ENVIRONMENT

Summary Project Fiche

Project n°: ES 9805.01

Project title: Implementation of Environmental Accession Programme, Estonia

Water Accession Project

Location: Institution Building: nation-wide,
Investment: Kuressaare, Pärnu, Valga

Objectives:
The proposed project will:
• improve Estonia’s capacity to harmonise with relevant Community legislation especially the water Framework Directive which is described as a short term priority in the Accession Partnership
• support the Estonian Public Investment Programme (PIP) in the field of water (water supply, sewerage), which is financed with internal resources, IFI loans and funds from other sources

Description:
The proposed project will assist Estonia in the harmonisation with Community water legislation through institution building and investment in water projects as part of the ongoing Small Municipalities Environment Programme (SMEP) (Service and Works contracts).

Institution Building

The institution building element of the programme will provide the following assistance:

• Harmonisation and implementation of the water Framework Directive, waste water and urban waste water Directives, and other relevant Community legislation, at all administrative levels as part of Estonia’s Approximation Strategy
• Training in enforcement of water quality legislation at all administrative levels
• Grant and loan management in the Estonian Water Company (Eesti Veevärk)

Investment

The Ministry of Environment together with the Estonian Water Company (a municipally owned joint stock company), are currently managing large scale investments in the field of water supply and waste water treatment within the framework of the EBRD led Small Municipalities Environmental Programme (SMEP). The SMEP can therefore be seen as substantive approximation of the water Framework Directive as well as the drinking water and urban wastewater Directives.

Phare 1998 funds will be used to fund a ”bolt-on” extension to the existing SMEP using the existing institutional structure with assistance and funds being channelled through the Estonian Water Company. The Ministry of Environment has presented a list of three towns requiring priority investments in water and sewerage (subject to change). The proposed projects in the three priority towns will serve a total population equivalent of 116,000.
(i) Kuressaare

This project is for the reconstruction of the Sewage Treatment Plant at the economically important town of Kuressaare on the island of Saaremaa. This will eliminate a major pollution source in an environmentally sensitive area and assist Estonia to meet its general obligations under the HELCOM treaty. The project size is 16,000 Population Equivalent.

(ii) Pärnu

This project is for the reconstruction of the primary tanks and replacement of mechanical equipment at the Sewage Treatment Plant of the key resort town of Pärnu in southwest Estonia. Other donors have already upgraded parts of this plant. The project size is about 90,000 Population Equivalent.

(iii) Valga

This project is for the construction of a new Sewage Treatment Plant in town of Valga, which is situated on the border with Latvia. The new plant will replace the current dysfunctional lagoon based system that is a major source of local river pollution. The project size is 10,000 Population Equivalent.

**Institutional framework:**

The water investment component (wastewater treatment and water supply) will be implemented as a ‘bolt-on’ extension of the ongoing EBRD led SMEP programme with substantive allocations from the Estonian Public Investment Programme, Estonian Environmental Fund and bilateral support from Finland, Denmark, Norway and Sweden.

Bilateral donors, particularly the Nordic countries, have expressed interest in participating in this project.

**Sub-Programme Budget (ECU)**

<table>
<thead>
<tr>
<th>Sub-Programme: ES-9803 Environment</th>
<th>Investment</th>
<th>Institution Building</th>
<th>Phare Total</th>
<th>Estonia</th>
<th>Donors</th>
<th>Total*</th>
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<tr>
<td>Project: ES-9803-01 Water Accession Project</td>
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<td>400,000</td>
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<td>4,500,000</td>
<td>4,100,000</td>
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<td>4,000,000</td>
<td>400,000</td>
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<td>4,500,000</td>
<td>4,100,000</td>
<td>13,000,000</td>
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</tbody>
</table>

* EBRD / NEFCO input to the SMEP project (water, investment) considered IFI cofinancing.
Implementation arrangements:

Investment: The Implementing Agency will be the Estonian Water Company (EWC) under an extension to the existing Small Municipalities Environment Programme (SMEP). The overall monitoring and supervision of project activities will be ensured by the Accession Programme Support Unit (Phare APSU) in the Ministry of Environment, with close coordination with the Environment Department of the Ministry. With support from APSU and the Ministry, the EWC will prepare the tender documents, carry out the evaluation and supervise the activities of the Contractor.

