1. Basic information
1.1 Désirée Number

Development of the Hungarian Air Quality Monitoring System

1.2 Title:
1.3 Sector
1.4 Location:

Institute for Environmental Management, Budapest (National Reference Laboratory) and air quality monitoring stations throughout Hungary

2. Objectives
2.1 Wider objective
The wider objective of the project is timely and effective application of the Acquis in the Air Quality sector concerning Air quality monitoring and implementation control.

2.2 Immediate objective

• Fully operational structures and capacities for environment monitoring and implementation control in the air sector in Hungary.

• Efficient data processing and communication system for the collection, processing, monitoring, and exchange of air quality data in line with EU standards /see details in annex 4/ and practices established and fully operational.

• An established and fully operational public information system.

2.3 Accession Partnership and NPPA priority:
The Accession Partnership refers to the need to ‘develop the air quality monitoring network and strengthen the authorised laboratories (responsible for implementation of legislation)’ in section 3.2 on Priorities and Intermediate Objectives. Developing the air quality-monitoring network is defined as a medium-term priority.

Chapter 6.1.2 of the National Programme for the Adoption of the Acquis of July 1999: ‘The legislation of the EC determines requirements which should be satisfied by measuring and monitoring networks, and in the system of regulation of air quality. In addition to this there is a strict system of requirements on the exchange of data and information’ and ‘It is necessary to prepare operating organisations for measuring tasks, supplying related data assessment and supply functions’.

3. Description
3.1 Background and justification
The co-ordination of the Institutions working in the field of air quality is the responsibility of the Ministry for Environment. The Ministry is also responsible for collecting and evaluating all relevant environmental indicators, which serve as a basis for the assessment of the country’s state of environment. Furthermore the Ministry is responsible for submitting national data to the international database according to EU requirements.

The purpose of the project is to develop a uniform Quality Assurance/Quality Control (QA/QC) system of air quality management and to establish an integrated Data Centre in the National Reference Laboratory /NRL/ (belonging the Ministry for Environment).
The project will result in the development of the QA/QC system and the data processing system in line with EU experience by way of a twinning arrangement.

The Data Centre will provide the needed national data for submission to the international database. Air quality data will available to be included in the Integrated Environmental Database maintained by the Ministry for Environment.

3.2 Linked activities

The establishment of the National Reference Laboratory for the quality control of emission measuring network was supported by the Phare projects HU9102 605-1/91 and HU9002 A-101B and -101C.

The projects focused mainly on the acquisition of monitoring instruments (stationary and mobile measuring stations), however, did not cover quality assurance and quality control aspects of the system.

The physical locations of the monitoring stations of Component ‘A’ of the project will be derived from the Master Plan for the Development of Air Monitoring Networks in Hungary(HU-980701) This sub-element is under preparation and will be completed in time for use in this project.

3.3 Results

- Twinning arrangement successfully carried out (QA/QC system installed in line with the relevant EU Decision and Directives (see Annex 4)),
- new and uniform data collection system is installed and fully operational,
- capacity of regular information dissemination is installed and fully operational,
- dissemination of information to the public and reporting will be more complete.

3.4 Activities

3.4.1 Contract 1 – HU/2000/IB/EN/01 Twinning – Air Quality Network

The system will be institutionally attached to the NRL and will be located in the Institute for Environmental Management (IEM). The basis for the development will be a study of similar foreign organisations and their QA/QC systems. To implement a QA/QC system in Hungary a twinning project will be carried out.

The scope of the twinning project and the tasks of the PAA will be as follows:

- Development of the new OA/OC system and a uniform data processing system with the adoption of International experience.
- Studying existing systems of similar foreign institutions promotes the fulfilment of the project objectives.

The twinning project will provide the professional framework for the successful implementation of the whole project. Specifically, the Adviser will assist the elaboration of an air quality accreditation system and contribute to the preparation of the Quality Assurance Manual for the NRL, the adoption of EU intercalibration systems and the national QA/QC system. It is necessary for the Hungarian staff to acquaint themselves with the practice of the twinning partner's country, which will involve training 10 Hungarian experts for two weeks. The assignment of the advisers at the Institute for Environmental Management will be for a duration of 12 months, starting as soon as possible. The overall duration of the project is 12 months.
Furthermore one short-term expert is required for the data processing activity (Ambient Air Quality Data Centre) for the duration of 3-5 months at the same institute.

