Standard Summary Project Fiche

1. Basic Information

Désirée Number: **2002/000-590-09-01**
Title: **Environment monitoring**
Sector: Environment
Location: Latvia

Latvian Environmental Agency
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Latvian Hydrometeorological Agency
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2. Objectives

2.1 Overall Objective(s):

To improve the quality of environment

2.2 Project purpose:

To strengthen institutions responsible for environmental monitoring in the areas of drinking water, wastewater, surface water, waste, and air quality.

2.3 Accession Partnership and NPAA priority

The Accession Partnership :

- Complete transposition of the acquis, with special emphasis on access to environmental information, waste management and chemicals.
- Continue implementing of the acquis, in particular waste management, water quality (in particular urban waste water, microbiological parameters of drinking water, establishment of pollution reduction programmes for List II substances, designation of vulnerable zones under the nitrates directive) and chemicals.
- Continue strengthening the administrative capacity at all levels, in particular regional and local levels. Special emphasis should be put on nature protection.

NPAA:

Chapter 6: Ability to assume the obligations of membership

6. Quality of Life and Environment
Technical Fiche: LA – 045

Priority Action: Development of the waste management system
Technical Fiche: LA-049

Priority Action: Ensuring the quality of drinking, surface and bathing water, improvement of wastewater treatment in order to meet the relevant EU standards.

Implementation of the environmental monitoring system that will be compatible with requirements of EU Directives

3. Description

3.1 Background and justification:

Latvia has made a commitment to ensure that its environmental monitoring system is fully in accordance with EU requirements by the date of the accession to EU. The main deficiencies and gaps between the monitoring system in Latvia and EU requirements are indicated in the *Position Paper of the Republic of Latvia Chapter 22: "Environment"*. In order to fulfil the obligations, the assistance from EU Phare programme is requested.

There are three studies ongoing or completed related to the gap assessment and evaluation of the monitoring capacity of Latvia:

1. *Administrative Capacity for Implementation and Enforcement of EU Environmental Policies in the 13 Candidate Countries* Sub-study Assignment request No. 6 DGENV Contract: Environmental Policy in the Candidate Countries and their Preparations for Accession.
2. EU Phare project No. OSS No:LT-0081.00-16.01 Regional Environmental Accession Project (REAP) *Compliance with EU Requirements on Environmental Monitoring and reporting.*
3. DANCEE project *Capacity Building Inspection and Control and Laboratory facilities,* financed by Danish Ministry of Environment and Energy.

In the draft final report of the project No 2 the following recommendations (actions) are provided regarding <u>waste</u>:

- Although some records of waste disposal facilities are kept by the Regional Environmental Board (REB) a need for new legislation needs to be addressed. It is recommended that the Latvian Environmental Agency (LEA) provide guidance to the REBs regarding reporting and monitoring. REBs should collect any required information and the LEA should collate this information to enable reporting at a National level.
- Responsibilities for tracking waste from production to final disposal need to be allocated and a clear programme implemented so that waste volumes can be reported and adequate information is provided for waste management planning. This will have an enormous impact on a range of waste management issues.
- Waste to landfill needs to be tracked and matched to records of volumes of waste disposed to landfill in order to check waste quantities.
- Information on disposal of hazardous waste is collated in a format not easily interrogated or manipulated to provide necessary detail to meet the reporting requirements.
- Where sites have a permit to treat, manage or dispose of waste they should produce information that is crucial to assist in waste management planning. This information should be provided to the Ministry for Environmental Protection and Regional Development (MEPRD).

As regards <u>wastewater</u> and <u>surface water</u>, the above-mentioned report provides the following recommendations:

- The REB should keep easily accessible records of the number of permits granted.
- Information on discharges to sewer should be clearly collated and reported.
- The REB should record the number of permits per industry sector and co-ordinate this information with other REB's and the LEA.
- The use of 'water quality objectives' as a means of setting discharge consent limits will require rigorous monitoring of the waters into which discharge is released from industry. The REB, LEA, Latvian Hydrometeorological Agency (LHMA) and MERPD need to work together closely to ensure the objectives are met.
- The REB should collate and report information on the status of discharge consents.
- Information on the validity of individual authorisations should be recorded and reported.
- Latvia should align information on List I substances with EU requirements.

- Discharges of List I substances should be calculated in kg/year and the quantity released by each facility in relation to production capacity should be recorded.
- The information held regarding the quality of surface water, sediment and biota should be clear and consistent across the regions.
- Latvia should ensure a representative number of monitoring stations assess the quality of the different media.
- Latvia should ensure that the same measuring techniques are used across Latvia to ensure each regions figures can be compared on the same level and the information can be collated at country level.
- Information regarding water quality, wastewater discharges, groundwater, drinking water and bathing water needs to be collated at country level.
- Although some information is available more detail is required at a local and facility level.

  – Modifications to, or additional, software may be required to enable interrogation and re-aggregation of data to provide the information required, (eg total discharge of specified parameters to specific classified water bodies.

  – Some information is available but not collated in a format to complete the questionnaire (ie not by p.e. or water body classifications).

  – Additional software may be required to incorporate a proportion of the water body quality monitoring data and to aggregate data sets from different databases.

The strengths, weaknesses and problems in **compliance monitoring** are / are being assessed in the ongoing and completed projects. Taking into account the available documentation of mentioned projects, the following tasks have to be completed:

– Improvement of water pollution monitoring;

– Waste monitoring capacity is insufficient and must be increased.

To a large extend these problems will be addressed within the DANCEE project, including detailed laboratory equipment inventory, supply of equipment, development of manual and training for inspectors. Remaining not covered issues within the compliance monitoring are:

- Development of data processing and dissemination system on permitting and statistical data processing for wastewater and waste monitoring,
- Establishment of methodologies, environmental standards and methods for waste monitoring in regions,
- Development of guidelines for hazardous waste handling – on transposing of volumetric units of generated and collected waste into the weight units,
- Development of educational and professional training system for staff involved in waste management;
- Strengthening of capacity in Regional Environmental Boards for monitoring and control of polluting emissions including List I and List II substances in wastewater;
- Improvement of analytical equipment in REBs for wastewater compliance monitoring
- Improvement of drinking water monitoring equipment and strengthening the administrative capacity of responsible institutions for fulfilment of EU legal requirements.

EC directive 98/83/EC of 3 November 1998 on **drinking water quality monitoring**:

Paragraph (23) defines that each Member State should establish monitoring programmes to check that water intended for human consumption meets the requirements of this Directive and such monitoring programmes should be appropriate to local needs and should meet the minimum monitoring requirements laid down in this Directive.

The State Agency "Public Health Agency" is obligated to perform drinking water quality monitoring in compliance with the requirements mentioned in the 2nd enclosure of this EU Directive.

The PHA needs expert's assistance in order to ensure that consumers receive appropriate and precise information on the drinking water quality (as stated in the 1st paragraph of the 13th article). Assistance is needed to evaluate if the existent drinking water quality monitoring programme corresponds to requirements of EC directive and to provide any needed recommendations for improving it. Additional investments in laboratory equipments are necessary to ensuring complete fulfilment of drinking water quality monitoring programme.

PHA needs assistance for the improvement of the information technology in order to be able to fulfil the requirement of EU Directive - to ensure the inhabitants with adequate and precise information on the drinking water quality as well as to ensure the fastest information analysis, rendering of the information to the consumers and to fulfil the 2nd paragraph of the 13th article about report's publication and its rendering to the society and Commission. Actually PHA receives the data from the regional offices in the paper format, and then data are collected in the existent database. There is no special programme for the automatic data processing and it is impossible to ensure the qualitative and operative data processing as well as to ensure operative availability of the information for the public. Within the project it is anticipated to implement a unified data network and automatic data processing as well as to ensure availability of the data by means of Internet.

The Latvian Hydrometeorological Agency is responsible for the execution of **air quality monitoring** and reporting. The main requirements of air quality monitoring are stated in the following legal acts:

- EU Directives 99/30/EC (Article 8); 2000/69/EC (Article 7); 96/62/EC (Articles 3, 5; Annex 1), 92/72/EEC (Articles 3, 6), 99/30/EC (Article 7; Annexes 6, 7, 8), 2000/69/EC (Article 5; Annexes 4, 5, 6, 7), 97/101/EC (Article 2,3; Annexes 1, 2).

