1. Basic Information

1.1 Désirée Number: CZ 2003/004-338.04.02
1.1.1 Twinning Number : CZ03/IB/EN/02
1.2 Title: Environmental Information and Management System (CENIA)
1.3 Sector: Environment
1.4 Location: Czech Republic

2. Objectives

2.1 Overall Objectives:
The overall objective is to take on the obligations of membership of the European Union including adherence to the aims of the political, economic and monetary union, and the acquis communautaire.

2.2 Project Purpose:
The project is intended to support the adoption and enforcement of all specific parts of the acquis communautaire related to information provision and reporting in the environmental sector. The purpose of the project is closely associated with the Accession Partnership priorities especially in the areas of administrative co-operation and co-ordination at central, regional, and local level, improving control and enforcement procedures in the state administration, and implementation of the acquis communautaire, and strengthening MoE information management capabilities.

The project purpose relates directly to horizontal EU Environmental legislation, namely:
- The Council Directive 90/313/ECC on the freedom of access to environmental information,
- The Council Directive 91/692/EEC standardizing and rationalizing reports on the implementation of certain directives related to the environment,

2.3 Accession Partnership and NPAA priority

Action plan for reinforcing the Czech Republic’s administrative and judicial capacity
Priority 1 : strengthening administrative, monitoring and enforcement capacity (all levels) :
- clear distribution of competencies
- co-operation
- training
- strengthening the investment planning capacity

All the above-mentioned points will be only addressed fully when data and information are gathered and unified in a harmonised and consistent manner by one independent entity. The aim of the project is to ensure this task and provide high quality data and information to all relevant parties and thereby avoid current problems with data exchanges within and between the many institutions in the environment sector.

The Accession Partnership of 2001 identified priorities in the environment sector:
- “to continue integration of environmental protection requirements into the definition and implementation of all other sectoral policies with a view to promoting sustainable development”
- “to continue strengthening the administrative, monitoring and enforcement capacity at national, regional and local level. Particular attention needs to be paid to clear distribution of competencies, to improve co-operation between responsible authorities, to training and to strengthening the investment planning capacity”

The project will focus on establishing a system whereby the responsibilities of individual institutions are clearly specified in respect of data and information.

The NPAA from June 2001 states following priorities:
Short-term priorities:
1. “In relation to approval by the EU, ratify the Agreement on Participation of the Czech Republic in the European Environment Agency and the European Environment Information and Observation Network (EEA and EIONET), provide for development of co-operation in the framework of these organisations”

2. “Prepare a system of reporting on the implementation of environmental Directives to the European Commission following adoption of sectoral acts (water, waste, air)”

The project will contribute to the achievement especially of the second short-term aim.

Medium-term priority:
“Provide for collection of data and their processing pursuant to the requirements and in forms for reporting to the Commission (Directive 91/692/EEC), create system of control and validation of data in accordance with the requirements of the relevant Directive, draw up reports for the Commission in the pilot stage”

Reporting, which is currently undertaken in the sector of environment, is of a good quality. However, there remain sectors in which information is not available for detailed implementation purposes or for sectoral reporting. In addition, data used for reporting is not unified and is very difficult to use for integrated reporting and for policy development. This project will focus on improving the quality of reporting and on combining all data sources so that they can be used for integrated reporting and policy development.

2.4 Contribution to National Development Plan – n.a.

2.5 Cross Border Impact – n.a.

3. Description

3.1 Background and Justification:
Environmental data and information is needed for a number of purposes:

- Practical and detailed implementation of EU (and other) environmental legislation
- Reporting in accordance with EU Directives
- Compliance checking against requirements of EU (and other) legislation
- State of the Environment Reporting
- Policy Analysis
- Public Information and stakeholder consultation
- Integrated Environmental Reporting including sustainable development indicators

In order to satisfy these needs efficiently and effectively, effective data management structures are required. Since 1992, when the Ministry of Environment was established, the approaches taken to information management have been sectoral and unharmonised. An integrated and efficient Environmental Information and Knowledge Management Process has not been introduced. This situation is typified by unclear distribution of responsibility between sections responsible for production processes and the support sections. Sectoral departments (e.g. Water protection department) are currently, amongst other duties, responsible for data collection, management of its subordinated information systems (Hydroecological information system, production of basic water management maps in scale 1:10 000), and communication in order to acquire data needed for decision making, strategies, etc. Such a mixture of production and supportive processes resulted in a situation, when sectoral departments contract very good and helpful projects but with no formal arrangements in terms of data quality assessment, verification of results, trans-sectoral data compatibility or cataloguing the results. Some projects have failed due to lack of data and incompatibility of methodologies across sectors.