All the necessary assistance and equipment will be provided by IEM. The twinning activities will help to establish the new system of QA/QC and data processing in Hungarian air quality network and to train the staff of IEM. Proposed twinning contact persons expert of JRC ERLAP for QA/QC activities and expert of EEA for the data supply system. Guaranteed results of the twinning project:

- quality assured measuring network functioning
- new air quality accreditation system set up
- new calibration methods brought in line with the international standards
- new national QA/QC system set up
- uniform data processing system set up
- well-trained staff in NRL

Air quality measuring system and data processing system will be in line with the EU requirements.

3.4.2 Contract 2 – Investments required for implementation of the Measurement System, Quality Assurance System and the Ambient Air Quality Data Centre - Supply

A. Air Quality Measurement System Development

The air quality measurement system will supply data for the countrywide preliminary assessment of air quality and for subsequent regular supervisions according to the requirements of Directive 96/62/EC. The system will include the following elements:

- Technical upgrading of existing monitoring stations for measuring newly regulated ambient air components: approx. 5 pcs of BTX monitors for benzene and 5 pcs of CO monitors for carbon monoxide. Further extending of the network with respect to ozone to control air quality in agglomerations and zones approx. 10 pcs of ozone monitors and other additional devices inter alia.

- Technical upgrading of laboratory for sampling analyses - gas chromatograph - mass spectrometer (GC-LRMS), microwave assisted extractor, multidimensional GC couple interface, solvent evaporation system, measuring instrument for absorbable, extractable, purgeable halogenated organic compounds (analyser for AOX-EOX-POX), ion chromatograph inter alia.

B. Quality Assurance System

The NRL will ensure the comparability of air quality monitoring data at the national and the EU level. More specifically, it will accomplish traceability with primary and secondary standards. It will also validate the instruments used for air quality measurements. This will involve an improvement of the instruments. Air quality data will be regularly checked, and the sources of erroneous measurements will be systematically investigated. The NRL will be available for sample collection and laboratory analysis of air pollutants.

To fulfil these tasks the following instruments, inter alia, are needed:

zero gas and nitrogen supply system, gas cylinder filling system, high precision balance, static and mobile calibration systems, ozone calibration photometer, automatic volumetric calibrators, permeation calibration system, titrator, data collection system, orifice flowmeter, dew point and temperature meter, reference measurement system, GC-MS, cross country car, sample collection system.
C. Ambient Air Quality Data Centre

The Centre will collect, process, change and prepare for the publishing of air quality information according to European Union standards. It will be established in the NRL at the Institute for Environmental Management. The task is part of the twinning arrangement. The short term twinning expert referred to in 3.4.1 is needed for the implementation of the new Data Centre. The mandatory dissemination of the information to the public will be performed through media, press, TV and Internet.

In order for the Data Centre to function efficiently the three Sub Data Centres must be provided with high quality computers and the adequate data transfer links between them.

4. Institutional framework

The Agency for Environmental Protection of the Ministry of Environment will provide overall co-ordination and technical management of the programme. Site management will be provided by

- the Regional Environmental Inspectorates and the National Public Health and Medical Officer’s Service in case of monitoring stations,
- the IEM in case of upgrading of laboratory for sampling analyses, and
- the IEM in case of the Data Centre and QA/QC system.

Project leader and contact person: Dr. Endre Kovács, deputy managing director of dept. Integrated Pollution Control

Ministry for Environment.
Telephone: +36-1-457-35-61; Fax: +36-1-201-30-56

Responsible officers: Mr András Pozsgai, deputy director, IEM,
Ms Irén Váraljai, head of NRL, IEM,
Mr György Tóth, head of department, IEM.

The steering committee of the project will comprise expert(s) on behalf of the National Public Health and Medical Officer’s Service (Ministry of Health), besides the above mentioned four officials.

The owner of the equipment to be procured will be the Institution for Environmental Management.
(Address. 1068 Budapest, Szófia utca 9.)

5. Detailed Budget /MEUR /

The input is 3.833 MEUR comprising 3 MEUR of Phare contribution which will be matched by a 0.833 MEUR co-funding contribution from the Hungarian Budget.