The current insurance of EU legislation requirements is partial – continuous air quality measurement stations are placed in more industrialized towns of the country, serving as urban industrial, traffic or urban background stations. Difficulties occur in assessment of air quality across the country and by establishment of certain zones regarding air quality, what cannot be done without proper functioning of rural background (regional) stations. According to Council Decision 97/101/EC a number of additional parameters, for example, wet nitrogen and sulphur deposition must be covered.

For the moment, two regional background stations are established in the country. Additional automatic measurement devices (for example, ozone meter, supportive automatic meteorological stations, etc.) and sampling devices (precipitation sampler type "wet-only", etc.) are needed in order to strengthen measurements and data transmission in these stations.

Reliable and accurate information on air quality in compliance with EU legislation would be ensured. The implementation of the project will allow assessing regional background concentrations.

The air sampling equipment that is being used at the background monitoring stations is obsolete, of former USSR manufacture.

The air sampling equipment is placed in old, very small pavilions with inadequate power supply that do not meet the sampling quality requirements. There are frequent failures in the operation of the air compressors, non-performance of the observations, and hence, non-compliance with the data completeness requirement of the Council Directive 92/72/EC.

Such a situation makes the operation of the automated for measurements of CO, PM_{10}, mercury, and priority indices of environmental quality of the environmental quality (Council Decision 97/101/EC) impossible.

Precipitation sampling at the precipitation quality stations is being carried out with BULK-type collectors (except of those available at the station in Rucava) makes sample collection ineffective. This, together with contamination of samples, affects reliability of the analysis results.

Background measurements of the tropospheric ozone, one of the environmental indices (Council Directive 92/72/EC), is conducted only at the station in Rucava. The ozone analyser, produced in 1986, is not in full operation because it is worn out.

Taking into account these conclusions, the scope of the project proposal has been defined as follows:

Component 1

Strengthening of administrative and institutional capacity at central and mainly at regional level for drinking water monitoring, wastewater monitoring; waste compliance monitoring.

Component 2

Strengthening of technical monitoring capacity, including waste monitoring, wastewater monitoring, drinking water monitoring, surface water monitoring and air quality monitoring.

In the framework of pollution reduction programmes and during project preparation consultations were carried out with representatives of some informal environmental protection organizations and NGOs ("*Zala Briviba", "Vides aizsardzibas klubs", "Delna*"). The NGOs were consulted in the matter of the availability and quality of the environmental information and monitoring results. The favourable opinion of the NGOs regarding the project approach was received since it is in accordance with the requirements of the availability and quality of the information.

Sustainability of the investment in the laboratory equipment will be assured as supplied devices will improve testing quality and for prolonged time period no additional investments will be needed in upgrading it.

3.2 Linked activities:

- Two related investment projects with financial assistance from the EU Phare programme were implemented: - *"The Supply of Equipment to the Environmental Sector for the Ministry of Environmental Protection & Regional Development, Latvia"* (Phare 1996) and *"Institutional Strengthening of Latvian Environmental Administration for Implementation and Enforcement of EU Environmental Legislation"* (LE9808.01.02).

By both projects significant assistance was provided for the development of air, inland water and marine monitoring systems by provision of modern laboratory equipment.

The main emphasis of these projects was on strengthening of technical capacity of central and regional environmental laboratories. With financial support of these projects was possible to obtain analytical laboratory equipment as well as office and printing equipment of the involved institutions so the basic functions can be efficiently carried out.

- *Latvian-Danish project "Assistance to Latvia on implementation of the EU Ambient Air Quality Directive"* is focused on the implementing the EU framework requirements on ambient air quality.

- *REAP Project No. AE.00.14.01/WA OSS No. LT-0081.00-14.01 Multi Year Waste Management Plan for Latvia (Draft)* provides an analysis of existing Latvian strategies and programmes in the waste management sector, new strategies including reviewing current management practices and developing options for future management in line with EU directives and preparation of the new waste management plan for the years 2003 – 2015.

Other recent and most relevant related projects are the following projects, which are already mentioned:

- *Administrative Capacity for Implementation and Enforcement of EU Environmental Policies in the 13 Candidate Countries* Sub-study Assignment request No. 6 DGENV Contract: Environmental Policy in the Candidate Countries and their Preparations for Accession.

The project was finalised in September 2001 and provides a rather general study covering all EU candidate countries and indicating strengths and weaknesses in administrative structures and processes for the implementation and enforcement of EU environmental Directives. The study provides recommendations as to how the weaknesses can be addressed.

- EU Phare project No. OSS No:LT-0081.00-16.01 Regional Environmental Accession Project (REAP) *Compliance with EU Requirements on Environmental Monitoring and reporting*

The project is planned to be finalised in first half of 2002 and is focused on identification of the EU requirements regarding monitoring and reporting on air, water, waste and industrial emissions as well as on identification of the existing monitoring and reporting methods and systems in Latvia, as well as on the gaps identification in data collection and collation in alignment with Directive 91/962/EC. Draft final report was presented in September 2001, but due to insufficient quality it is being redrafted.

- DANCEE project *Capacity Building Inspection and Control and Laboratory facilities*, financed by Danish Ministry of Environment and Energy.

Project is the most detailed one in the terms of a needs assessment and the main planned outcomes of it are the following: inspection manual developed; self-monitoring tested in 5 pilot enterprises; Inspection Database developed; training programme developed, institutionalised and tested; inventory of laboratories conducted; Reference Laboratory function consolidated; practices for sampling of wastewater from enterprises upgraded; costs for EU compliance of environmental inspection estimated; management reports developed. The project was launched in August 2001, currently it is at the inception phase, and the finalisation is planned at the beginning of March 2003 by then it is expected that this (Phare 2002) project could start.

A more detailed description of related activities is given in annex No 6.

3.3 Results:

The following results are anticipated:

- **Waste water monitoring:**

Information system for wastewater data processing and dissemination developed and operational.

- **Waste monitoring:**

Effective and efficient information flow between monitoring, permitting and enforcement institutions ensured providing REBs, municipalities, operators and others stakeholders with necessary information on waste management.

- **Drinking water monitoring:**

The testing of all indicators of drinking water according to the methods listed in the Directives ensured.

Data on drinking water gathered and processed according to the requirements of the Directive 98/83/EC.

- **Surface water monitoring:**

Surface water monitoring data transmission and processing system developed and established.

Regional and national laboratories working efficiently and reporting according to EU reporting requirements.

- **Air quality monitoring:**

Ensured reliable and accurate information on air quality in compliance with EU legislation. Measurements and data transmission in two regional background stations ensured.

3.4 Activities

Component 1

Strengthening of administrative and institutional capacity at central and mainly at regional level for drinking water, wastewater and waste compliance monitoring.

- **Waste water monitoring:**

- To develop and install data processing and dissemination system, to organise a training session for the work with data processing and dissemination system;
- To develop guidelines for monitoring and control of polluting emissions including List I and List II substances in wastewater;
- To organise training session on monitoring and control of polluting emissions including List I and List II substances in wastewater.

- **Waste monitoring:**

- To develop the guidelines on the hazardous waste handling (transposing of volumetric units of generated and collected waste into the weight units);
- To develop and install data processing and dissemination system, to organise a training session for the work with data processing and dissemination system;
- To organise four seminars and two study visits on the handling of hazardous and solid waste.

- **Drinking water monitoring:**

- To develop the recommendations for adequate drinking water information system for public, experts and government including recommendations for adequate monitoring data processing and analysis software;
- To develop the recommendations for improvement of existent drinking water monitoring programme according EU Directive and local needs;\
- To develop and install data processing and dissemination system, to organise a training session for the work with data processing and dissemination system;
    - To organise two seminars on the following topics:
    - Improvement of drinking water monitoring programme;
    - Drinking water monitoring data evaluation and information dissemination – training seminar for the staff of laboratories.

- **Surface water monitoring:**

- To develop and install data processing and dissemination system, to organise a training session for the work with data processing and dissemination system.

