"Quick Start"
Project Proposal

As Identified by the Ministers of Environment from SEE for the Regional Environmental Reconstruction Program (REReP) for South Eastern Europe

"Development of National Environmental Information Systems"

Prepared by
Ministry of environmental protection and physical planning (MZOPU), Croatia
The Regional Environmental Center (REC)
for Central and Eastern Europe,
UNEP-GRID Arendal,

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Project Information

Project Title:	**"Development of National Environmental Information Systems"**
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Geographical focus:	**SEE Region**: Albania, B&H, Bulgaria, Croatia, Kosovo, Macedonia, Romania, and the Federal Republic of Yugoslavia
Amount requested:	
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Project Summary

Project Title: "Development of National Environmental Information Systems"

Key Words:

Project Summary:
National environmental information systems are based upon a network of institutions using state-of the art electronic tools and traditional mechanisms that supports the collection, storage and accessibility of environmental information to decision-makers and increasingly the public. These tools contribute to informed and efficient decision-making, and also improve the transparency and accessibility of governments and regional multi-stakeholder cooperation. This contributes to a User Friendly Information Society, compliance with the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, EEA/EIONET integration and European security, critical in Stability Pact states.

The project will establish a *regional framework* for the support and development of national information systems within Environment and other Ministries and facilitate active participation in the EIONET Telematic Network. Bosnia and Macedonia have recently become part of this network, while Bulgaria and Romania are already established partners. Albania and Croatia may be supported in the near future through REREP 1.6. Efforts to implement the Aarhus Convention are also a priority for its signatories (Albania, Bulgaria, Croatia and Romania, while Macedonia has already acceded). Similar efforts may be expected from the newest beneficiary of the project, the Federal Republic of Yugoslavia.

Successful strategies for implementation of effective national environmental information systems that meet both the requirements of decision-makers and the public will require certain legislative changes, strengthening capacities of both government officials at the central and local level and involvement of NGOs. Assistance is needed in the practical implementation of national information systems. Activities will provide a regional framework for such assistance to the SEE countries according to their needs in developing and later implementing successful systems and strategies at national level, and a forum for discussion and exchange of experience at the regional level

Anticipated Lifetime of project: 2 years (with possible extension up to 5 years)
"Quick Start" component: April 2001 – March 2002
Total project: April 2001- March 2005

Summary of First two years:
The following activities, oriented toward establishing a regional framework for assistance in developing national systems for environmental information access and dissemination in the SEE countries, are foreseen for the first two years:

1. Sub-task A. Setting up a Steering Group or Regional Forum chaired by the representative of Croatia to oversee the project implementation, to advise and to monitor and evaluate progress in the SEE countries.
2. Sub-task B. Preparing on a country level in each SEE country:
   - an assessment of status of environmental information systems, including accessibility, use of state of the art electronic media and traditional mechanisms, quality and clarity of information, environmental issues covered, inter-ministerial cooperation, existing legal and policy frameworks and implementation of the Access to Information Pillar of the Aarhus Convention EU Directives and OECD Recommendation, national capacities and challenges.
   - identifying needs and priorities for the development of national environmental information systems under an overarching strategy for improvement
   - identifying needs for international and national assistance

   (Note. A draft study has already been prepared by Croatia and is detailed in Annex 1)