The impacts on the current state of the environmental data is as follows:

- existing and new databases are created and run without broader concept covering needs from other environmental sectors,
- data are of variable quality without any certification
- data might be treated as incredible due to lack of verifiability
- information and data is not accessible from one point
- collection of data from subjects reporting in accordance with a law has not been formally described nor harmonized
• there is no central information service providing added value services on consolidated cross-sectoral environmental database
• unclear funding of data creation further destabilizes data availability.

The recent EC Peer review showed the need for controllable, manageable and transparent data creation, handling, processing and publication.

No single existing institution working in the field of environment is able to fulfil this role at present. The current environmental institutions are specialized bodies that act only within their own narrow domains. Moreover, the technical nature of the work to be undertaken is such that it would be inappropriate for the Ministry of Environment to fulfil such a function. Therefore, it is intended to realign the Czech Ecological Institute to form the Czech Environmental Information Agency.

The twinning project would help to ensure that the Agency is fully operational as soon as practicable and would assist in integrating best practice in Europe into the working methods of the Agency. As such, the principle aim of this project is to assist in bringing the Czech Environmental Information Agency into full operation. This Agency will serve as a counterpart to the EEA, neighbouring countries and other international institutions.

MoE currently works on a catalogue of documents, information sources, directories and services. The master catalogue (MC) is based on a state-of-art technology Content Registry now under development at European Environment Agency (EEA) within the Reportnet framework. This “core” or “master” catalogue has been connected to an environmental portal to be found at http://portal.env.cz.

MoE has developed its own metadata standard based on Dublin Core initiative and fully compatible to EEA metadata standard.

MoE has been building internal Administrative information system (AIS) based on Lotus Notes since 1995. AIS is a major workflow component of all the office automation tools deployed at the MoE. AIS has not got a capability to use the advanced cataloguing mechanism yet and therefore it is not able to accommodate processes such as archiving or discarding services since they fully depend on a functional catalogue. Thus, the next important goal to be conducted by the project bearer is to support creation of process “Creating and indexing official authorised document”.

The detailed aims of the project include:
• To design and implement a process that concentrates all the supportive processes in the field of information support to the productive services at MoE and its subordinate organizations.
• To ensure the availability of clear, evident, complete and most importantly linked to other data (i.e. water taking into account nature protection data, etc.).
• To help to ensure free data access, which will strongly influence strategic planning by making possible verifiable indicators in environmental policies and strategies.
• To facilitate integrated reporting, which has not worked properly yet because data are not linked neither from formal nor contents point of view, i.e. different methodologies, different attribution notes, different object and subject identification, geographical identification, etc. This project will lead to smooth operation of integrated reporting.
• To provide support of an organization with expertise in the field of development and deployment of environmental thesauri, metadata handling, and updates. A big issue is a document indexing where the MoE still lacks experience. Skilled professional librarian with a good orientation in the metadata field is also highly welcome.
• There is a need to **develop a directory service** containing a list of experts in the environmental issues. Skills in the field of organization and methodology are required unlike information technology deployment.

• Project team is to **support creation of process “Creating and indexing official authorised document”**.

The Agency will provide a **centralized data gathering, their control and validation** related to all environmental Acts (approximately 20). It will implement management processes of acquisition, consolidation, data processing and making them available. This “data clearinghouse” will be extremely valuable especially in providing data in relation to the Water Framework Directive, Biodiversity, EPER, etc.

The Agency will also help to exchange data between the **national and regional level**.

End-user of the data will be the Ministry of Environment and its organisations. Nevertheless, MoE will provide public access to the data.