- **Air monitoring:**

- To develop and install data processing and dissemination system, to organise a training session for the work with data processing and dissemination system.

Means:

Input foreseen is classical type of technical assistance; therefore service contract is proposed according to the Practical Guide to Phare, ISPA and SAPARD contract procedures. Indicative:

- **wastewater monitoring:**

1 long-term international expert for 10 m/m – for development of guidelines and training on wastewater monitoring monitoring;

1 short-term local IT expert (4 m/m) for development and upgrading of existing data processing and dissemination system and organisation of a training session for the work with data processing and dissemination system.

- **waste monitoring:**

1 long-term international expert for 10 m/m - for development of guidelines for hazardous waste handling and organisation of 4 seminars;

1 short-term local IT expert (4 m/m) for development and upgrading of existing data processing and dissemination system and organisation of a training session for the work with data processing and dissemination system.

1 short term local expert (3m/m):

- Assistance in the preparation of the guidelines for hazardous waste handling (transposing of volumetric units of generated and collected waste into the weight units) and for preparation of guidelines for wastewater monitoring,
- Organisation of 2 study visits to EU countries (one for hazardous waste specialists at local, regional and national level, one for solid waste specialists at local, regional and national level).

- **drinking water monitoring:**

1 short-term local IT expert (4 m/m) for development and upgrading of existing data processing and dissemination system and organisation of a training session for the work with data processing and dissemination system.

1 short term local expert (3mm):

- Development of recommendations for adequate information system for public, experts and government including recommendations for adequate monitoring data processing and analysis software;
- Development of recommendations for improvement of the existing drinking water monitoring programme according to the EU Directives and local needs;
- Organization of two seminars.

- **surface water monitoring:**

1 short-term local IT expert (4 m/m) for development and upgrading of existing data processing and dissemination system and organisation of a training session for the work with data processing and dissemination system.

- **air monitoring:**

1 short-term local IT expert (4 m/m) for development and upgrading of existing data processing and dissemination system and organisation of a training session for the work with data processing and dissemination system.

Component 2

Strengthening of technical monitoring capacity, including monitoring of waste, waste water, drinking water, and air quality.

Activities:

Supply of the equipment for central and regional laboratories of LEA, REBs, PHA, field measurement equipment for LHMA and IT equipment for operation of created databases. (Indicative description given in annex 4)

- Analytical equipment for wastewater compliance monitoring;
- Laboratory equipment for drinking water monitoring;

- Drinking water, surface water and air monitoring processing software, data servers and workstations;
- Equipment for collection of precipitation samples;
- Equipment for collection, storage and preparation of air samples for analyses.

Means:

All activities will be carried out in accordance with the Practical Guide to Phare, ISPA and Sapard contract procedures. Two supply contracts are envisaged. The Contractors will be selected in open international tendering procedure within EU and Phare countries.

3.5 Lessons learned:

No direct recommendations that could be referred to this project is given in previous evolution and monitoring reports. Taking into account previous experience, to avoid the difficulties faced in other projects – the maintenance costs of the procured equipment will be envisaged in each institution's budget in advance.

4. Institutional Framework

There are two types of monitoring - general monitoring of the ambient environment to observe changes (and compliance with EU environmental quality standards) and compliance monitoring, eg assessing whether pollutant emissions are within permit conditions. Ministry of Environment Protection and Regional Development (MEPRD) has an overall authority for environmental monitoring and reporting and Latvian Environmental Agency (LEA) has a responsibility for the co-ordinating and reporting of monitoring activities.

General monitoring

Three ministries are involved in the monitoring of the ambient environment – Ministry of Environment Protection and Regional Development, Ministry of Welfare and Ministry of Agriculture (forest monitoring) - and institutions subordinated to them. In realisation of this project will be involved two of them - MEPRD and Ministry of Welfare and institutions subordinated to them.

Ministry of Welfare has overall responsibility for the Drinking Water and Bathing Water Directives. The institutions subordinated to Ministry of Welfare - the Public Health Agency and its regional offices carry out monitoring of **drinking water** according to the elaborated Drinking water monitoring programme.

The main institutions subordinated to MEPRD, which deal with general monitoring of the ambient environment, are Latvian Environmental Agency (LEA), Latvian Hydrometeorological Agency (LHMA) and State Geological Survey.

LEA has a responsibility for the co-ordinating of monitoring and reporting activities and deals with **surface water quality monitoring**. LHMA is responsible for **air quality monitoring.**

The responsible institutions collect monitoring data in the databases, assess and report them to national authorities (MEPRD, State Statistic Board etc.) and to the international institutions (EUROSTAT, EIONET, secretariats of international conventions). The general monitoring data are summarized and evaluated at national level in the annual State of the Environment Reports published by LEA.

Compliance monitoring

The main institutions involved in the compliance monitoring (assessing whether pollutant emissions are within permit conditions) are 8 Regional Environmental boards (REBs), the Environment State Inspectorate (ESI) and LEA. These institutions are subordinated to the MEPRD.

REBs issue environmental permits, *inter alia*, water use permits including effluent requirements. They collect emission and upstream-downstream monitoring data from operators carrying out monitoring according with requirements stated in water use permit and input emission monitoring

data into statistical database "2-Water". LEA compiles this information at national level. Each year the LEA publishes annual statistical reports *Water – 2* and *Latvian State of the Environment Report*. They provide information on the amounts of the wastewater discharged, its composition and treatment applied.

REBs are responsible for waste monitoring as well. The institutional framework of waste data collection involves: waste producer (filling of reporting forms) →Regional Environmental Boards (primary verification of data and approval) → State Environmental inspectorate (data verification and approval) → Latvian Environment agency (data processing) →Ministry of Environmental Protection and Regional Development; Central Statistical bureau.

The Environmental State Inspectorate controls and supervises the implementation of legislation framework in the field of environmental protection and natural resources use in the territory of Latvia, continental shelf, economic zones of the Baltic Sea and the Riga Gulf, territorial waters and inland waters. It also supervises and guides the activities of Regional Environmental Boards, Marine Environmental Board and environmental inspectors at state reserves and other particularly protected nature areas.

Beneficiaries:

Latvian Environmental Agency (LEA) is an institution under supervision of the Ministry of Environmental Protection and Regional Development (MEPRD). The main objective of LEA is to implement governmental policy in the area of environmental data and information compilation, processing and dissemination. LEA has a responsibility for the co-ordinating of monitoring and reporting activities and carries out surface water monitoring. LEA is the National Focal Point of the European Environment Agency (EEA).

LEA will be the responsible institution for technical implementation of the project. LEA also will maintain the established databases.

LEA will be involved in the project through:

- Development of database on statistical data and permits for waste management (together with REBs),
- Data processing software based on web technologies for waste and wastewater data (together with REBs),
    - Preparation of the guidelines for hazardous waste handling on transposing of volumetric units of generated and collected waste into the weight units (together with REBs),
- Development of educational and professional training system for staff involved in waste management (together with REBs and municipalities),
- Modernization of surface water monitoring data processing equipment
- Modernization of central laboratory equipment for sampling, field measurements, storage, transportation, preparation and testing of surface water samples;

Regional Environmental Boards (REBs) are the institutions subordinated to the MEPRD.

There are 8 Regional Environmental Boards - Daugavpils (Daugavpils, Kraslava, Preili and Jekabpils districts), Jelgava (Jelgava, Bauska and Dobele districts), Metropolitan Riga (Riga and Ogre districts), Liepaja (Liepaja, Kuldiga and Saldus districts), Madona (Madona, Gulbene, Aluksne and Aizkraukle districts), Rezekne (Rezekne, Balvi and Ludza districts), Valmiera (Valmiera, Cesis, Limbazi and Valka districts) and Ventspils (Ventspils, Talsi and Tukums districts) Regional Environmental Board.

The REBs carry out the main functions in enforcement of environmental legislation. The most important functions of REBs are expertise (permitting) and inspection. In addition some of them participate in monitoring tasks on their area on the basis of annual contracts with LEA. They compile the monitoring data and forward it to the LEA. Each REB has a laboratory, which serves the inspection and monitoring functions.

