Forests, the National Statistical Institute, and the National Meteorology and Hydrology Institute also maintain specialized databases with specific geographical coverage. With the data existent in many different formats, it is not easily shared with other organisations except following preliminarily signed inter-institutional agreements for information exchange. The linkages are thus poorly developed. Horizontally, information is not adequately shared between ministries and agencies.

Vertically also, information flow between the local level regarding the environmental situation and decision makers at the national level is inadequate, as well as for other stakeholders, including the general public. Yet municipal administrations depend on the information gathered by the regional inspectorates in order to realise a number of responsibilities (assessing legal compliance, the development and assessment of environmental policies and programmes of local importance, ensuring public access to information, launching permit procedures concerning waste management, assessing environmental impact of proposed investments etc.).

#### *Public Accessibility*

The collection and distribution of environmental information in Bulgaria is well regulated and occurs in a variety of formats via different media. This includes daily web-based bulletins on air quality and gamma-background radiation, a monthly information bulletin, and quarterly and annual state of the environment indicator-based reports/bulletins online

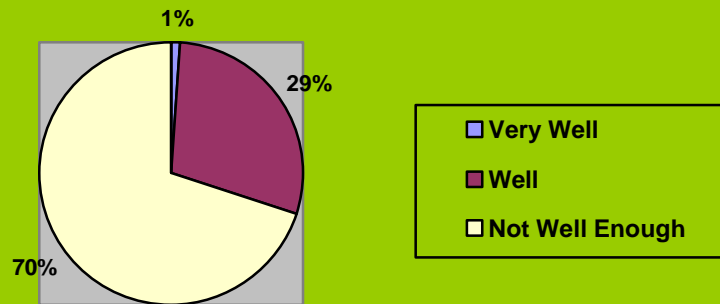
and in hardcopy. These are made available either free of charge or inexpensively (EUR 2.5 for the annual state of the environment reports for example, although exceptions are made for members of the National Assembly, municipal bodies, undergraduate, post-graduate and Ph.D students).

In most cases, these publications are also made available free of charge via the Internet at the websites maintained by the environment ministry: <[www.moew.government.bg](http://www.moew.government.bg)> and the executive agency: <[nfp-bg.eionet.eu.int/ncsd/index.html](http://nfp-bg.eionet.eu.int/ncsd/index.html)>. In addition, two information centres located at the ministry and the agency provide a wide range of environmental information to the public, including legislation; planned, ongoing and terminated projects; initiatives; and web user groups. Generally though, only limited emphasis is placed on publishing environmental information in formats preferred by users.

According to Article 17 of the 2002 Environmental Protection Act, everyone has the right to environmental information which already exists in published format (bulletins, annual reports, legislation etc.), without having to state their legal interest or pay a fee. In 2000, Bulgaria also adopted a Public Access to Information Act which obliges the environment ministry, the agency and the regional inspectorates to provide environmental information upon request within 14 days, or within one month in cases where they do not possess the information requested or additional data is required. The ministry receives approximately one information request per day, mostly concerning the quality of air and water, and waste disposal. Citizens can also submit information requests via email and the web, but this is still uncommon.

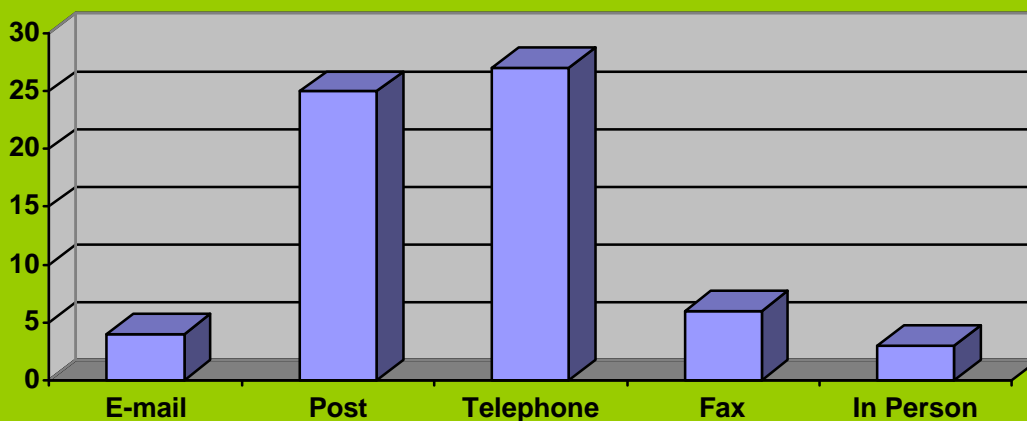
## What NGOs had to say about the usefulness, accessibility and reliability of official environmental information

NGOs depend on ministries for current and reliable environmental information. Of the 70 NGOs that responded to this survey, 96 percent indicated they have requested information from relevant authorities at one time or another. On average, they request information four times per year. Seventy percent of NGOs felt, however, that the authorities are not sufficiently responding to requests (see pie chart below) and in characterising staff, one NGO's comments ranged from "friendly" to "highly uncooperative." Twenty five percent of NGOs indicated they have been denied information, citing a lack of processed data at the relevant authority as the primary reason, while 21 percent said responses simply never arrive. Thirty seven percent of the surveyed NGOs also noted that responses are generally provided in time.