<table>
<thead>
<tr>
<th>Component</th>
<th>Phare support</th>
<th>National Co-financing**</th>
<th>TOTAL</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Investment</td>
<td>Institution Building</td>
<td>Total Phare (=I+IB)</td>
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01.08.22
<table>
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<tr>
<th>Contract 1 (Twinning)</th>
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<tr>
<td>Contract 2 * (Supply)</td>
<td>2.50</td>
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<td>TOTAL</td>
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<td>0.50</td>
<td>3.00</td>
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</table>

* In case of Contract No. 2., the sums comprise training arrangements necessary for the staff to properly operate the acquired instruments and software.

** The source of national co-financing is the government budget.

### 6. Implementation arrangements

#### 6.1 Implementing Agency

The contracting authority and financial management will be the responsibility of the CFCU, headed by Ms Judit Rozsa.

Address: József nádor tér 2-4. 1051 Budapest  
Telephone: (36-1) 327-2520  
Fax: (36-1) 327-5972  
e-mail: jrozsa.cfcu@sdi.hu

#### 6.2 Twinning

The beneficiary will be the Ministry for Environment and the Institute for Environmental Management, H-1068 Budapest, Szófia utca 9.

#### 6.3 Non-standard aspects

DIS manual will be strictly followed apart from those parts in the twinning manual that are different; twinning is expected, see budget Contract No. 1. / 0.5 MEUR/

#### 6.4 Contracts

One supply tender is expected, of an amount of 3.333 MEUR comprising 2.5 MEUR of Phare contribution.

One twinning arrangement is foreseen of an amount of 0.5 MEUR.

### 7. Implementation schedule

<table>
<thead>
<tr>
<th>Components</th>
<th>Start of tendering * Call for proposal **</th>
<th>Contracting × Start of project activity ××</th>
<th>Completion</th>
</tr>
</thead>
</table>
8. Equal opportunity

The equal participation of women and men in the training component will be assured. For the remaining parts of the project the principle of equal opportunity is not relevant.

9. Environment

The programme will have no adverse effect on environment. After the completion, people and authorities will have at their disposal better information about the quality of air. This will help preventing serious and dangerous air pollution situations.

10. Rates of return

Not applicable because of non profit oriented investment.

11. Investment criteria

11.1. Catalytic effect

The Phare contribution will help accelerating the effective implementation and enforcement of the environmental Acquis. It will help setting up the basis for the substantive compliance with the Acquis in the field of air quality.

11.2. Cofinancing

The Ministry for Environment will contribute approximately 25 percent of the programme costs.

11.3. Additionality

No other financiers will be displaced by Phare intervention.

11.4. Project Readiness and Size

All preparatory works have been completed and the ToR documents will be ready by the time when the Financing Memorandum will be signed.

The physical locations of the monitoring network of Component ‘A’ of the project will be derived from the Master Plan for the Development of Air Monitoring Networks in Hungary (HU-980701) This sub-element is under preparation and will be completed in time for use in this project.

11.5. Sustainability

Relevant government policies ensure sustainability. All participating institutions are in the position to operate the programme effectively in the long run. Funds for the long-term operation will be provided by the national budget.

11.6 Compliance with state aids provisions

The amount of national co-financing will be provided through the National Environmental Program.

11.7 Contribution to

Not applicable.
12. Conditionality and sequencing

Conditionality: The *Master Plan for the Development of Air Monitoring Networks in Hungary (HU-980701)* will have to be ready for the equipment of component ‘A’ to be installed.

Sequencing is outlined in the Implementation schedule.
### Logframe planning matrix for project:

**Development of the Hungarian Air Quality Monitoring System**

**Programme name and number:** HU-0003.01  
**Date of drafting:** 15.02.2000

<table>
<thead>
<tr>
<th>Contracting period expires:</th>
<th>Disbursement period expires:</th>
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<tr>
<td>09/2002</td>
<td>09/2003</td>
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**Project Number:** HU0004-01  
**Total Budget (Meuro):** 3.833  
**Phare contribution (Meuro):** 3.0

#### Wider Objective

<table>
<thead>
<tr>
<th>Indicators of Achievement*</th>
<th>How, When and By Whom Indicators Will Be Measured</th>
<th>Assumptions and Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timely and effective application of the Acquis in the Air Quality sector concerning Air Quality monitoring and implementation control.</td>
<td>Hungarian reporting on Air quality monitoring and implementation control meets all requirements of the environmental Acquis</td>
<td>Public information Government reports Regular Reports by the Commission</td>
</tr>
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</table>