REBs will be involved in the project through:

- Capacity development in REBs for monitoring and control of polluting emissions including List I and List II substances in wastewater,
- Development of database on statistical data and permits for waste management (together with LEA),
- Data processing software based on web technologies for waste and wastewater data (together with LEA),
- Establishment of methodologies, environmental standards and methods for waste monitoring in regions and preparation of the guidelines for hazardous waste handling on transposing of volumetric units of generated and collected waste into the weight units (together with LEA),
- Development of educational and professional training system for staff involved in waste management (together with LEA and municipalities),
- Modernization of analytical equipment for compliance monitoring,
- Modernization of 3 regional laboratory equipment for sampling, field measurements, storage, transportation, preparation and testing of surface water samples;

There is a possibility that in the future the laboratories currently located in eight REBs will be reorganized and their tasks will be performed by three regional laboratories of the LEA. These changes will not affect the workload and needs of laboratories, since the equipment is required for performance of the certain tasks and does not have specific location requirements.

Latvian Hydrometeorological Agency (LHMA) is an institution subordinated to the MEPRD and it is responsible for execution of air quality monitoring and reporting according to requirements stated in Directive On ambient air quality assessment and management, 96/62/EC, Directive on air pollution by ozone: Information and data exchange – formats, 92/72/EEC, Directive relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air, 99/30/EC, Directive relating to limit values for benzene and carbon oxide in ambient air, 2000/69/EC.

LHMA will receive equipment for air and precipitation sampling / field measurements, sample transportation as well as related IT means for processing of air quality information.

Public Health Agency (PHA) is an institution subordinated to the Ministry of Welfare. PHA and its ten regional offices are responsible for monitoring of drinking water quality. In a case of contamination or pollution PHA shall inform society and identify possible sources of pollution. The PHA laboratories accredited by the National Accreditation office perform physical-chemical and microbiological analysis and investigation of water. **PHA** prepares common annual drinking water quality review for Latvia showing the situation in each region, preparing comparison of water harmlessness parameters with previous years, analysis of situation with conclusion and recommendations for further actions.

Within this project the PHA and its regional offices will be beneficiary in all activities related to the drinking water monitoring.

PHA will be responsible for:

- Development of recommendations for drinking water monitoring programme improvement;
- Organization of seminars on drinking water quality monitoring methods;
- Emplacement and maintenance of equipment for water quality monitoring.

All above-mentioned institutions indicated as beneficiaries will be involved in the implementation of the project. The LEA, LHMA, PHA and REBs will benefit from the supply of the equipment as well as the administrative and institutional capacity of the REBs and regional offices of PHA will be strengthened. Municipalities will benefit from the training sessions and study visits. All equipment purchased in the framework of the project will become a property of the respective beneficiary.

For implementation of this project there will be established a **Steering Committee** including representatives from LEA, LHMA, PHA, MoW, MEPRD and the MoA. The Steering Committee will meet at least once a month and will be responsible for determining the general directions of the project; identify the benefits to be achieved from the development of strategic and operational analysis system; ensure that project is commensurate with the aims and objectives of the Latvian

Government and the requirements of EU; approve additions and variations to the project; monitor the process against plans, approve actions to be taken to correct any major deviations from plans; monitor expenditure against budgets.

Ministry of Environmental Protection and Regional Development, Ministry of Welfare and Ministry of Agriculture will have a supervisory role and the representatives of the MEPRD, MoW and MoA will be members of the Steering Committee.

5. **Detailed Budget** (*in EURO)*

	Phare	**Support**				
	Investment Support	Institution Building	**Total Phare (=I+IB)**	**National Cofinancing**	**IFI**	**TOTAL**
Contract 1 Service		517 000	517 000	58 000		575 000
Contract 2 IT Supplies	407 000		407 000	136 000		543 000
Contract 3 Supplies	989 000		989 000	331 000		1 320 000
Total	1 396 000	517 000	1 913 000	525 000		**2 438 000**

6. Implementation Arrangements

6.1 Implementing Agency

The Implementing Agency for this project will be the Central Financing and Contracting Unit (CFCU) Central Financing and Contracting unit (CFCU), PAO - Ms Valentina Andrejeva, State Secretary, Ministry of Finance; Smilsu 1, Riga Latvia, LV-1050 (phone +371 7226672, fax +371 7095503).

SPO – Mr Zigfrids Bruvers, State Under Secretary, Ministry of Environmental Protection and Regional Development, Peldu 25, Riga Latvia, LV-1050 (phone +371 7026401, fax +371 782106).

The overall technical management, reporting and monitoring of project activities will be the responsibility of Latvian Environmental Agency – Ms. Ilze Kirstuka, Director, Straumes iela 2, Jurmala, Latvia LV 2015 (phone +371 7811 492; fax: +371 7811 494).

6.2 Twinning

N/a

6.3 Non standard aspects

During the project implementation DIS Manual will be strictly followed and contracts will be signed according to the procedures provided in Practical Guide for Phare, ISPA and SAPARD Contracting Procedures.

Ratio: if during project implementation the project cost for some reasons will decrease, the Phare financing will also decrease proportionally.

6.4 Contracts

Contract Nr. 1 Technical assistance for the institutional and administrative strengthening of the institutions responsible for the monitoring at national, regional and local level. Total value 575 000 EUR.

Contract No 2 Supply of the data processing software and IT technology. Total value 543 000 EUR

Contract No 3 Supply of the monitoring equipment. Total value 1 320 000 EUR.

7. Implementation Schedule

	Start of tendering	Start of project activity	Completion
Contract 1	I Quarter of 2003.	III Quarter of 2003.	III Quarter of 2004
Contract 2	II Quarter of 2003	IV Quarter of 2003.	III Quarter of 2004
Contract 3	II Quarter of 2003.	IV Quarter of 2003.	I Quarter of 2005.

8. Equal Opportunity

The main criteria for the selection and evaluation of the staff will be relevant professional qualification and experience in similar assignments but their sex or age. There will be equal opportunities for both – men and women.

9. Environment

N/a

10. Rates of return

N/a

11. Investment criteria

11.1 Catalytic effect:

The implementation of this project will allow to improve environmental monitoring system of Latvia accordingly to EU requirements in order to fulfill obligations of EU Member State.

11.2 Cofinancing:

The Ministry of Environment Protection and Regional Development and the Ministry of Welfare have requested Co-financing from the state budget has been requested in the amount of 22% of the total project costs. The final decision on the co-financing has not been taken by the Government of Latvia yet.

11.3 Additionality:

Phare grant will not displace other financiers.

11.4 Project readiness and Size:

Project will be ready for tendering process after the signature of Financing Memorandum. The technical specifications and terms of reference will be prepared by local financing.

11.5 Sustainability:

The equipment provided to the responsible institutions will be maintained by their own means, the necessary costs will be envisaged in each institution's yearly budget.

11.6 Compliance with state aids provisions

The project is in accordance with the Europe Agreement.

12. Conditionality and sequencing

- Political commitment at the State level to continue support of development of environmental monitoring system;
- Co-financing allocated from national budget;
- Technical specifications and tender documentation ready for tendering in January 2003. Preparation of Tender documentation is to be financed by local means.

- Project Steering committee established by the start of the project, including the responsible officials from the MEPRD, MoW, LEA, LHMA, PHA and MoA.