E-Government and accession of e-Content principles are one of the main principles of the Czech National Information Policy and the subsequent Action Plan published by the Office for Public Information System (www.uvis.cz) in 2001.

The Ministry of Environment adopted its own specific sectoral Information Strategy in 2000 with evaluations and updates in 2001 and 2002 in order to reflect rapid development in the field of environmental informatics and information management.

Informatics Department at the Ministry of Environment is responsible for creation and operation of the integrated information system on the environmental issues (IISEI). IISEI has been built on the principles of provision of relevant, targeted, precise, and timely information to end users including the public. This information system acts as an umbrella covering all the state information systems in the environmental sector.

The Czech Republic is currently introducing implementation plans for all the Directives in the *acquis communautaire* including those in the environmental reporting.

Structural funds (such as ISPA) and ability to accept and transparently use the funding has been on of the most important driving forces behind IISEI.

The Ministry of Environment established general content registry built upon the EEA standards and technologies and in accordance with Information Strategy adopted in 2001.

### 3.2 Linked Activities:

**CZ 9705-05-01 Development of a Management Information System (MIS) for Approximation**, which was further developed by MoE in 2000 - see [http://mis.env.cz](http://mis.env.cz)

**CZ01-09-0401 Information System of Environmental Indicators** - Twinning Light (Finnish Environment Agency)

The main target of the project is direct support to the development of strategic, long-term environmental policies and to the decision making processes through the assistance to the implementation of the ISEI.

MoE is strengthening its information management capabilities and recently developed:

- **Metainformation system** to describe data available (mis.env.cz)
- **Map publishing service** providing geographical data up to scale 1:5000 (mapmaker.env.cz)
- **Research portal** (yet under construction) allowing single point of access to all information sources made available (portal.env.cz)
- **Environmental indicators on-line** (indicatory.env.cz)
- **Structured linguistic analysis** of the Czech environmental texts allowing decomposition of a user query to theme and spatial and temporal coverage
- **Administrative information system** automating selected administrative processes
- **High speed network** connecting MoE and headquarters of the subordinated bodies (10Mpbs switched fibre Ethernet)

A pilot version of biodiversity clearinghouse as pilot test for the environmental clearinghouse will be finished in 2002. If successful, it can be immediately used as the central repository for IPPC, EPER or Water Framework Directive data and take as key players also regional authorities (krajské úrady) and local authorities. To allow this system to act as a supportive tool for the above mentioned topics requires elaborated and tuned process accompanied by a set of standards and procedures.
Office for Public Information System (www.uvis.cz) elaborates unified information system computer interface facilitating mutual access between two independent state information systems based on a set of protocols XML/WSDL/SOAP.

MoE has currently many tools to handle almost every information need but with a lot of effort, lack of data linkage and with varying quality. Missing environmental information and knowledge of management process can adversely affect being a full and useful member of the European Community in the future.

3.3 Results: The project will be focused on assisting with the establishment of the CENIA and to build up a framework for coordinated action in the field of reporting and information provision. The project should cover the following areas:

The review of the current metadata system and data/information provision, especially:
- Strategies for achievement of environmental objectives in individual sectors in terms of information support
- Review of the current metadata system, its contents, metadata standards
- Identification and designation of environmentally significant classes of data and information sources across the state administration in the Czech Republic (methods and procedures)
- Economic aspects of unified information support and information sharing.

Integrated information management

Analytical part of the integrated information management
- Development of the centralised environmental data model
- Stakeholder involvement in the information provision and reporting processes (methods, procedures, seminars), establishment of human networks
- Comparison of the information needs across various user groups with the available information sources
- Critical advice on the bringing CENIA into full operation

Implementation of integrated data model:
- Analysis of existing information systems, identification of necessary actions for conversion to the unified data standard
- Development of data collection/processing/provision institutional structure on the side of future CENIA
- Prerequisite processes in effect – integrated information support process, knowledge management process
- Appropriate training to stakeholders, CENIA staff, involved user groups

Practical Implementation
- Devising steps leading to CENIA being fully operational
- Public information and consultation mechanisms
- Data management for reporting purposes

The project will produce a series of guaranteed results leading to the revision of the draft establishment plan for the Czech Environmental Information Agency and the fulfilment of a number of the requirements of that plan:

1. Thorough review of the current catalogue of existing data and information sources is completed.
   The current catalogue of existing data and information sources consists of databases, information systems, services, and experts. The contents suffers from serious underestimation by the stakeholders, information providers, and decision makers despite the order of the minister of environment (2000) to the deputy ministers and directors of subsidiary organizations to describe the data and information sources in the meta-information system (catalogue) and guarantee regular updates. Therefore, the review should help to enforce the completeness and correctness of the catalogue.