Concerning the range of topics and documentation available, Evgeniya Tasheva of the NGO "Institute for Ecological Modernisation" found this to be unsatisfactory and highlighted the need for better access to environmental impact assessment reports related to investment and infrastructure projects, for information on the environmental impacts of transport, and details on decisionmaking procedures, draft legislation and policies. In addition, she proposed a regular hardcopy bulletin of news about events, legislation, draft decisions etc. be widely distributed to NGOs, citizens, and local authorities. Regarding the quality of information, the same NGO felt that it was "somewhat useful," "informative" and "adequately presented," but that it could be improved through more regular updating. Weekly updates via the environment ministry and local authority's websites would be welcomed, particularly regarding pollution measurements at both local and national levels and decisionmaking processes.

Concerning the methods used by NGOs to request environmental information, the following chart indicates telephone (27 percent) and post (25 percent) are the most popular means relied on. Email surprisingly remains unpopular given the level of IT development in the country, with only 4 percent of respondents choosing this media. One NGO commented that in the future, they would like to be able to access and receive official environmental information online, via email and by post, and would like to see Regional Inspectorates of Environment and Waters host their own websites.



### 3. Obstacles and Challenges for the Future

Among the major challenges facing Bulgaria in developing its environmental information system, the following can be noted:

- A great deal of information remains in non-electronic format (around 40 percent);
- Information is not integrated (owing to its storage in incompatible databases, whose structures vary and applied nomenclatures differ);
- The available information is generally unsuitable for use and comprehension by decisionmakers and the public.

An integrated environmental information system will need to overcome the fragmentation and incompatibility of current database systems, even within the environment agency, but also at the regional inspectorate level. Technical constraints also exist in that the available servers are of low capacity in respect to their specifications (RAM 64MB and HDD 4 + 2.6MB).

In spite of a sound body of legislation regarding information access, the available raw data is not widely processed into user-friendly information, and is therefore not understandable to most decision makers or community members. Expert responses to requests for instance must be prepared based on raw/technical data, which first requires interpretation. The obstacle is the limited time available to staff, whose primary obligation is to process the data for environmental quality assessment reporting, and the difficulty in retaining staff who can publish the data in user-friendly format. This problem is exaggerated at the regional/local level.

### 4. Needs and Priorities

The National Environmental Strategy of 2000 and National Action Plan on the "Development and Improvement of the National Monitoring System and Environmental Information System detailed overleaf cites a variety of needs. The most pressing are highlighted below.

The development of the **technological backbone** is central to the effective exchange of information. Better communication links between the various ministries and the regional inspectorates is essential (via the environment agency). All databases should be upgraded to one standard platform (ideally Oracle 9i). State of the art computer hardware is locally needed to develop and maintain registers, to collect and store information, as well as to ensure the network connection (most importantly via an upgrade to NetWare 6.0) with the environment agency's centralized database and links with municipalities.

Data accessibility must be improved for decisionmakers through technical solutions such as a **catalogue of data sources**. This will inventory the various databases and at the same time link them, and will be based on a flexible and easily manipulated input system. It will be regularly updated by participating agencies. Such a registry would also facilitate Bulgaria's accession process, by listing European Union directive compliance reports.

**Useful information** needs to be made accessible to the layperson. Environmental data needs not only to be presented, but synthesized and interpreted so that its significance is obvious. An **enhanced Internet portal** should serve as a one-stop shop and exchange point for Bulgarian environmental information. **Regional Environmental Information Centres** appropriately equipped with seamless access to this portal need to be established in order to serve as effective regional distributors of information, relevant to regional issues.

The use of **Geographic Information Systems (GIS)** will be invaluable in the presentation of vast quantities of environmental quality data, monitoring trends and for modelling expected changes. In turn this is expected to enable rapid and effective interpretation of the environmental situation by environment agency experts and the public, thanks to subsequent data manipulation via the Internet, brochures and reports.