ANNEXES TO PROJECT FICHE

1. Logical framework matrix in standard format
2. Detailed implementation chart
3. Contracting and disbursement schedule
4. Detailed description and justification of the supplies (indicative)
5. Detailed indicative description of the activities
6. Previous assistance/related activities
7. Institutional structure of the involved institutions

Phare log frame

LOGFRAME PLANNING MATRIX FOR Project: **Environment monitoring**	Programme name and number	
	Contracting period expires	Disbursement period expires
	Total budget: 2 438 000	Phare budget: 1 913 000

Overall objective	**Objectively verifiable indicators**	**Sources of Verification**	
To improve the quality of environment	• Properly functioning environmental monitoring system • Institutions involved both in policy making and policy evaluation process are provided with correct and timely information • Monitoring system corresponds to EU requirements	• State of the environment reports	
Project purpose	**Objectively verifiable indicators**	**Sources of Verification**	**Assumptions**
To strengthen institutions responsible for environmental monitoring in the areas of drinking water, wastewater, surface water, waste, and air quality.	• Databases of monitoring data established • Requirements of EEA regarding supply of information within EUROAIRNET and EUROWATERNET fulfilled • Improved competence of employees of environment monitoring institutions	• European Commission reports; • European Environmental Agency reports; • Regular reports of international environmental cooperative programs (EMEP, ICP-Waters, etc.); • Official Journal of Methodology	• Co-ordination with other projects or processes or institutions is taking place; • Environmental reporting obligations of Latvia to EU, EEA and other international organizations specified; • In-depth review teams accept National Communication;
Results	**Objectively verifiable indicators**	**Sources of Verification**	**Assumptions**
• **Waste water monitoring**: Information system for wastewater data processing and dissemination developed and operational. • **Waste monitoring**: Effective and efficient information flow between monitoring, permitting and enforcement institutions ensured providing REBs, municipalities, operators and others stakeholders with necessary information on waste management. • **Drinking water monitoring**: The testing of all indicators of drinking water according to the methods listed in the Directives ensured. Data on drinking water gathered and processed according to the requirements of the Directive 98/83/EC. • **Surface water monitoring**: Surface water monitoring data transmission and processing system developed and established.	• The quantity, frequency and number of environment parameters measured correspond to, at least, minimal numbers required by EU Directives and international observation networks/cooperative programs; • Reporting fulfils information requirements of EU Directives and international obligations of Latvia; • Laboratory intercomparison exercises show results acceptable to the corresponding procedures of international observation networks/cooperative programs	• European Commission reports; • European Environmental Agency reports; • Technical monitoring reports; • Statistical information and annual reports on state of environment; • Regular reports of international environmental cooperative programs (EMEP, ICP-Waters, etc.); • Certificate of the accreditation of the testing laboratory	• Supportive information from other organizations is delivered in due time and is reliable; • Adequate yearly allocation from state budget; • Development of associated rules and regulations; • Adequate staff involved in data interpretation is recruited and regularly trained;

Regional and national laboratories working efficiently and reporting according to EU reporting requirements. • **Air quality monitoring:** Ensured reliable and accurate information on air quality in compliance with EU legislation. Measurements and data transmission in two regional background stations ensured.			
Activities	Means		Assumptions
• **Waste water monitoring:** - To develop and install data processing and dissemination system, to organise a training session for the work with data processing and dissemination system; - To develop guidelines for monitoring and control of polluting emissions including List I and List II substances in wastewater; - To organise training session on monitoring and control of polluting emissions including List I and List II substances in wastewater; • **Waste monitoring:** - To develop the guidelines on the hazardous waste handling (transposing of volumetric units of generated and collected waste into the weight units); - To develop and install data processing and dissemination system, to organise a training session for the work with data processing and dissemination system; - To organise four seminars and two study visits on the handling of hazardous and solid waste. • **Drinking water monitoring:** - To develop the recommendations for adequate drinking water information system for public, experts and government including recommendations for adequate monitoring data processing and analysis software; - To develop the recommendations for improvement of existent drinking water monitoring programme according EU Directive and local needs; - To develop and install data processing and dissemination system, to organise a training session for the work with data processing and dissemination system; - To organise two seminars on the following topics: o Improvement of drinking water monitoring programme; o Drinking water monitoring data evaluation and information dissemination – training seminar for the staff of laboratories; • **Surface water monitoring:** - To develop and install data processing and dissemination system, to organise a training session for the work with data	- 5 short term local experts (IT) 4 mm each; - 1 long term international expert (non-hazardous and hazardous waste management specialist) – 10 man months; - 1 long term international expert (waste water monitoring) – 10 man months; - 2 short term local experts (3 mm each); - 12 training courses; 2 study visits; - two supplies contracts.		Adequate provision from the state budget; Timely and adequate training

processing and dissemination system. • **Air monitoring:** - To develop and install data processing and dissemination system, to organise a training session for the work with data processing and dissemination system; • **Supplies of** laboratory equipment, field monitoring equipment, software and data servers and workstations.			

Preconditions

- Political commitment at the State level to continue support of development of environmental monitoring system;
- Technical specifications and tender documentation ready for tendering in January 2003.
- Project Steering committee established by the start of the project, including the responsible officials from the MEPRD MoW, LEA, LHMA, PHA and MoA.

ANNEX No.2

DETAILED IMPLEMENTATION SCHEDULE OF ACTIVITIES

	2003				2004												2005
Institutional Building	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J
Long term international expert (10 m/m)																	
Preparation of the hazardous waste handling on transposing of volumetric units of generated and collected waste into the weight units guidelines. Organisation of 4 seminars	X	X	X	X	X	X	X	X	X	X	X	X					
Long term international expert (10 m/m)																	
Preparation of waste water monitoring guidelines, organisation of training session for monitoring and control of polluting emissions including List I and List II substances in wastewater	X	X	X	X	X	X	X	X	X	X	X	X					
Short term local expert (3 m/m)																	
Assistance in the preparation of the guidelines for hazardous waste handling and for wastewater			X			X			X								
Organisation of 2 study visits (one for hazardous waste specialists at local, regional and national level, one for solid waste specialists at local, regional and national level)			X				X										
Short term local expert (3m/m)																	
Development of recommendations for adequate information system for population, professionals and government including recommendations for adequate monitoring data processing and analysis software Development of recommendations for improvement of the existing drinking water monitoring programme according to the EU Directives and local needs Organisation of 2 seminars			X			X			X								
5 local short term IT experts (4m/m each)																	
Installation of databases, 5 training sessions									X	X	X	X					
Supplies																	
Provision and development of data systems					X	X	X	X	X	X	X	X					
Provision of necessary equipment					X	X	X	X	X	X	X	X	X	X	X	X	X

ANNEX No.3

CUMULATIVE CONTRACTING and DISBURSEMENT SCHEDULE (EUR million)

	30.06.2003	30.09.2003	31.12.2003	31.03.2004	30.06.2004	31.12.2004	31.03.2005.
Contract 1							
Contracted	0,575						
Disbursed	0,173	0,345			0,575		
Contract 2							
Contracted			0,543				
Disbursed			0,326	0,488	0,543		
Contract 3							
Contracted			1,32				
Disbursed			0,792		1,188		1,32

Detailed description and justification of supplies Annex 4

Activities / inputs	Requirement of the *acquis*	Previous Phare/other assistance	Current compliance	Compliance after implementation of the project	Beneficiary
Supplies:					
Data processing:					
Database on statistical data and permits on waste management	EU reporting requirements Landfill Directive 1999/31/EC, Articles 9.D; 15 Directive 91/692/EEC, Article 2	-	There is no software for centralised accounting and reporting on quantities of land filled waste	Reporting requirements fulfilled Full compliance with the respective requirements	LEA 8 REBs municipalities
Data processing software based on web technologies for waste and wastewater data	EU reporting requirements Landfill Directive 1999/31/EC, Articles 15, Directive 94/62/EC, Article 6 Directive 91/692/EEC, Article 2, Directive 91/271/EEC Preamble, Directive 76/464/EEC	-	There is no flexible and comprehensive information system on waste and wastewater data for the all stakeholders and general public	Access to data and information provided Full compliance with the respective requirements	LEA 8 REBs municipalities
Drinking water data processing and dissemination system 11 working stations	Art. 13 of Directive 98/83/EC Concerning the quality of water Intended for Human Consumption		PHA receives the data from the regional offices in the paper format, and then these data are input in the existent database. There is no special programme for the automatic data processing	Full compliance with the respective requirements	PHA and its regional laboratories
Surface water monitoring information processing software	EU reporting		There is no suitable	Software and hardware will	LEA and its