#### Immediate Objectives

<table>
<thead>
<tr>
<th>Indicators of Achievement*</th>
<th>How, When and By Whom Indicators Will Be Measured</th>
<th>Assumptions and Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fully operational structures and capacities for Air Quality monitoring and implementation control in Hungary</td>
<td>Air quality reporting meets the relevant national and international requirements. Environmental Inspectorates have a clear overview of the air quality situation in Hungary. Air quality data exchange complies with the standards of EU Decision 97/101/EC.</td>
<td>Information to the public performed through media, press, TV and Internet. Performance reports of the Ministry for Environment. Annual reports on air quality to the international data base centres.</td>
</tr>
</tbody>
</table>

#### Outputs

<table>
<thead>
<tr>
<th>Indicators of Achievement*</th>
<th>How, When and By Whom Indicators Will Be Measured</th>
<th>Assumptions and Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Twinning arrangement successfully completed</td>
<td>All guaranteed results of the twinning arrangement reached. All data processing and communication equipment delivered on time, at the required quality level and as planned. Operational staff trained.</td>
<td>Master Plan information available when needed. Qualified officers for staff training available. Local co-finance available when needed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How, When and By Whom Indicators Will Be Measured</th>
<th>Assumptions and Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handing over notes. Progress reports by implementing agencies</td>
<td>Master Plan information available when needed. Qualified officers for staff training available. Local co-finance available when needed.</td>
</tr>
<tr>
<td>Inputs</td>
<td></td>
</tr>
<tr>
<td>------------------------------</td>
<td></td>
</tr>
<tr>
<td>3.0 MEUR from the Phare and 0.833 MEUR from national contribution</td>
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ANNEX 2  
Project Number: HU 0003-01  

Title: Development of the Hungarian Air Quality Monitoring System

<table>
<thead>
<tr>
<th>DETAILED IMPLEMENTATION TIME CHART</th>
<th>2000</th>
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<td>J</td>
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<tr>
<td>Component</td>
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<tr>
<td>Contract 1 --- Twinning</td>
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<tr>
<td>Contract 2 --- Supply</td>
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<thead>
<tr>
<th>Preparation</th>
<th>Tendering</th>
<th>Implementation</th>
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01.08.22
ANNEX 3

Project number: HU0004-01
Title: Development of the Hungarian Air Quality Monitoring System

<table>
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<tr>
<th>Date</th>
<th>30/09/2000</th>
<th>31/12/2000</th>
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<td>Disbursed</td>
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<td>0.25</td>
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</tbody>
</table>

ANNEX 4

NB: 1. All contracting must be done by 30.09.2002
    2. All disbursements must be done by 30.09.2003
Reference to Feasibility studies

All necessary preparatory work has been completed and the PHARE tender documents will be ready by the time of the signature of the Financing Memorandum.
List of relevant Laws and regulations

Project Number: HU 0003-01

Title: Development of the Hungarian Air Quality Monitoring System

**EU Directives**

- **92/72/EEC** on air pollution by ozone
- **96/62/EC** on ambient air quality assessment and management
- **1999/30/EC** relating to limit values for sulphur dioxide, oxides of nitrogen, particulate matter and lead in ambient air
- **COM 591/98** final proposal relating to limit values for benzene and carbon monoxide in ambient air
- **COM 125/99** proposal relating to the ozone in ambient air

**EU Decision**

- **97/101/EC** establishing a reciprocal exchange of information and data from networks and individual stations measuring ambient air pollution within the Member States

**Hungarian regulations**

- **5/1990. (XII.6.)** Ministerial Decree of the Ministry of Public Welfare on air polluting substances, ambient air quality criteria and the measurement of air polluting substances and it’s amendment
- Hungarian Standard MSZ 21854-1990 on ambient air quality criteria
- Ministerial Decree on air quality in connection with the Governmental Decree on air pollution abatement (draft to be issued in 2000)
Reference to relevant Government Strategic plans and studies

Project Number: HU 0003-01

Title: Development of the Hungarian Air Quality Monitoring System

Governmental Strategic plan: Concept of development on ambient air quality monitoring networks accepted by the Ministry for Environment and Regional Policy in 1995.

National Environmental Program 1997.