3. Sub-task B. Within a regional meeting discussing and finalizing needs and priorities for the development of information systems in each SEE country (in the form of national action plans) and the assistance needed, in dialogue with NGOs and other stakeholders and with the involvement of international and/or local experts for strengthening information systems
4. Sub-task C. Capacity building workshops at national level to share experiences and good practices on specific issues identified by the countries on practical aspects of building efficient systems of access to information for NGOs and decision-makers, as well as legal aspects (policy, legislation) as identified in needs analysis.
5. Sub-task D. Implementation of the pilot information system in an integrated thematic area (e.g. air, water, soil, biodiversity, waste, etc.) in the Republic of Croatia where modern principles of projecting environmental information systems and all the knowledge acquired during realization of the project "Development of National Environmental Information Systems" would be applied. Successful implementation of the pilot information system will be the confirmation of feasibility of the project "Development of National Environmental Information Systems", and the pilot information system would serve as a model to be used by other Southeastern European countries in designing and implementing their own environmental information systems.
6. Sub-task E. Prepare and circulate a case book that summarises regional and pan-European examples of provision of access to environmental information, compliant with the Aarhus Convention and EU Directives. Technological and non-technical solutions will be detailed. Local Language abstracts will also be included.
7. Sub-task F. A regional NGO-Ministerial meeting to monitor and evaluate the progress in the countries and exchange experiences including concertation with EIONET extension and implementation of the Aarhus Convention, implementation of an information society policy. The meeting will also evaluate the results of the project, discuss efforts to implement an environmental information policy and corresponding legislation, identify further needs and recommend further activities to support the development of national and improvement of local information systems in the SEE countries for the next three years.

Anticipated Results:

PHASE I

During the first two years the process of developing national systems and action plans for improving access to information with civil society /NGO involvement will be started. By the end of the second year the following results can be anticipated.

- Enhanced operational environmental information management capacities (largely in the pilot country) based on an institutional network between government (including a number of related ministries) and civil society in all countries of the CEE region.
- Improved access to the most relevant, up to date, and topical environmental information.
- Steps toward implementation of Articles 4, 5, 6, 7 and 8 of the Aarhus Convention (with or without national ratification)
- Comprehensive analysis of needs and priorities for strengthening information systems and national action plans in each SEE country
- Improved online governance and transparency, and improved inter-ministerial and regional cooperation
- Gradual integration with OECD, and EEA indicator mechanisms
- Development of national environmental information society policies and possible supporting legal frameworks

PHASE II
After the first two years, the project will focus according to the more specific needs in each country, and in supporting environmental information society plans in cooperation with civil society, as well as further developing and enhancing national systems. Extending and nurturing local information systems may also be included.

Indicators of success:

- Open and transparent, participatory process of developing information systems in SEE countries
- Participation and input of civil society groups in their respective development in SEE countries
- Establishment of a structure for continuous civil society involvement in developing, monitoring and evaluating the progress of implementation strategy in SEE countries
- Continued interest of SEE (inter) governmental officials and NGOs to participate in the project activities
- Successful meetings at regional and national level meeting the needs of participants and increased capacity of officials, NGOs and other stakeholders
- Improved understanding, support and compliance with international initiatives including Aarhus Convention, PRTR, Indicator mechanism, EEA/EIONET, EU Directives, and OECD Recommendations and Guidelines
- Success of the pilot information system implementation for a single environmental thematic area– a basic model for future designs and implementation of environmental information systems in Southeastern Europe.
- Enhanced access to information for decision-makers and the public through electronic reports, WebPages, CD-ROMs, hotline services/information shops, assessment reports, books etc
- Improved physical operational networks (installed hardware and software)
- Record on the use of outputs: number of individuals accessing the information system, disseminated copies of products, user feedback collected in the form of 'stories'

Task Objectives:

The overall goal of the project is to ensure a transparent and **participatory regional process** in the development of SEE countries' mechanisms for information access and dissemination. This process will rely on the involvement of international expertise, regional experience exchange and civil society involvement. Assistance will be provided to SEE government officials to develop national action plans and to enhance national systems for information access, as well as to consider a longer term environmental informational policy. A regional framework will support a combination of national and local activities.

A thorough and indicative state of the art survey and **needs assessment** for each SEE country will indicate the current status of environmental information systems, including accessibility, use of state of the art electronic media and traditional mechanisms, quality and clarity of information, environmental issues covered, inter-ministerial cooperation, existing legal and policy frameworks, review of implementation of the Access to Information Pillar of the Aarhus Convention, EU Directives and OECD Recommendations, national capacities, challenges and will reveal obstacles to wider implementation and consensus on priority action in the form of a national action plan.

The project will **strengthen governmental capacities** in terms of a) improving knowledge of available techniques for providing access to information (internet, CD-ROM, email, info kiosks and access points, press releases, question and answer services), b) its storage (databases, information society technologies, Intranet, hardware and software) and c) international mechanisms promoting information access including the Aarhus Convention, EIONET, EU information society and environment initiatives, and those of the OECD.