	requirements Exchange of Information Decision (77/795/EEC) amended by Decision 86/574/EEC, Decision 95/337/EC amending Decision 92/446/EEC, Directive 91/692/EEC		equipment and hardware for data transmission and data processing. There is lack of surface water monitoring data processing system. The two data bases – data base on emission monitoring data and on surface water quality data are not linked.[1] Additional software may be required to incorporate a proportion of the water body quality monitoring data and to aggregate data sets from different databases[2]	help to develop surface water monitoring data transmission and processing system as well as EU reporting requirements will be met. The two data bases – data base on emission monitoring data and on surface water quality data are linked. Full compliance with the respective requirements	regional laboratories (3)
Air quality monitoring information processing system 2 data servers 13 workstations	EU reporting requirements Directives 99/30/EC (Article 8) and 2000/69/EC (Article 7)		There is no suitable equipment and hardware for data transmission and data processing. There is a lack of full air monitoring data processing system, including regional GAW/EMEP (transboundary air pollution observation stations) and precipitation data.	Software and hardware will help to develop full air monitoring data transmission and processing system as well as EU reporting requirements will be met. Full compliance with the respective requirements	LHMA
Wastewater monitoring equipment (number of units)					
Gas Chromatographs (8)	UWWT 91/271/EEC, Di 76/464/EEC	Gas Chromatograph Latvian Environment centre (LEA)	There are no gas chromatog in REBs, the samples is trans long distancies	Supplements of equipmen strengthen technical capacity of R Full compliance with the respective requirements	8 REBs
Automatic Sampling Units (20)	UWWT 91/271/EEC, Directive 76/464/EEC	Automatic Sampling Unit for Latvian	There are mainly manual procedures in REBs. The quality of data is not stable.	Supplements of equipment to strengthen technical capacity of REBs	8 REBs

[1] Compliance with EU Requirements on Environmental Monitoring and Reporting. 2nd Draft Final Report

[2] Compliance with EU Requirements on Environmental Monitoring and Reporting. 2nd Draft Final Report

		Environment Data centre (LEA)		Full compliance with the respective requirements	
BOD_5 Detectors (Incubators) (12)	UWWT 91/271/EEC, Directive 76/464/EEC	BOD_5 Detectors for Latvian Environment Data centre (LEA), Valmiera, Venspils	There is not enough technical capacity for detection of BOD_5.	Supplements of equipment to strengthen technical capacity of REBs Full compliance with the respective requirements	8 REBs
Drinking water monitoring equipment (number of units) Ph-meter (6) Conductometer (6) Spectrophotometers (4) graphite's furnaces for atomabsorbtion spectrophotometers(3) atomabsobtion spectrophotometers with graphite's furnaces and system of hydrides(1) ion's chromatograph (2) fluid's chromatograph with fluorimetric and diod's matrix detector's and derivatization system (1)	Annex 3 of Directive 98/83/EC Concerning the quality of water Intended for Human Consumption			To enable regional laboratories making operative water quality assessment Full compliance with the respective requirements	PHA and its regional laboratories
Air quality monitoring equipment (number of units) Equipment for collection of precipitation samples precipitation collectors type "wet-only" (10) precipitation collectors for detection of mercury (10)	Directives 96/62/EC (Articles 3, 5; Annex 1), 92/72/EEC (Articles 3, 6), 99/30/EC (Article 7; Annexes 6, 7, 8), 2000/69/EC (Article 5; Annexes 4, 5, 6, 7).		There is no possibility to ensure sampling, pre-treatment and transportation of air and precipitation samples according with EU Directives	Equipment will allow using standardised sampling and pre-treatment methods, enabling to get high quality data and to cover all parameters required. Full compliance with the respective requirements	
Equipment for collection of air samples - filter holders, compressors, vacuum pumps, precise gas counters, samplers for atmospheric aerosols and persistent and volatile organic compounds(10)					LHMA
automatic meteorological stations (2) automatic troposphere ozone meters (2) Stabilizer of current (1)					
Equipment for storage and preparation of air samples for analyses (refrigerators, distillators, cold boxes, filtering equipment, autoclaves, centrifuges)					

ANNEX No.5

DETAILED INDICATIVE DESCRIPTION OF ACTIVITIES

Contract No.1

1. Technical assistance for the institutional and administrative strengthening of the institutions responsible for the monitoring at national, regional and local level

Activities:

- **Waste monitoring**:

Development of database on statistical data and permits for waste management;

Development of data processing software based on web technologies for waste data.

Preparation of the guidelines for hazardous waste handling on transposing of volumetric units of generated and collected waste into the weight units;

- **Waste water monitoring**:

Development of data processing software based on web technologies for waste water data;

Capacity development in Regional Environmental Boards for monitoring and control of polluting emissions including List I and List II substances in wastewater.

- **Drinking water monitoring**:

Development of recommendations and training of personnel in drinking water quality assessment.

Development and installation of the data processing and dissemination system.

- **Surface water monitoring:**

Development and installation of the data processing and dissemination system.

- **Air monitoring:**

Development and installation of the data processing and dissemination system.

Results-summary

- **Waste monitoring**:

- Effective and efficient information flow between monitoring, permitting and enforcement institutions would be ensured. REBs, municipalities, operators and others stakeholders would receive necessary information on waste management.

- **Waste water monitoring**:

- Information system for wastewater data processing and dissemination would be developed and operational.

- **Drinking water monitoring**:

- The capacity of the institutions responsible for drinking water monitoring would be increased.

- **Surface water monitoring**:

- Software and hardware would help developing surface water monitoring data transmission and processing system as well as EU reporting requirements would be met.

- **Air monitoring:**

- Software and hardware would help developing surface water monitoring data transmission and processing system as well as EU reporting requirements would be met.

1. Long term international expert (10 m/m):

Activities:

- Preparation of the hazardous waste handling guidelines on transposing of volumetric units of generated and collected waste into the weight units, organisation of 4 seminars.

Results-summary

- Guidelines of the hazardous waste handling prepared, seminars held.

2. Long term international expert (10 m/m)

Activities:

- Preparation of guidelines and organisation of training sessions for monitoring and control of polluting emissions including List I and List II substances in wastewater

Results-summary

- Guidelines developed and personnel of the REBs trained for monitoring and control of polluting emissions including List I and List II substances in wastewater

3. Short term local expert (3 m/m)

Activities:

- Assistance in preparation of the hazardous waste handling and wastewater guidelines
- Organisation of 2 study visits to EU countries to visit (one for hazardous waste specialists at local, regional and national level, one for solid waste specialists at local, regional and national level)

Results-summary

- Guidelines of the hazardous waste handling prepared
- 2 study visits provided

6. Short term local expert (3m/m)

Activities:

- Development of recommendations for adequate information system for population, professionals and government including recommendations for adequate monitoring data processing and analysis software
- Development of recommendations for improvement of the existing drinking water monitoring programme according to the EU Directives and local needs
- Organisation of 2 seminars

Results-summary

- Recommendations for adequate information system and for improvement of the drinking water monitoring programme elaborated
- 2 seminars held

7. 5 short term local IT experts (4 m/m each)

Activities:

- Installation of databases
- Training

Results-summary

Databases installed and tested, responsible officials trained.

ANNEX No.6

Previous assistance, related activities

Phare projects

Two investment projects received financial assistance from the EU Phare programme supporting LEA and Regional Environmental Boards: "The Supply of Equipment to the Environmental Sector for the Ministry of Environmental Protection & Regional Development, Latvia" (Phare 1996) and "Institutional Strengthening of Latvian Environmental Administration for Implementation and Enforcement of EU Environmental Legislation" (LE9808.01.02).

The main emphasis of these projects was on strengthening the technical capacity of central and regional environmental laboratories. With the financial support of these projects it was possible to obtain analytical laboratory equipment for development of air, inland water and marine monitoring systems as well as office and printing equipment of involved institutions so the basic functions can be efficiently carried out.