2. Implementation of the process of Quality Assessment/Quality Control and source/contents verification
   The public, decision-makers, media and other relevant user groups should be well informed about the quality analysis and assurance techniques through the communication tools prepared within the project.

3. A comprehensive study of common user requirements and acknowledgement of environmental metadata at the national level elaborated.
   Metadata user needs and expectations surveyed. The survey should ensure inputs from regions, local authorities and various stakeholders.

4. Reviewed methodology for processing and presentation of metadata to be used on both national and international levels.
   The methodology will both stem from the MS experience and reflect the specific national
conditions. It will reflect the standards of the EU reporting processes (ROD, SERIS) and EEA metadata standards.

5. **Public, decision-makers, media and other relevant user groups well informed** about the quality analysis and assurance techniques through the communication tools prepared within the project.

6. **Analysis and assessment of the current institutional arrangements environmental data management in the Czech Republic is completed.**

   The analysis will include consideration of the institutional arrangements necessary for compliance with the requirements of the reporting obligations and directives. This analysis will assist the Czech Republic in determining whether the current information management and provision is in compliance with the requirements of the Directives and obligations, and to make changes if necessary.

7. **Gap Analysis between the abilities of the current data management arrangements with identified needs for environmental information is completed.**

   It will be based on the results of the information management analysis. This report will give the Czech Republic clear and thorough picture of the present lack of data creation supervision and mutual affect on data from different environmental sectors.

8. **An integrated centralised model for information supply, storage, processing and dissemination capable of rectifying the identified gaps is developed and agreed.**

   The centralised model will be able to rectify the identified gaps and to bring rules and inter-operational framework for all the environmental information systems. All these information systems should be converted to comply with this model.

9. **Strategy for extraction of data for reporting purposes is developed**, including strategies for integrated reporting. Institutional and organizational framework together with direct impact on data funding and use is the major result.

10. **Strategy for dissemination of information for stakeholder consultation is developed.**

    Various stakeholders including regional and local authorities will be involved in the information dissemination process.

11. **Data standards for the centralised model are developed and agreed**

    Data standards for the centralised model allow all the information systems to cooperate on the database level. This is a crucial point in measuring successfulness of the project. Nowadays individual information systems use internal data standards not linked to any other source.

12. **Training is provided on the operation of the centralised data model and its operation to the data managers within CENIA**

    The training will help the future data processors and providers to understand and manage well the information flows, data requirements and consequent needs for unified data model.

13. **Implementation of the centralised information management model, including:**

    - CENIA information storage facilities operational
    - Data is provided to CENIA in agreed format
    - Data is distributed to target groups
    - Training of end-users on how to use CENIA services

   The centralised information management model brings the optimal information processing model to a real life: 
   Assignment -> Decomposition -> Data/Information Acquisition -> Cataloguing -> Storing -> Processing -> Interpretation -> Results Delivery.

   Prerequisites of this process are: operational information storage facilities, unified data format, results distribution routes.

The project will be continually monitored through the production of interim progress reports in addition to the final reports for each of the five guaranteed results mentioned to above.

Where relevant and beneficial, opportunities will be provided for the trainees referred to in paragraph 8 above to experience first-hand the application of the appropriate techniques in existing Member States.