Institution Building: Administration by the CFCU, monitoring and supervision by APSU.

The Institution Building and the Investment element of the project will be tendered and contracted separately, i.e. the project will be implemented in two contracts. The Institution Building contract will follow Phare procedures for services contracts (with possible twinning elements), while for the investment one works contract will be prepared by EWC and APSU experts in accordance with the DIS Manual rules, section F4 Procurement, according to the FIDIC rules.

Implementation schedule (see annex)

<table>
<thead>
<tr>
<th>Project Element</th>
<th>Start of Tendering</th>
<th>Start of Project Activity</th>
<th>Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institution Building</td>
<td>July 1998</td>
<td>February 1999</td>
<td>24 months after contract award</td>
</tr>
<tr>
<td>Investment</td>
<td>July 1998</td>
<td>April 1999</td>
<td>24 months after contract award</td>
</tr>
</tbody>
</table>

Equal Opportunity:

Equal access to the activities of this project will be provided to women and men in accordance with the laws of the Republic of Estonia. The participation of women will be measured in accordance with the laws of the Republic of Estonia.

Environment:

As formal Environmental Impact Assessments (EIA) procedures are not applicable to environment projects, no EIA has been carried out but the major environmental effects of the investment element of the project are:

**General Improvements**

- Reduction of Environmental discharge "Fines" to the three municipalities because the after the project discharges will be within Estonian law.
- Improvement in public health because less infected matter will be released to the environment.
- Improvements to tourism because of water quality improvements.
- Reduce pollution of commercial and hobby fishing areas.

(i) Kuressaare

Kuressaare is the chief town on the Island of Saaremaa. The entire island is a nature reserve and, as a part of the West Estonian Archipelago Biosphere Reserve, has been designated a site of international importance by UNESCO. The current sewage treatment plant is inadequate and is a significant source of pollution. The works proposed in this project will eliminate this pollution and help Estonia meet its HELCOM obligations.
(ii) Pärnu

The existing sewage treatment plant is not effective and pollutes Pärnu Bay, an important resort and fishery area. The works proposed under this project are part of a comprehensive multi-donor project to improve the sanitation and reduce pollution in Pärnu Bay.

(iii) Valga

Sewage at present in Valga is treated in lagoons that are ineffective and as a consequence is a source of pollution to the local river and aquatic environment. The works proposed would eliminate this pollution.

Rates of Return:
An Internal Rate of Return analysis was carried out for the investment element of the project, based on the expected returns in revenues, savings in fines, health improvements, tourism receipts and fishing improvements. The estimated Internal Rate of Return is 73%.

Investment criteria:
Phare assistance will form a valuable addition to ongoing investment programmes and help Estonia overcome the problem of affordability by the inhabitants in different small and medium size municipalities and to ensure sustainability of the investments undertaken:
The investment element of the project will be catalytic for further investments into tourism and fishing industry due to cleaning up of beaches and reduced pollution of surface water bodies and the sea, but also for further improvements in water treatment. The investment will be sustainable as the waste water treatment plants to be constructed with Phare assistance can be sustained in future without further foreign funding. The investment will also be additional to ongoing investment programmes and help Estonia overcome the problem of affordability by the inhabitants in different small and medium size municipalities and to ensure sustainability of the investments undertaken. All three sub-projects are in an advanced stage of preparation and are ready to start in 1998.

Conditionality and Sequencing:
The Phare support is conditioned on the availability of the above mentioned funding by the recipient. The effectiveness of project is also conditioned on the availability of competent counterpart staff at all administrative levels involved.

The ongoing process of approximation of legislation in the field of environment must be continued in accordance with the National Programme for the Adoption of the Acquis.

Immediate steps must be taken within the Ministry of Environment to strengthen the allocation of experienced civil servants to the management of the Phare supported activities in order to diminish the dependence on international experts. Upgrading and training of civil servants must be a core element of the Phare project.
Project ES 9805.01: Water Accession Project

Relationship of Project with Previous Projects (Investment Element)

(i) Kuressaare

Kuressaare is part of the Small Municipalities Environment Programme (SMEP) and currently there are four ongoing projects (KU1 to KU4), using Estonian and Donor funding (EBRD, NEFCO), to upgrade the water and sewage systems. The sewage treatment plant proposed under this project is urgently needed to replace, and stop the pollution from, an ageing and inefficient existing plant and will complete the current system upgrading cycle. The works will assist Estonia in meeting its HELCOM obligations and improve the ecosystem of a significant environmentally sensitive area so identified by UNESCO. Kuressaare is important economically to Estonia because of its eco-tourism and recreation facilities.