Programme Components:

- Atmospheric Emission Network Equipment (LE 9707)
- Environmental Monitoring Equipment (LE 9615)
- Environmental Laboratory Equipment (LE 9704)

Equipment delivered in this programme:

- Gas chromatograph with dynamic headspace (purge and trap concentrator)
- Equipment for temperature and flow measurements:
- Integrated velocity and temperature measuring and logging equipment with L- or S-type Pitot tube and temperature probe – (Daugavpils, Lielriga, Ventspils);
- Equipment for particulate measurements:
- 2 automatic systems for isokinetic sampling of particulates in ducts or stacks with data logging system
- Extractive gas monitoring system for measuring of CO, CO2, O2, NOx and SO2 concentrations and relevant calibration gases:
    - Gas sampling and conditioning equipment – (Daugavpils, Lielriga, Ventspils);
    - O2 analyser– (Daugavpils, Lielriga, Ventspils, LEA);
    - CO and CO_2 analyser – (Daugavpils, Lielriga, Ventspils, LEA);
    - NO/ NOx analyser– (Daugavpils, Lielriga, Ventspils, LEA);
    - SO_2 analyser– (Daugavpils, Lielriga, Ventspils, LEA);
    - Data logger - (Daugavpils, Lielriga, Ventspils, LEA);
    - Heated sample probe –(LEA);
    - Gas cooling/drying unit (LEA);
    - calibration gas cylinders;
    - Microscope for microbial count by fluorescent-stained technique,
    - identification of coliform bacteria by gram stain technique,
    - identification of filamentous bacteria e.g. iron and sulphur bacteria by phase-contract and fluorescence microscopy in environmental samples;
    - UV-Visible spectrophotometer;
    - Atomic absorption spectrometer with graphite furnace, flame, and hydride system

LE9808.01 – Institutional Strenghtening of Latvian Environmental Administration for Implementation and Enforcement of EU Environmental Legislation

National Programme 1998 Programme code and title: LE9808.01 – Environment, Sub-project code and title: LE9808.01.02 – Supply of Laboratory, Computer and Office Equipment

- Energy dispersive X-ray fluorescence spectrometer;

Equipment for Laboratory Department of Latvian Environmental Data Center – Quantity: 1

Purpose: energy dispersive X-ray fluorescence spectrometer, preferably with polarized radiation, is intended for fast non-destructive multi-element quantitave simultaneous analysis of soil, sediments, fly ash and water samples in the sub-ppm range.

- Analyzer for determination of adsorbable, extractactable, purgable organic halogens (AOX, EOX, POX) and absorbable organic sulphur (AOS)

Equipment for Laboratory Department of Latvian Environmental Agency - Quantity:1

Purpose: analyzer for determination of adsorbable, extractactable, purgable organic halogens (AOX, EOX, POX) and absorbable organic sulphur (AOS) is necessary for determination of organically bound halogens in water and sediments. These global parameters are used to provide information on organic contamination in accordance with the requirements of international environment monitoring programmes, e.g., HELCOM PLC.

- Portable multi-parameter instrument

Equipment for laboratory of Ventspils and Valmiera Regional Environmental Board - Quantity: 2

Purpose: universal portable hose-proof and submersible multi-parameter instrument is necessary for simultaneous field measurements of pH and redox potential, oxygen content, conductivity, salinity and temperature.

- Stereo Microscope

Equipment for laboratories of Ventspils Regional Environmental Board, Daugavpils Regional Environmental Board, Valmiera Regional Environmental Board, Laboratory Department of Latvian Environmental Agency - Quantity: 4

Purpose: stereo microscope is necessary for determination of macroinvertebrates in environmental water samples. Macroinvetebrates are determinants suggested by European Environmental Agency as primary biological indicators for river and lake monitoring networks used to assess ecological quality, acidification, physical intervention, nutrient status and organic pollution.

- Automatic isokinetic sampler

Equipment for Laboratory Department of Latvian Environmental Agency - Quantity:1

Purpose: automatic isokinetic sampler is necessary for sampling particles and micropllutants from stationary emission sources under isokinetic conditions in accordance with ISO 9096.

- Auto Analyser

Equipment for Laboratory Department of Latvian Environmental Data Centre - Quantity: 1

Purpose: an automated analyser is required for determination of several parameters - ammonia, nitrite, nitrate, N_{total}, phosphate, P_{total}, phenol index etc. in water, soil and sediment samples by continuous flow analysis.

- BOD manometric/ self -check measuring system

Equipment for Laboratory Department of Latvian Environmental Agency, Valmiera, Ventspils - Quantity: 3

Purpose: the BOD manometric/self - check measuring system is required for BOD- biological oxygen demand (oxygen consumption in biodegradation of organic substances) measuring in surface waters and waste waters.

- Kjeldahl System

Equipment for laboratories of Ventspils Regional Environmental Board, Daugavpils Regional Environmental Board, Valmiera Regional Environmental Board, Laboratory Department of Latvian Environmental Agency - Quantity: 6

Purpose: Kjeldahl System is used for conversion of nitrogen compounds to ammonium sulphate by sample digestion with subsequent steam distillation procedure for the determination of Kjeldahl nitrogen and total nitrogen in water, soil and sediments.

- Laboratory Water Purification System

Equipment for laboratories of Ventspils Regional Environmental Board, Daugavpils Regional Environmental Board, Valmiera Regional Environmental Board, Laboratory Department of Latvian Environmental Data Centre - Quantity: 6

Purpose: Laboratory water purification system is necessary to provide high quality purified water for analytical use according to the requirements of ISO 3696.

Other projects

Latvian-Danish project "Assistance to Latvia on implementation of the EU Ambient Air Quality Directive" (2001 – 2003)

The Latvian Ministry of Environmental Protection and Regional Development (MEPRD) has requested Danish assistance in implementing the EU framework requirements on ambient air quality. These requirements, as set forth in Directive 96/62/EC on Ambient Air Quality, the so-called Framework Directive (FWD) and its daughter directives (DD), cover common principles to: (1) define and establish objectives for ambient air quality designed to avoid, prevent or reduce harmful effects on human health and the environment; (2) assess ambient air quality on the basis of common methods and criteria; (3) obtain adequate information on ambient air quality and make it available to the public; and (4) maintain ambient air quality where it is good and improve it in other cases.

This project will provide assistance to several of Latvian environment institutions with regard to implementation of the EU air quality requirements. The overall project objective is to enable Latvia to qualify for EU membership by assisting it to approximate with EU environmental requirements with respect to ambient air quality.

In addition to the overall objective, three immediate objectives have been identified:

1. The development of capacity for air quality assessment and management so that it can become self-sufficient in e.g. designating zones under the Ambient Air Quality Directive.
2. To bring Latvia's monitoring of ambient air quality into compliance with EU requirements.
3. The development of operational systems for informing the public and decision makers concerning air quality.

The project envisages training of Latvian specialists in air quality modelling and data validation issues, as well as will support an initial programme of passive sampling for NO_2, SO_2 and benzene at hot spots and urban background pollution in Riga. The project will also provide Riga City Council with one automatic AQ monitoring station. Any aspects relating to rural background air monitoring will not be covered and the mentioned project does not overlap with the proposed one.

Phare REAP (Regional Environmental Accession Project) Project *Compliance with EU Requirements on Environmental Monitoring and Reporting* (No. OSS No :LT-0081.00-16.01)

This project is carried out by Phare consultants from URS Dames & Moore. It is planed to finalise this project at a first half of year 2002. As a result of the project, information will be obtained on the current situation in Latvia on compliance with reporting requirements and on the necessary steps to be undertaken to achieve compliance. The administrative requirements for reaching compliance will be assessed.

The key objectives of this project in the short term are to:

- Identify the EU requirements regarding monitoring and reporting on air, water, waste and industrial emissions;
- Identify existing monitoring and reporting methods and systems within Latvia regarding air, water, waste and industrial emissions;
- Identify gaps in data collection and collation in alignment with Directive 91/962/EC;
- Assess the current level of communication between Latvian beneficiaries in the co-ordination of information flows; and
- Develop a programme to ensure the Latvian environment monitoring and reporting systems are compatible with the requirements of the national and EU legislative requirements.

REAP Project No. AE.00.14.01/WA OSS No. LT-0081.00-14.01 Draft Multi Year Waste Management Plan for Latvia (Draft)

The project comprises three main tasks:

1. Analysis of existing Latvian strategies and programmes in the waste management sector covering a review of the existing situation in waste management in Latvia. Analysis and review of political, legal, social and economic context in which the waste management authorities and institutions operate.

2. New strategies including reviewing current management practices and developing options for future management in line with EU directives on these waste streams.

3. Preparation of the waste management plan. A new waste management plan for Latvia for the years 2003 to 2015, to be in line with EU waste directives, will be prepared in close co-operation with MEPRD.