Sub-Tasks include:

Sub-Task a:

Establishing a Regional Forum/Steering Group for guidance and sharing of expertise, especially in developing national systems for environment information access and dissemination in the SEE countries. A steering group meeting (in Croatia) consisting of REC, UNEP-GRID Arendal, EEA, Federal Environment Agency of Austria (Chair of the Electronic Tools Task Force, and seven MoE reps.) will be hosted to discuss the project workplan, goals, and objectives.

Sub-Task b:

Preparing on the national level in each SEE country:

A thorough and indicative state of the art survey and **needs assessment** for each SEE country that indicates the current status of environmental information systems, including accessibility of information contained within, use of state of the art electronic media and traditional mechanisms, quality and clarity of information, environmental issues covered, inter-ministerial cooperation, existing legal and policy frameworks, review of implementation of the Access to Information Pillar of the Aarhus Convention, EU Directives and OECD Recommendations, indicator monitoring, national capacities, and challenges. The assessment will also reveal obstacles to wider implementation and give consensus on priority actions for international and national assistance defined in cooperation with NGO representatives. The Republic of Croatia in its role as Chair and Lead Country for the proposed project has already reviewed the nature of the assessment and drafted a review of its information capacities and requirements as a basis for its country chapter. These are presented in Annex. 1, and will serve to contribute to the above referenced survey.

Within a **regional meeting** (in Croatia) discussing and finalizing needs and priorities for the development of information systems in each SEE country in dialogue with NGOs and other stakeholders and with the involvement of international and/or local experts. Conclusions of the meeting will scope content of national action plans.

Sub-Task c:

A single capacity building workshop(in Szentendre) will be hosted (to ensure cost savings and) full cross fertilization of ideas and sharing of experiences. These will explore good practices on specific issues identified by the countries pertinent to building efficient systems of access to information for NGOs and decision-makers and provide training. This will equip government officials, NGOs and other stakeholders with practical knowledge on the different aspects of building efficient systems of access to information and public participation according to their needs.

This would include reviewing possible compliance and progress beyond:

The EUs Access to Information Directive:
Question and Answer "one-stop" information shops for all environmental information requests, accessible virtually (electronically) and physically.

The Rio Declaration of 1992 and its provisions on access to information.
A Miljobutikken in Denmark which enables the public to know where to find relevant environmental information and which serves as a "gateway" to official information.

The Aarhus Convention, Access to Information pillar:

Art. 5 on collection and dissemination of environmental information (real time and regularly updated interactive websites), including items such as state-of-the-environment reports (Pollutant Release and Transfer Registers), facts and analyses for major environmental policy proposals, legislation and policy documents;

Art. 6 – information on proposed activities, decision-making processes and draft decisions, environmental impact statements (downloadable pdf files on the Internet), receipt of comments (via Bulletin boards) and prompt notification of the decision (via email) encouraging public participation in decision-making;

Art. 7 – provision of information on plans, programs and policies;

Art. 8 – publication of draft rules, opportunity for public comment;

EU Information Society Technologies for environmental data management (air and water quality assessment, emergency monitoring, earth observation) and online governance, *EIONET application* (environmental reporting and information exchange technologies), *indicator* and reporting mechanisms (EEA environmental progress indicators), implementation of *OECD guidelines* (on Pollutant Release and Transfer Registers, environmental democracy)

Demonstration of good practice and progressive mechanisms for providing and facilitating information access:

- Exchange of information and cooperation with other related Ministries (energy, transport, water);
- Highlighting citizen rights to practically access information;
- Sharing of data across national borders;
- Monitoring compliance with Directives and International Treaties;
- Supplementing basic environmental data with information on environmental effects;
- Eco-efficiency product information;
- Health and risk analysis;
- Emergency preparedness and ;
- Socio-economic data.