(ii) Pärnu

Pärnu is also part of SMEP and currently there are seven (PR1 to PR7) ongoing projects to improve the water and sewage systems using Estonian and donor funding (Finland, EBRD, and NEFCO). Pärnu is an economically important beach and spa town in southern Estonia. Currently gross pollution from the sewage treatment plant inhibits tourism on some of the beaches. Pärnu Bay is an inshore fishery. The works proposed under this project are for the reconstruction of part of the sewage treatment plant, primary tanks and mechanical equipment. The remaining parts of the plant have been previously upgraded using funds from Finland.

(iii) Valga

Valga is part of SMEP and currently there are two (VA1 and VA2) ongoing projects to improve the water and sewage systems using Estonian and donor funding (EBRD). Valga is an important trading and industrial border town with Latvia. At the moment the sewage is treated in a system of lagoons that, due to temperature and other factors, are inefficient during much of the year and the consequences are pollution of the river Pedali and serious odour problems. Under this project it is proposed to construct a new sewage treatment plant to modern standards and effluent quality criteria. This will reduce pollution in the river Pedali, eliminate a public health hazard and assist Estonia in its HELCOM obligations and obligations to neighbouring countries. Other projects are being planned to rehabilitate and extend the sewerage pipe network in order to reduce inflows and connect all of the population to the sewerage network.
# Project ES 9805.01: Water Accession Project

## References to Feasibility and Pre-Feasibility Studies (Investment Element)

<table>
<thead>
<tr>
<th>Town</th>
<th>Document</th>
<th>Author</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kuressaare</td>
<td>Small Municipalities Environment Project Feasibility Study</td>
<td>Norconsult</td>
<td>1994</td>
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<td>Kuressaare Municipality Environment Project</td>
<td>Eesti Veevärk</td>
<td>1994</td>
</tr>
<tr>
<td>Pärnu</td>
<td>Small Municipalities Environment Project Feasibility Study</td>
<td>Norconsult</td>
<td>1994</td>
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<td></td>
<td>Pärnu Water Works Investment Programme</td>
<td>Vesi-Hydro</td>
<td>1997</td>
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<td>Valga</td>
<td>Valga Town Water and Sewerage Feasibility Study</td>
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<td>Valga Town Environment Project</td>
<td>Valga Municipality</td>
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## Annex 7

**Project ES 9805.01: Water Accession Project**

**List of Relevant Laws and Regulations**

<table>
<thead>
<tr>
<th>Community Water Quality Legislation</th>
<th>Transposition into Estonian legislation</th>
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<tbody>
<tr>
<td><strong>WATER QUALITY</strong></td>
<td><em>From 0 (no legislation) to 4 (full transposition)</em></td>
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<tr>
<td><strong>Non-White Paper Legislation</strong></td>
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<tr>
<td>COM(97)49 Proposed Water Quality</td>
<td>Partial compliance (1)</td>
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<td>Framework Directive</td>
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<tr>
<td>DIR 91/271/EEC Urban Waste Water</td>
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<td>DIR 91/675/EEC Nitrates</td>
<td>Partial compliance (2)</td>
</tr>
<tr>
<td>DIR 76/464/EEC Dangerous Substances to Aquatic Environment</td>
<td>Partial compliance (2)</td>
</tr>
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<td>DIR 76/160/EEC Bathing Water</td>
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<tr>
<td>DIR 80/778/EEC Drinking Water</td>
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<tr>
<td>DIR 75/440/EEC Surface Water for the Abstraction of Drinking Water</td>
<td>Partial compliance (2)</td>
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<tr>
<td>DIR 79/869/EEC Measurement and Sampling of Drinking Water</td>
<td>Partial compliance (1)</td>
</tr>
<tr>
<td>DIR 80/68/EEC Ground Water</td>
<td>Partial compliance (2)</td>
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<td>DIR 78/659/EEC Fish Water</td>
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<tr>
<td>DIR 79/923/EEC Shellfish Water</td>
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Annex 8