### 3.4 Activities:

1. Review of current catalogue of existing data
2. Implementation of the process of QA/QC, incl. seminar on QA/QC techniques
3. Survey of metadata user needs – a comprehensive study of common user requirements

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1 In view of the complexity of this result, not all data sources may come „on line“ during the life time of the project, but a substantial proportion will need to do so.
4. Review of methodology for processing and presentation of metadata
5. Information for relevant user groups
6. Completion of existing institutional analysis in order to ensure that a complete understanding of the current and proposed future institutional arrangements is available. The existing metadata information system will provide the basis for this work.
7. Detailed comparison of the existing arrangements and data availability with the information requirements which have been identified for all environmental directives including those relating to public access to information and to reporting so as to produce a “Gap Analysis”
8. Drafting, development and completion, with the MoE Information Department and CENIA, of an integrated centralised model for information management, which will satisfy the requirements referred to above.
9. Drafting, development and completion of a strategy for the extraction of data from the model for the purposes of reporting in accordance with EU Directive requirements
10. Drafting, development and completion of a strategy for the extraction of data from the model for the purposes of stakeholder consultation in accordance with best practice within the EU
11. Design, organisation and implementation of training for staff from CENIA, MoE and other relevant institutions in the operation and management of the centralised data model
12. Drafting, development and completion of an integrated set of environmental data standards with unified and unique subject and object identification harmonized to Czech technical norms - Drafting, development and completion of data conversion routines to this model to cover most important environmental data
13. Organising the practical delivery of data into the centralised data model and rectifying problems which may arise in the process of implementing the model in practice

The project will require full involvement of one long-term pre-accession advisor (PAA) who will take up permanent residence in Prague for the full duration of the twinning project (twenty months) and will provide the general expertise in all matters related to the project. The pre-accession adviser should be familiar with all aspects of the environmental data management, have practical experience in the field the information management and have a good working knowledge of the implementation of processing standards. He/she should also be familiar with the state administration practices including co-ordination and co-operation of the state authorities with subsidiary bodies and technical institutions (budget appr. 270.000 €).

For the purpose of the preparation of the centralised information management system and initial review of the current catalogue, one more PAA would be required. This expert should have detailed experience of state administration, environmental sector, and environmental data management and will stay in CR for the duration of approximately 12 months (budget appr. 180.000 €).

The PAA will be assisted by a number of short term experts, who will have good practical knowledge and experience in the areas listed in the logframe (budget appr. 450.000 €, i.e. 300 men/days)

The project will also include translations, study trips, a workshop and training (budget appr. 50.000 €).

4. Institutional Framework

Ministry of Environment (MoE) is the central body of the state administration for protection of the natural accumulation of waters, protection of water resources and protection of the quality of ground and surface waters, for air protection, protection of nature and landscape, protection of agriculture land fund, for implementation of the state geological service, for protection of the geological environment, including protection of mineral resources and ground waters, for geological work, and environmental supervision over mining, waste management and environmental impact assessment. The Department of Informatics maintains environmental information in these areas.

MoE has several support organisations:

Czech Ecological Institute was established in 1992 as an expert institution of the Ministry of Environment, dedicated to the collection, creation and publication of environmental information. Several information databases provide outputs in a GIS interface. (Information System on Hazardous Chemicals, EIA Information System, Information System on Waste, Integrated Register IRZ, etc.)

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2 See Implementation Plans for individual Directives
The T.G. Masaryk Water Research Institute – its tasks are to carry out targeted research in the field of water management in order to assist the public water management authorities by providing advisory, methodical and consultancy support. Centre for Waste Management is a part of WRI. (Register of Municipal Pollution Sources, Basic Water Management Map, Groundwater Resources for Water Supply, etc.)

The Czech Hydrometeorological Institute (CHMI) performs the function of the central national institute in the fields of air quality, hydrology, water quality, meteorology, and climatology. (Air Information System, Register of Emissions and Air Pollution Sources, HEIS – Groundwater Volume, HEIS – Surface Water Volume, HEIS Water Quality, Meteorological Information, etc.)

The Agency for Nature Conservation and Landscape Protection is an expert organisation of the state nature protection, which guarantees methodical, documentary, information, educational research and consulting activities in the field of nature and landscape management in the Czech Republic. (Information System of Nature Conservation ISNC – Module of Localities, Information System of Nature Conservation ISNC – Module of Small Protected Areas, Information System of Nature Conservation ISNC – Module of Large Protected Areas, etc.)