These workshops will also enable stakeholders to use the experience and knowledge in their own country in developing the different components of implementation strategy. Furthermore, priority actions will be earmarked in order to support implementation of national action plans, and serve as a basis for environmental information policy. Conclusions and Recommendations will be captured and used for identifying future actions and finalizing the national action plans. NGO involvement will be assured in order to ensure potential systems meet public demand for accessible information.

Sub-Task d:

Implement the pilot information system in Croatia, with a view to enhancing the national environmental information system, based on cost viability and need.

Sub-Task e:

Circulate case studies in environmental information access through a good practice case book. This will summarise regional and pan-European examples of provision of access to environmental information, compliant with the Aarhus Convention and the new EU Directive on Access to Environmental Information. Technological and non-technical solutions will be detailed with diagrams and illustrations. These case studies will feed into the work of the recently established Electronic Access to Information

Task Force, under the Aarhus Convention, and will contribute to the initiative's online web gallery of case studies. Local Language abstracts will also be included to facilitate wider dissemination and uptake.

Sub-Task f:

Regional NGO-Ministry representative meeting (in Bulgaria) to monitor and evaluate the progress in the countries and exchange national experiences as well as ensure concertation with EIONET extension (REReP Priority 1.9), and implementation of the Aarhus Convention (REReP Priority 2.2), implementation of an information society policy.

Held toward the end of the 2 year timeframe this will present the results of the national workshops, the national action plans. The Croatian pilot study will also be discussed and the extent to which it has enhanced the national information system as a tool for promoting public access and participation in decision-making and in supporting informed decision-making.

An evaluation of the results of the project, discussion of efforts to implement an environmental information policy and corresponding legislation, identification of further needs and recommendation for future activities to support the development of national and improvement of local information systems in the SEE countries for the next three years.

Justification:

National and International processes are increasingly awarding attention to promoting democracy through access to information. The Organization for Economic Cooperation and Development (OECD) countries recently reviewed progress towards improved public access to environmental information during a seminar in Athens on 7-8 June as part of a review process for a 1998 OECD recommendation on environmental information.

The EU's Information Society Technologies Program gives keen attention to supporting a user friendly information society in which smart governments are envisaged that provide users of government services (e.g. citizens, enterprise, NGOs) with more user-friendly services based on intelligent IT systems.

The existence of a Task Force supporting the implementation of the Aarhus Convention and Pollutant Release Transfer Registers and recently adopted task force on electronic tools' use means to improve access to information lends further to the need to encourage the timely development of information systems as a means to promote democracy and good governance. Particularly since, technology today is well ahead of much of the legislation and practice regarding access to and dissemination of information and many citizens, governments and businesses are already part of an open information society that uses electronic media like e-mail, the Internet, cellular phones, display boards and digital television to access and propagate information.

The SEE countries have identified the need to develop their environmental information systems in line with these processes and other informational activities under REREP. However, neither of the latter give specific attention to developing state of the art national systems that clearly meet citizen needs. They rather focus on improving connection to the EEA Eionet and therefore focus on IT transfer and data exchange between so-called European Topic Centres. The REREP priority item 2.2 focuses on implementation strategies for the Aarhus Convention as a whole and gives limited attention to actions targeting national systems that enhance citizen access.

In SEE countries, progress to date concerning online governance has been limited. More could be achieved by the governments. The public still meets difficulties to access official environmental information. While some environment ministries tend to have taken a lead, environmental information held

by other ministries is often less accessible. Many quasi-public bodies that hold environmental information do not consider themselves bound by rules governing public authorities.

All these players need to be brought together through an integrated approach within the SEE countries that includes strong NGO participation. This will be ensured by the main international organizations supporting the project (REC, UNEP and the Croatian Ministry of Environmental Protection and Planning as chair). This will help promote long term security, democracy and environmental awareness and improvement in the region.

Expected Results and Deliverables:

- A **regional framework** for assistance in developing national systems for environmental information access and dissemination in the SEE countries according to their needs.

- Six country based **needs assessment** on the current status of environmental information systems.

- **Regional meeting** discussing and finalizing needs and priorities for the development of information systems.

- **National action plans** for developing efficient systems for information access.