Project ES 9805.01: Water Accession Project

Relevant Government Plans and Studies

Current Status

Acts:

1. Water Act (SG I 1994, 40, 655), amendment (SG I 1996, 13, 240/241);
4. Act on the Protection of Marine and Freshwater Coasts, Shores and Banks (SG I 1995, 31, 382);
5. Act on Sustainable Development (SG I 1995, 31, 384);
6. Act on Building and Planning (SG I 1995, 59, 1006);

Governmental Regulations:

1. Statute of the National Water Cadastre (SG I 1993, 41, 610);
2. Regulation on the termination of discharges of waste water into surface water (SG I 1994, 62, 1048);
3. Regulation No. 464 of 15.12.1994 on the establishment of requirements for discharge of waste water into the surface and soil (SG I 1994, 93, 1580), amendment (SG I 1996, 64, 1178);
4. Regulation on the establishment of more stringent requirements for discharge of waste water into surface water bodies (SG I 1995, 45, 690);
5. Regulation No. 174 of 11.04.1995 on the establishment of the temporary reference figures for surface and ground water pollutants (SG I 1995, 42, 625);
7. Regulation on charge rates for special water use (SG I 1997, 76, 1285).

Regulations of the Minister of the Environment:

1. Regulation No. 18 of 19.07.1993 on the establishment of procedures for keeping the National Water Cadastre;
2. Regulation No. 24 of 28.09.1993 on the establishment of consumption norms for household water;
3. Regulation on the establishment of restrictions for the use of fertilizers in conformity with environmental requirements (SG 1994, 35);
4. Regulation on the establishment of guidelines for the research, use and protection of groundwater (SGA 1994, 46);
5. Regulation on the establishment of rules for planning, drilling and filling of bored wells (SGA 1994, 46);
6. Regulation on the establishment of restrictions for the use of waste water sludge in agriculture, building of green areas, recultivation and forestry (SGA 1994, 35);
7. Regulation on the establishment of procedures for laboratories with regard to water research (SG 1995, 9);
8. Regulation on the establishment of environmental requirements for oil product related facilities (SGA 1996, 42, 282);
9. Regulation on the nomination of the authority issuing special water use permits (SGA 1996, 125, 640);
10. Regulation on the establishment of procedures for the assessment of ground water resources (SGA 1996, 135, 4781);
11. Regulation on the establishment of procedures for the establishment and planning of sanitary zones for water intake structures (SGA 1997, 3, 8);
12. Regulation on the establishment of procedures for issuing and invalidation of permits for special water use (SGA 1997, 3, 9);
13. Regulation on the establishment of water protection requirements for soil reclamation (SGA 1997, 14, 87).

Regulation of the Minister of Social Affairs:

1. Regulation on the establishment of quality requirements for drinking water (SGA 1996, 36, 253) - 80/778/EEC (partly), 75/440/EEC.

Other legal acts:

1. Decree of the Minister of the Environment on the establishment of the National Ground Water Monitoring Programme (29.07.1993);
2. Decree of the Minister of the Environment on the establishment of the National Monitoring Programme for Inland Water Bodies (29.07.1993);

Legal Acts drafted in the end of 1997:

Governmental Regulations:

2. Regulation on the adoption of the Programme of Good Agricultural Practice - 91/676/EEC;
3. Regulation on the establishment of requirements for bathing water - 76/160/EEC.

Regulations of the Minister of the Environment:

1. Regulation on the establishment of procedures for issuing permits for special water use - 91/271/EEC, 80/68/EEC;
2. Regulation on the establishment of restrictions for the use of fertilizers - 91/676/EEC.

Assessment of Status
a) Legislation

Estonia in co-operation with the Helsinki Commission (HELCOM) of the Convention on Protection of the Marine Environment of the Baltic Sea has been active in the field of water protection in Estonia since the beginning of the 1990s. Thus, there is sufficient knowledge of Helcom requirements and the time period for their application has been relatively long.