Czech Geological Institute is a research organisation established by MoE. Its main tasks are: basic research of the state geological survey, acquisition, documentation, evaluation and storage of information on geological survey on the territory of the Czech Republic, etc. (Geodatabase of Maps, etc.)

Ministry of Agriculture is the central authority of the state administration for water management except for protection of natural accumulation of water, protection of water resources and protection of quality of surface water and groundwater.

The Department of Informatics, MoE, will act within this project as umbrella covering all data sources. It will ensure co-operation of all relevant institutions.

5. Detailed Budget on (M €)

<table>
<thead>
<tr>
<th>Project Components</th>
<th>Phare Support</th>
<th>National Co-financing</th>
<th>TOTAL</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Investment</td>
<td>Institution Building</td>
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<td></td>
<td>Support</td>
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<tr>
<td>Twinning Covenant</td>
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<td>TOTAL</td>
<td>0,95</td>
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6. Implementation Arrangements

6.1 Implementing Agency

The CFCU is the Implementing Agency responsible for tendering, contracting and accounting. The project will be administered by CFCU: Mr. Jan Slavícek, CFA, kpt. Jarosle 1000, Praha 7, Czech Republic.

The beneficiary of the project is Department of Informatics, MoE.
Project leader: Mr. Jiri Hradec, Director of Department of Informatics
Ministry of Environment
Vrsovicka 65
100 10 Prague 10, Czech Republic
Tel: +420 2 6712 2473 / Fax: +420 2 6731 0920 / E-mail: jhr@env.cz

6.2 Twinning

The PAA will be fully integrated in the Informatics Department of the Ministry of the Environment and be in daily contact with its staff and the staff of other responsible ministries and relevant institutions including the Office for Public Information System and associated institutions.

The Ministry of the Environment will provide the PAA and experts with the office accommodation and equipment to ensure appropriate and effective working conditions at the day of the arrival of the PAA.

The Czech Republic will establish a Steering Committee for the management of the project. The Committee will include representatives of all the responsible Ministries and relevant institutions.

Project Working Groups will be established for each component of the project.
6.3 Contract

(1) Twinning Covenant: 0,95 M €

7. Implementation Schedule

<table>
<thead>
<tr>
<th>Twinning Component</th>
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<tbody>
<tr>
<td>Twinning Selection</td>
<td>1Q/2003</td>
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<tr>
<td>Contracting</td>
<td>4Q/2003</td>
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<tr>
<td>Project completion</td>
<td>4Q/2005</td>
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</tbody>
</table>

8. Equal opportunity

Equal opportunity principles and practices in ensuring equitable gender participation in the project will be guaranteed.

9. Environment NA

10. Rates of return NA

11. Investment criteria NA

12. Conditionality and sequences NA

Annexes to Project Fiche

1. Logframe Planning Matrix
2. Detailed Implementation Chart
3. Contracting and Disbursement Schedule
## LOGFRAME PLANNING MATRIX