- National **capacity building workshops** in each country to share experiences and explore good practices on specific issues identified by the countries pertinent to building efficient systems of access to information for NGOs and decision-makers

- Implementation of the pilot information system of an integrated thematic area (e.g. air, water, soil, biodiversity, waste, etc.) in the Republic of Croatia where modern principles of projecting environmental information systems and all the knowledge acquired during realization of the project "Development of National Environmental Information Systems" would be applied. Successful implementation of the pilot information system will be the confirmation of feasibility of the project "Development of National Environmental Information Systems", and the pilot information system would serve as a model to be used by other Southeastern European countries in designing and implementing their own environmental information systems.

- Based on cost viability and need, a **local pilot project** in Croatia, designed to enhance access to national environmental information and the national information system.

- **Good practice case book** concerning access to environmental information

- Final **regional NGO-Ministerial meeting** toward the end of the 2 year timeframe to present enhanced national information systems as a tool for promoting public access and participation in decision-making and in supporting informed decision-making.

- An **evaluation** of the results of the project, and identification of further needs and recommendation for future activities to support the development of national and improvement of local information systems in the SEE countries for the next three years.

Timeline

Activity/ Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Sub Task A																								
Sub Task B																								
Sub Task C																								
Sub Task D																								
Sub Task E																								
Sub Task F																								

ANNEX 1: SURVEY SCOPE AND NEEDS ASSESSMENT CONCEPT

A. INPUTS

Although this project deals with development and implementation of national environmental information system, IT system is to be regarded as a means of securing the environmental and social objectives defined by other REReP projects, and not as a goal for itself. National environmental information system is also regarded as a powerful means of building environmental democracy and enforcing democracy in general. Therefore, it is very important to identify project inputs very precisely and to describe them in a clear and logical manner.

The process of comprehensive inquiries related to project inputs will entail locating and appraisal of existing IT systems in the MoE and other relevant ministries/directorates, local governments and major measuring/monitoring institutions. Inventories of existing hardware and software should enable further planning of IT system. Hopefully, accurate register of existing GISs and other databases will be defined.

As to properly develop the concept of the national environmental information system, following elements are to be analysed and taken into account:

1. requirements of the MoE

- requirements related to the reorganization of the Ministry along the lines of EU requirements and practices,
- needs related to internal communication, data exchange and reporting,
- requirements related to receiving and processing of data collected by external organizations (other ministries and directorates, local governments, measuring and monitoring institutions, public etc.),
- requirements relating databases and Website,
- external communications (at national and international level),
- evaluation of existing IT.

NOTE:
Other relevant ministries and directorates will be taken into consideration in proportion to the relevance of the information and their share in harmonization with EEA and the Aarhus Convention implementation.

2. EEA requirements

- data/information format requirements,
- hardware/software compatibility requirements,
- measuring/monitoring requirements,

- indicator and reporting mechanisms (EEA environmental progress indicators),
- EIONET application (environmental reporting and information exchange technologies),
- progressive development of data-bases in accordance with EEA/EIONET/CORINE,
- OECD guidelines on Pollutant Release and Transfer Registers, environmental democracy

/see: REReP project proposal # 1.6 "Membership with EEA: regional information system"/

3. The Aarhus Convention requirements

- requirements related to public accessibility of data,
- Website with instructions and guidelines on registers and libraries with environmental information that is not included in electronic databases,
- Website with information on assistance mechanisms related to access to justice,
- requirements related to public participation in decision-making,

4. Institutional infrastructure

- models and methods of information exchange and cooperation between ministries, central and local government, ministries and relevant institutions,
- needs for amending existing legislation as to ensure operability of national environmental information system,
- IT system access and use: training for officials and NGOs,
- regional cooperation and data exchange requirements,
- regional communication requirements relating to access to databases and dissemination of information at SEE level

B. OUTPUTS

A concept of the IT system and the implementation of the system will be conditioned by the type of data and data collection methods, as well as data processing and data dissemination needs.