In Estonia, discharge limit values have been established for industrial, municipal and drinking water. Requirements for bathing water and sewage sludge and for the treatment and usage of the latter will be established in 1998. The majority of sampling, analysis and monitoring rules have been established. The number of implementation acts on water protection is larger than in any other field of environmental protection. Analysis of the compliance of these acts to Community requirements was carried out in 1997.

b) Implementation

Water permits for special water use are among the most important instruments of water protection. These permits include requirements for the use of drinking and waste water as well as for monitoring. Water permits for special water use are issued by Regional Environmental Departments. Pursuant to the programme adopted by the Minister of the Environment, water monitoring is organised by the Environmental Information Centre. Samples are taken and analyses are made by the Environmental Research Centre, Marine Research Institute, Tallinn Technical University and three Environmental Laboratories in Tartu, Pärnu and in Ida-Virumaa. Annually, 10 000 - 11 000 water samples are taken on the national level.

Every year more than EEK 400 million (MECU 25,5) are invested in water protection and in the development of drinking water infrastructure.

Wastewater treatment plants have been constructed in 47 cities. Wastewater treatment meets the established requirements in 9 cities (Tallinn, Rapla, Kärdla, Tapa, Narva, Pärnu, Sillamäe, Türi, Kehra). There are 1033 wastewater treatment plants in the rural settlements of which 65% have to be reconstructed. The Small Municipalities Environment Project, covering 14 small cities in Estonia, funded by the loans from EBRD, is currently underway. In near future, new wastewater treatment plants should be constructed or the existing ones reconstructed in Kuressaare, Pärnu, Tartu, Narva, Kohtla-järve, Paide, Põlva, Võru, Keila, Paldiski, Valga, Viljandi and Jõgeva.

Short-term Priorities

a) Legislation

Acts:

1. Draft Act on the Amendment of the Water Act;

Governmental Regulations:
1. Regulation on the establishment of quality requirements for bathing water;
2. Regulation on the establishments of requirements for waste water discharge in the ground water and surface water;
3. Regulation on the establishment of temporary reference figures for surface water and groundwater pollutants;
4. Regulation on pollution charges on waste water bodies, ground water and surface.

Regulations of the Minister of the Environment:

1. Regulation on the establishment of procedures for water research in laboratories;
2. Regulation on the establishment of requirements for preliminary treatment of industrial waste water;
3. Regulation on the establishment of restrictions for the use of waste water sludge (amendment);
4. Regulation on drawing up guidelines for action programmes;
5. Regulation on the Strategy of Sustainable Agriculture;

Other legal acts:

1. Regulation of the Minister of Social Affairs on the drinking water standard.

Medium-term Priorities

Regulations of the Government:

1. Regulation on the Statute of the Water Cadastre;
2. Regulation on the establishment of quality requirements and usage categories for fresh water bodies;
3. Regulation on the Strategy of Sustainable Agricultural Practice.

Regulations of the Minister of the Environment:

1. Regulation on the establishment of procedures for keeping of the Water Cadastre;
2. Regulation on quality requirements for surface water intended for the abstraction of drinking water;
3. Regulation on calculation and payment of pollution charges;
4. Regulation on the establishment of procedures for issuing integrated pollution permits;
5. Regulation on the establishment of restrictions for the use of fertilizers in conformity with environmental requirements.

Legislative acts in the field of water protection complying with Community legislative acts will be mainly drafted in the next two years.

b) Implementation
In order to bring water protection and drinking water quality in line with the requirements of EC directives, large investments are needed. Preliminary estimates show that the construction of waste water and sewerage facilities will cost (at the price level of 1997) EEK 4.4 billion (MECU 280), including Tallinn - EEK 2.2 billion (MECU 140); and ensuring drinking water compliance with the drinking water standard for all inhabitants will cost EEK 4.8 billion (MECU 306), including Tallinn - EEK 2.3 billion (MECU 146).

In order to ensure the high quality of drinking water, drinking water treatment plants have to be constructed in 11 towns in near future. The total length of water pipelines in Estonia is 3100 km of which 30% have to be replaced in near future. In addition, 630 km of pipelines has to be constructed. Of 1300 drilled wells connected to the public water supply, ca 250 have to be renewed and 100 filled. Ninety new wells have to be drilled.

**Training will be needed:**

* for the specialists drafting legal acts;
* for the specialists of Regional Environmental Departments and inspectors in the field of Community requirements;
* for the technical experts of municipal and city governments.