**Project**: Environmental Information and Management System (CENIA)

<table>
<thead>
<tr>
<th>Overall objective</th>
<th>Objectively verifiable indicators</th>
<th>Sources of verification</th>
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<tbody>
<tr>
<td>Ability to take on the obligations of membership of the European Union including adherence to the aims of the political, economic and monetary union, and the acquis communautaire.</td>
<td>Verification of compatibility of Czech legislation and implementation practices with EU legislation</td>
<td>Peer Review Reports, Czech Reports to EC in the field of Environment</td>
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<table>
<thead>
<tr>
<th>Project purpose</th>
<th>Objectively verifiable indicators</th>
<th>Sources of verification</th>
<th>Assumptions</th>
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<tbody>
<tr>
<td>The information requirements for implementation of EU Environmental Directives including their reporting obligations are fulfilled through the establishment of a central environmental information system (including unified data gathering and processing), which is operated by Czech Environment Information Agency (CENIA) and which provides transparent and linked data for all environmental sectors to end-users (MoE, regional and local authorities, and stakeholders) including process enforcement and data/information validation capability.</td>
<td>Information required for implementation of the requirements of EU legislation is available to the implementing organisations specified in the implementation plans for each Directive</td>
<td>Actual Reporting to European Commission, Peer Review Reports, Public Information availability (including internet)</td>
<td>Establishment of CENIA, Ministerial backing for the introduction of a centralised data model</td>
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<table>
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<tr>
<th>Results</th>
<th>Objectively verifiable indicators</th>
<th>Sources of verification</th>
<th>Assumptions</th>
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<tbody>
<tr>
<td>1. Thorough review of the current catalogue of existing data and information sources is completed.</td>
<td>Seminar on QA/QC with min. 15 participants, draft implementation plan</td>
<td>Project management reports, “Subject” reports including: Institutional reports, Gap Analysis, Strategy for reporting, Strategy for public consultation, Catalogue analysis</td>
<td>No major change in current structure of the Ministry of Environment needed (CENIA) can be established through a realignment of the Czech Environmental Institute and will be managed from the Department of Informatics</td>
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<tr>
<td>2. Process of Quality Assessment/Quality Control and source/contents verification implemented</td>
<td>Production of a report on current institutional arrangements of environmental data</td>
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<td>3. Metadata user needs and expectations surveyed - a comprehensive study of common user requirements and acknowledgement of environmental metadata at the national level available</td>
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<tr>
<td>4. Reviewed methodology for processing and presentation</td>
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</tbody>
</table>

**Programme name and number**: CZ2003/004-338.04.02

**Contracting period expires**: 31/10/2005

**Disbursement period expires**: 31/10/2006

**Total Budget**: 0.95 MEUR

**Phare contribution**: 0.95 MEUR
of metadata to be used on both national and international levels. The methodology from the MS experience gained and specific national conditions reflected. Standards of the EU reporting processes (ROD, SERIS) and EEA metadata standards reflected;

5. Public, decision-makers, media and other relevant user groups well informed about the quality analysis and assurance techniques through the communication tools prepared within the project.

6. Analysis and assessment of the current institutional arrangements of environmental data management in the Czech Republic are completed.

7. Gap Analysis between the abilities of the current data management arrangements with identified needs for environmental information is completed.

8. An integrated centralised model for information supply, storage, processing and dissemination capable of rectifying the identified gaps is developed and agreed.

9. Strategy for extraction of data for reporting purposes is developed, including strategies for integrated reporting

10. Strategy for dissemination of information for stakeholder consultation is developed.

11. Data standards for the centralised model are developed and agreed

12. Training is provided on the operation of the centralised data model and its operation to the data managers within CENIA

13. Centralised information management model implemented, including:
   - CENIA information storage facilities operational
   - Data is provided to CENIA in agreed format
   - Data is distributed to target groups
   - Training of end-users on how to use CENIA services

<table>
<thead>
<tr>
<th>Activities</th>
<th>Means</th>
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<tbody>
<tr>
<td>QA/QC analysis</td>
<td>Specifications for data standards</td>
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<tr>
<td>QA/QC analysis</td>
<td>Legislation tracking provisions of the Government of the Czech Republic</td>
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<tr>
<td>QA/QC analysis</td>
<td>Inspection of the CENIA operation</td>
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<td>QA/QC analysis</td>
<td>Internet pages of MoE and CENIA</td>
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<tr>
<td>QA/QC analysis</td>
<td>Training Reports and feedback forms</td>
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<table>
<thead>
<tr>
<th>Assumptions</th>
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<tbody>
<tr>
<td>on behalf of the Ministry of Environment</td>
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<tr>
<td>Stakeholders are motivated to cooperate</td>
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<tr>
<td>Strong will in the environmental sector to obtain objective and quality data</td>
</tr>
<tr>
<td>Co-operation with other Ministries and Institutions with Environmental responsibilities at central, regional and local level e.g. the Ministry of Agriculture in the field of water data.</td>
</tr>
<tr>
<td>All data generating organisations within the environment sector are willing to co-operate and provide data to the system. This will be ensured by the Ministry of Environment.</td>
</tr>
<tr>
<td>Data sources available and various stakeholders communicate in order to reach unified data available for all interested parties. This will be co-ordinated by MoE.</td>
</tr>
</tbody>
</table>
1. Review of current catalogue of existing data
2. Implementation of the process of QA/QC
3. Survey of metadata user needs – a comprehensive study of common user requirements
4. Review of methodology for processing and presentation of metadata
5. Information for relevant user groups
6. Completion of existing institutional analysis in order to ensure that a complete understanding of the current and proposed future institutional arrangements is available. The existing meta data information system will provide the basis for this work.
7. Detailed comparison of the existing arrangements and data availability with the information requirements which have been identified for all environmental directives including those relating to public access to information and to reporting so as to produce a “Gap Analysis”
8. Drafting, development, and completion, with the MoE Information Department and CENIA, of an integrated centralised model for information management, which will satisfy the requirements referred to above.
9. Drafting, development and completion of a strategy for the extraction of data from the model for the purposes of reporting in accordance with EU Directive requirements
10. Drafting, development and completion of a strategy for the extraction of data from the model for the purposes of stakeholder consultation in accordance with best practice within the EU
11. Design, organisation and implementation of training for staff from CENIA, MoE and other relevant institutions in the operation and management of the centralised data model
12. Drafting, development and completion of an integrated set of environmental data standards with unified and unique subject and object identification harmonized to Czech technical norms - Drafting,