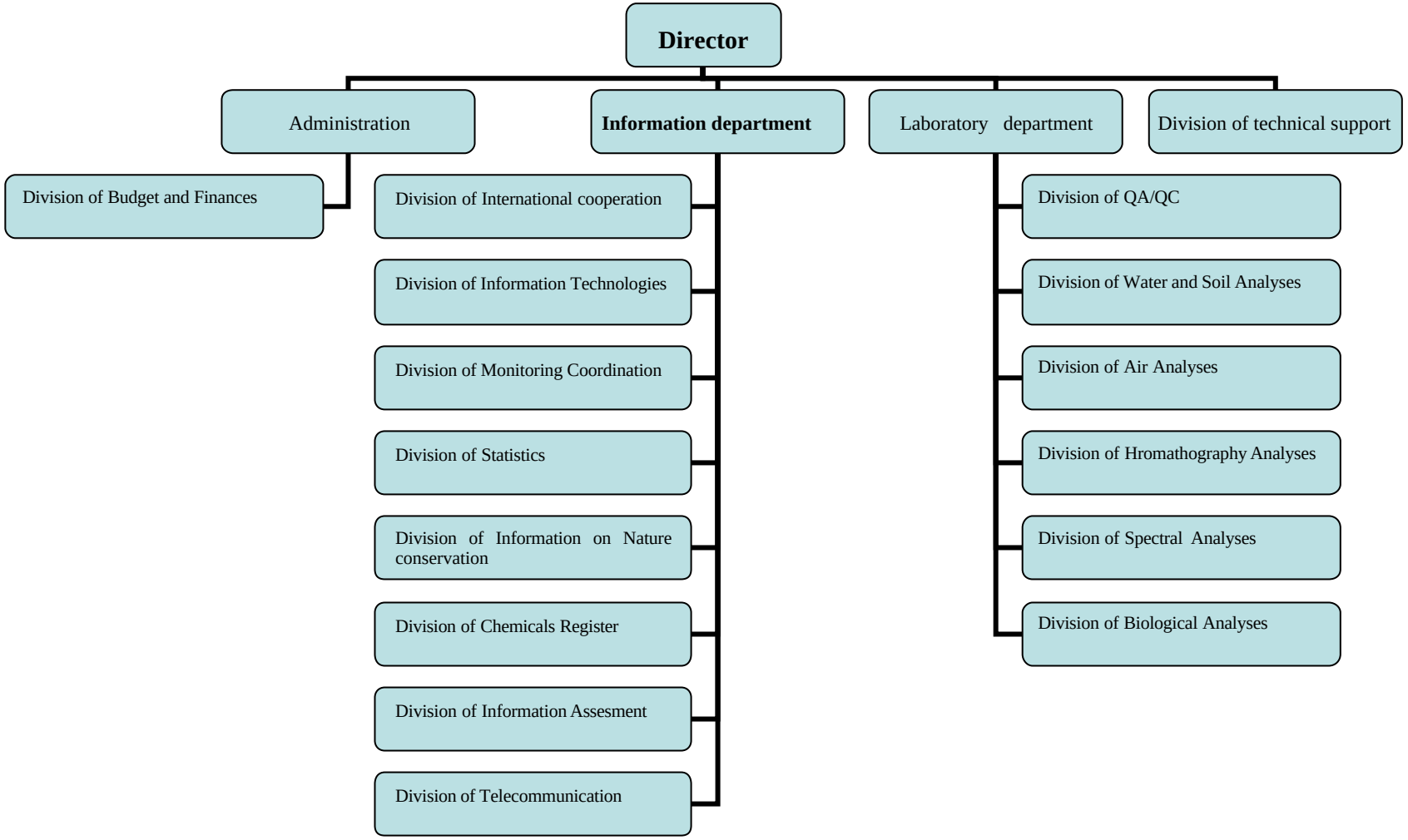
Draft multi Year waste management Plan was presented on 21 September 2001.

ANNEX No.7

Institutional Structure of the Involved Institutions

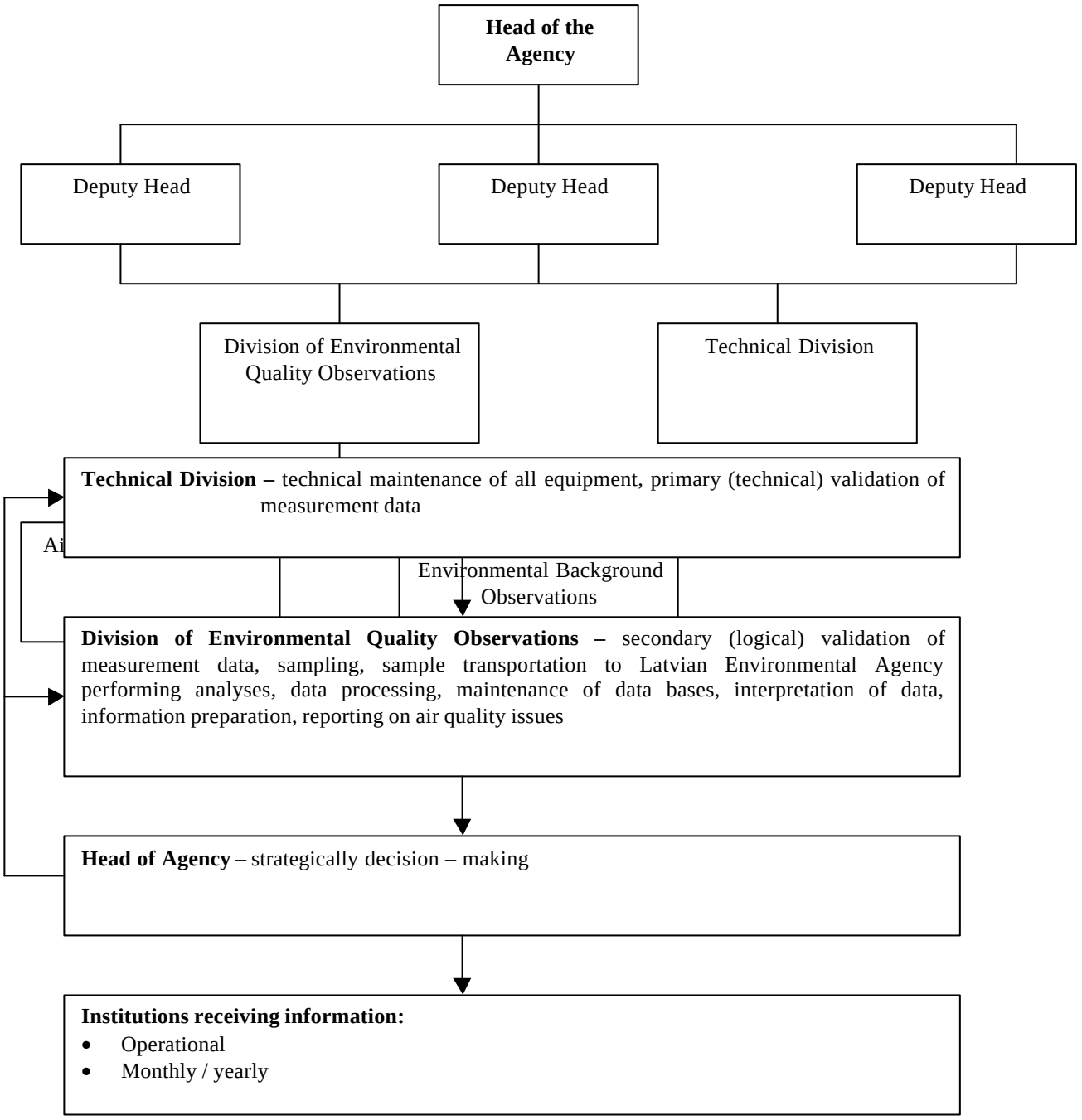
Institutions under supervision and subordination to
the Ministry of Environmental Protection and Regional Development

Institutional Structure of Latvian Environment Agency



Structure of Latvian Hydrometeorological Agency

(Extraction – only divisions directly involved in the project)



Institutional structure of Public Health Agency