Integrating **indicator based-reporting methodologies** at the executive environmental agency (with the assistance of the European Environment Agency, OECD etc.) will enhance data usability within decisionmaking processes, for compliance monitoring and for public reporting.

New **staff resources** need to be employed and constantly trained for the operation and development of a frequently upgraded state-of-the-art technological infrastructure. At the same time, the processing of environmental data into useful, reliable information is resource-intensive. Additional well-trained staff must be recruited - and retained. Training must then occur at the regional and local level also.

Further details on priorities and foreseen actions are detailed in the National Action Plan included overleaf drafted with the REReP 1.8 project team.

**Bulgaria – Action Plan for National Environmental Information System Development**  
*(Prepared by Ivanka Todorova, Executive Environmental Agency and Mihail Staynov, 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>TIMELINE</b>
<b>Institutional establishment of the environmental information system</b>	National monitoring and information system exists  Databases of all key players are not linked or compatible  Limited flow of useful information to decisionmakers or the public	Develop communication links between all key players  Improve compatibility/integrate databases  Train experts at regional level & NGOs to know where and what information is accessible at the executive agency	Better exchange of environmental information  Enhanced accessibility of environmental data	Better communication between [national and] regional/ local levels  Instant access to all available data	Upgrading and purchase of additional servers, workstations, modems, and specialised software	REReP 1.7	2002-2003
<b>Legal framework</b>	Sound legal framework already in place  No standards or procedures exist regarding processing and reporting	Ratification of the Aarhus Convention  Training of municipalities & NGOs on available environmental information [and procedures for access]	Increased provision of environmental information locally	Widespread implementation of the new Environmental Protection Act  NGO/citizen satisfaction  Aarhus convention compliance	[Staff time to administer local trainings]	REReP 2.2	2002
<b>Data collection and management</b>	Sixty percent of environmental information collected is stored electronically  The remainder remains in paper-based form  International reporting	Improve the ways data is processed and made accessible through software upgrades, network development  Store paper-based data electronically  Train experts to deal	Full compliance and integration with international standards	All (100 percent) environmental information stored in electronic databases  Full application of international reporting standards	Adequate servers, workstations, and specialised software for statistical processing and analyses	REReP 1.7	2002-2003

	requirements are being integrated into everyday practice	with international reporting requirements					
<b>Information dissemination</b>	A system exists for the dissemination of environmental information but is not adapted to end-user interests	Establish Regional Information Centres  An enhanced national web portal and Catalogue of Data Sources	Compliance with the Aarhus convention  Improved access to useful information	Deployment and usage of those priority mechanisms identified	Upgrading and purchase of additional servers, workstations, modems, and specialised software for regional use	REReP 1.15 REReP 2.2	2002 onwards
<b>Use of information in policy and decision making</b>	Technical information exists but not efficiently used for policy and decision making	Development of an indicator-based reporting system for environmental assessment  Training of staff on statistical analyses, reporting and GIS	Useful indicators of environmental quality and sustainable development	Better decision making and management	Products for statistical processing and analyses, and GIS software	REReP 1.7	2002 onwards

*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*

## 5. Case Study on Donor Funding

### *Objectives*

Through the generous support of the Netherlands Ministry of Foreign Affairs, seed funding was made available to develop communication links between the environment Ministry, the environment agency and the Regional Environmental Inspectorates. This was achieved through three activities. First, switching and routing equipment was purchased and networks developed, so as to enhance the environment ministry's access to the environment agency's data. Second, local area networks were set up and database software upgraded for the ten major regional inspectorates, in order to enhance their exchange capabilities with the central database of the environment agency. Third, environmental NGOs' access to environment ministry information was enhanced through the provision of computer equipment to the Blue Link NGO Network.

*Note: municipality and NGO trainings on how to use the available data and the newly developed catalogue of data sources (detailing regional level data) were hosted, thanks to funding from other sources.*

### *Benefits*

A key step towards integrating data and improving its exchange has been made, with the environment ministry now able to rapidly access information contained in the Agency's central database. Through the assistance provided to the regional inspectorates, local level information and environmental compliance data is also accessible, thereby supporting compliance with international reporting obligations. National air quality/digital elevation modelling and O<sub>3</sub> data is also now available in real time, and by the end of 2003 the executive agency website will feature real time data on air quality, daily bulletins on radiation data, data on water quality – monthly, quarterly, annually, on emissions data every six months, and real time data on soil, waste and noise. This in turn, will enable a broader stakeholder community to access official environmental information.

### *Expenditures*

<b>ITEM</b>	<b>SUM (Eur)</b>
Computer equipment	20,667
<b>TOTAL</b>	<b>20,667</b>

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