**Twinning**
The Twinning will be a joint co-operative venture between the Ministry of Environment and its associated institutions and member state institution(s) with expertise in centralised environmental information management.

The project will require:
- Secondment of a long-term expert to the Ministry of Environment to act as a pre-accession adviser for entire duration of project (20 months). The PAA must be familiar with all aspects of the environmental data management and have practical experience in this field.
- Secondment of another PAA to the Ministry of Environment to manage the preparation of the centralised information management system and initial review of the current catalogue. This expert must have detailed experience in state administration, environmental sector, and environmental data management. He/she will stay in CR for the duration of approx. 12 months.
- Short term experts will be required to address the following items. Estimates of the numbers of days input are indicated:
  - Reporting Strategy – 30 man days
  - Specific inputs to the centralised information model: 70 man days
  - Environmental data standards: approx. 6 experts 20 man days each – water, air, nature protection, geology, wastes, reporting and data analysis, including all data covered by the IP
  - Information for Public Consultation and Stakeholder Involvement including assimilation of European best practice 25 man days
  - Training in new systems – 25 days
  - Methodology for processing and presentation of metadata – 1 expert approx. 10 days
  - Administrative processes and document description – 1 expert experienced in information indexing – 1 expert approx. 10 days
  - Preparation of metadata standard covering both environmental data and information for the management and search purposes - 1 expert approx. 6 days
  - QA/QC in the field of environmental data and information - 1 expert approx. 6 days
  - Additional input will be required from translators and interpreters.
- The budget should cover study trip of four Czech experts to the home country of the project partner to facilitate experience exchange and spread

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3 See Implementation Plans for individual Directives
development and completion of data conversion routines to this model to cover most important environmental data

13. Organising the practical delivery of data into the centralised data model and rectifying problems which may arise in the process of implementing the model in practice

<table>
<thead>
<tr>
<th>Preconditions</th>
</tr>
</thead>
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- Workshop on QA/QC techniques
- Trainings on integrated information management and operation and implementation of the centralised data model
## Annex 2

**Detailed Implementation Chart**

**Environmental Information and Management System**

<table>
<thead>
<tr>
<th>Year</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
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<tbody>
<tr>
<td><strong>Twinning Selection</strong></td>
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<tr>
<td><strong>Contracting</strong></td>
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<tr>
<td><strong>Project completion</strong></td>
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Cumulative Contracting and Disbursement Schedule

Cumulative Quarterly Contracting Schedule (MEUR)

<table>
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<tr>
<th>Project</th>
<th>4Q/03</th>
<th>1Q/04</th>
<th>2Q/04</th>
<th>3Q/04</th>
<th>4Q/04</th>
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<th>2Q/05</th>
<th>3Q/05</th>
<th>4Q/05</th>
<th>Total</th>
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</thead>
<tbody>
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</table>

Cumulative Quarterly Disbursement Schedule (MEUR)

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