4.1 **Type Of Data And Information**

- national/regional land cover data
- results of measurements
  - automatically processed data
  - manually collected data
- data and information on environmental incidents
- data on waste
- product information
- relevant national and international legislation, incl. conventions, treaties and protocols

4.1.1 **Data Collection Methods**

land cover data

Sources:

- Existing national data bases transformed into IT system compatible format;
- Existing information/knowledge data transformed into electronic form adjusted to IT processing;

Data collection:

Authorized continual remote access (RAS – Remote Access Service)

Measuring/monitoring results

Automatically processed data

Sources: national governments, scientific and commercial institutions

Data collection: RAS

Manually etc. collected data

Sources: field monitoring/measuring units, reports

Data collection: direct data entering via Internet interface

Data on environmental incidents

Data collection: depending on the nature of the incident, combined RAS (e.g. national/international institutes: data on earthquakes, explosions etc) and Internet interface in the cases of dangerous emissions/discharges etc).

4.2 Data Processing

Processing of data will be centralized at national level in such a manner to ensure exchangeability and comparability of information on regional and EU level.

4.3 Data Dissemination

National level

Data are accessible through RAS by the IT systems in possession of governmental, scientific and commercial bodies within national administrative borders. They are intended to be the basis for scientific analysis and input for factual approach to decision making on national environmental policies, programmes and action plans.

International level

Continual on-line access to environmental data by designated regional institution, EEA and other international scientific and environmental institutions.

Public access

Dissemination of data to general public regardless of administrative borders will be ensured via Internet. Presentation of data/information will ensure easy understanding (e.g. measuring/monitoring results against limit/recommended values).

All levels of data dissemination will be designed to enable interactive participation of data sender and data receiver. Pubic access to data will be designed as to support NGOs' and general public's involvement in environmental discussions, policies and programmes defining as well as ensure their initiatives in the field of environmental protection and problem identification.

IT System's Architecture

On the basis of accurate project inputs architectural structure and dimensions of hardware and software will be defined.
Optimal platform for the system's development is combination of Microsoft NT/2000 network technology (Microsoft NT/2000 Server) and SQL Server 2000 relation database.

Such an architecture ensures:

- stability of the system and integrity of data,
- controls parameters for authorized remote access (RAS),
- security of data when they are accessed via internet (Firewall),

- interactive exchange of data (Exchange Server),
- facilitate interpretation of processed data via OLAP (On Line Analytical Processing) tools and decision support tools (Decision Support).

Data processing and presentation of data in the very data-base (via Internet Information Server) are automatic, and require minimum of administration.

National centers will be designed as standard NT/2000 LANs (Local Area Network) with at least seven functional units in the process of data collection, data processing, distribution and data protection, ensuring the integrity of the system and communication links to internet and/or direct links to vital IT resources in relation to data collection, data usage and data protection:

1) PDC (Primary Data Controller) – Main IT system resource and data base with data currently being processed;
2) BDC (Backup Data Controller) – Main resource for ensuring of the integrity of the system, containing data on local network events with the possibility of restoration of the system in contingency situations;
3) IIS (Internet Information Server) – Main resource for input/output data control and protection against unauthorized external access via Firewall;

4) Computer for online presentation of data in specific timeframe (longer than time required for ongoing data processing – operational archives),
5) Computers with complete replication of the system at geographically separate location as protection against data losses due to incident situations with serious consequences;
6) Equipment set for communication in local and external network (WAN) – HUBs, Routers and Cabling;
7) Equipment set for protection against damages due to failure in feeding the system with software (UPS).

It is understood that the system is of modular structure that enables continual upgrading in accordance with further requirements regarding data quantities, data processing and data keeping as well as upgrading of software.

4.3 Website

User-friendly interactive Website will be created as a means of facilitating public access to environmental information and public participation in decision-making. Information accessible via Internet will meet the requirements of the EEA and the Aarhus Convention.

4.4 Project Manual

Project Manual will describe, in necessary detail, *inter alia*:

- A general concept of the environmental information system,
- Guidelines for access to and use of environmental IT system,
- Concept of the Website,
- Inventory of databases,
- Technical description of the EIS

Guidelines for NGOs and a media on access and use of the environmental information system designed specially for the NGOs and a media will be summarized in a separate handbook. Training and workshops related to information systems characteristics and operation will also be provided.