

# **SANITATION COUNTRY PROFILE**

## **ESTONIA**

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## **Decision - Making**

### **A. Basic Sanitation**

The Ministry of Environment is the body mainly responsible for basic sanitation. Ministry is responsible for drafting legal acts for wastewater treatment. There are following legal acts that regulate wastewater issue:

- Water Act,
- Public Water Supply and Sewerage Act,
- Pollution Charge Act,
- Establishment of the Requirements for Discharging Dangerous Substances into Public Sewage System,
- Criteria for Designating Agglomerations,
- Procedure on Discharging Wastewater into Water Bodies or Soil,
- Procedure for the Issue, Amendment and Revocation of Permits for the Special Use of Water and Temporary Permits for the Special Use of Water, the List of Documents Required for Application of Permits and the Format of Permits,
- Identifying River Basin Districts and River Basin Sub-districts

15 county environmental services implement wastewater related policy in counties.

According to the Water Act the water use as such can be either a public use or a special use. Public use of water is free of charge and need no permit. The special use of water is the use of water which has or might have a significant impact on water quality and water resources. For special use of water the water user must have a water permit.

Water permit is a document which gives the right to use the water with conditions that must be followed in order to ensure the sufficient protection of water quality and water resources.

Water permits are issued by the county environmental services. Water permits for activities on sea or in coastal waters except discharge of wastewater are issued by the Ministry of the Environment.

For an example, if effluent or other water pollutants are discharged to water or soil, permit is necessary.

According to the Water Act measures for the water protection and use (incl wastewater collection and treatment) will be planned in the river basin management plan which will be established for each river basin district and for each river basin sub-district. The river basin management plan itself as well as its objectives, tasks and obligations must be followed municipalities' public water supply and sewerages development plans and when drafting general or detailed plans.

According to the regulation established by the Government of the Republic there are 3 river basin districts and 8 river basin sub-districts in Estonia.

The river basin districts in Estonia are:

- East-Estonian river basin district (International RBD for Lake Peipsi and river Narva shared with Russia)
- West-Estonian river basin district
- Koiva river basin district (International RBD for river Koiva shared with Latvia)

River basin sub-districts in Estonia are:

- Harju sub-district
- Läänesaarte sub-district

- Matsalu sub-district
- Pandivere sub-district
- Peipsi sub-district
- Pärnu sub-district
- Viru sub-district
- Võrtsjärv sub-district

Ministry of the Environment also coordinates investments for building or renovating pipes, wastewater collecting systems and wastewater treatment plants.

## **B. Solid Wastes**

The Ministry of Environment is the body mainly responsible for solid waste. Ministry is responsible for drafting legal acts for waste. In the case of a problem or object of local importance, the local government makes the decision according to the Local Government Organization Act and Waste Act (e.g. waste treatment on the local level, etc.).

Waste management shall form an integrated system where all levels – national, county (regional), municipal government, company and waste producer level function as a whole.

Estonian environmental law is complex, involving many inter-related components, being dynamic and constantly evolving. Estonia, like so many other countries, consists of heavily industrialized areas with serious pollution problems, some areas that are ecologically sensitive; and other areas which are still in satisfactory or good environmental health. Partly because of this, the nature of environmental law requires that environmental laws and regulations should be flexible, yet long-term, and have a systematic framework. Estonian legal framework based on the precautionary principle, the polluter-pays principle and an integrated pollution prevention and control methodology.

The environmental policy of the Estonian Government has been provided by the National Environmental Strategy (1997) and the National Environmental Action Plan (NEAP; 1998) which also set guidelines for legal development.

In accordance with the integrated waste management approach, the National Environmental Strategy establishes the internationally accepted list of priorities for improving the waste management system. This hierarchy also forms the principal basis for the whole set of legislative documents in the field of waste management:

1. Prevention of waste generation;
2. Minimization of waste amounts and hazards;
3. Waste recovery:
  - direct re-use,
  - recycling of waste materials,
  - biological recovery (e.g. composting),
  - energy recovery (e.g. incineration);
4. Safe disposal of non-recoverable waste.

The main legislative document is the Waste Act (2004). The first version of the Estonian Waste Act was adopted already in 1992 as one of the first specific environmental laws in the restored Republic of Estonia, but was completely renewed in 1998 according to the principles defined in Waste (75/442/EEC) and Hazardous Waste (91/689/EEC) framework directives of the European Union.

Similar to the above-mentioned framework directives the Estonian Waste Act provides legal basis for prevention of waste generation and minimization of hazards it causes to health and the environment, as well as for the organization of waste recovery and disposal to ensure the protection of the environment. Several lower-level regulative acts have been issued as regulations of the Government or of the Minister of the Environment.

To encourage the use of recyclable materials, particularly packaging materials and wastes, the new Packaging Act has been approved by the Riigikogu (Parliament) in 2004. In 1996, the Packaging Excise Act was adopted. There are governmental policies encouraging efficient resource use and requiring reuse, recycling and reduction of waste.

In addition to the Waste Act, which is the principal legal tool in the field of the waste management, the corresponding legislative framework is based also on the Act on Protection of Estonian Nature, the Act on Sustainable Development and related to many other horizontal and specific environmental acts as, for example, the Act on Environmental Monitoring, the Act on Environmental Supervision, the Act on Pollution Charges, the Act on Ambient Air Protection, the Water Act, the Act on Environmental Impact Assessment and Environmental Auditing, the Act on Integrated Environmental Permits, etc.

### **C. Hazardous Wastes**

The Ministry of Environment is responsible for issues related to hazardous waste. The Ministry of the Environment is obliged to organize the development of the network of hazardous waste management facilities (Hazardous Waste Management System). Transboundary movements of waste are performed in compliance with international agreements binding on the Republic of Estonia, in first of all with Basel Convention, and on the basis of Estonian legislation.

The main legislative document is the Waste Act (2004). In this Act, principles of waste prevention, minimization and source reduction are determined. Several lower-level regulative acts have been issued as regulations of the Government or of the Minister of the Environment.

### **D. Radioactive Wastes**

The Ministry of the Environment is responsible for issuing the licences for managing the radioactive wastes. There is operating radioactive waste interim storage in Paldiski, it is run by ALARA Ltd, which is reporting to the Minister of Economy. The main legislative document is Radiation Act (2004), which provides basic safety standards for the protection of persons and the environment against the dangers arising from ionising radiation and to provide the rights, obligations and liability of persons upon the use of ionising radiation. There is a regulation issued under the Radiation Act, which covers the topic of radioactive waste.

## **Programmes and Projects**

### **A. Basic Sanitation**

Ministry of the Environment has initiated an annual program for water protection (which includes also wastewater treatment) which is financed by EIC that is state established foundation which gets its financial means from revenues from use of the environment. Annually approx. 150 million EEK is allocated to program for water protection.

Majority of the finances comes from Cohesion Fund (previously ISPA). During the programming period of 2000-2006 approx. 2,9 billion EEK from ISPA and CF is planned to be used for water sector.

In time period of 2000-2004 approx 2,9 billion EEK has been invested for upgrading and expanding water supply and sewerage system and for building new treatment plants. The investments have been financed from different sources: state budget, environmental investment centre (EIC), local budgets, and means of water utilities, foreign loan and foreign grant.

About 77 % of the Estonian population is connected to a public sewerage system, but significant efforts are still needed to develop municipal wastewater infrastructure in rural areas. The wastewater transmission systems are generally old and need rehabilitation or replacement. The pipelines are made of steel or iron and are heavily corroded. Consequently, wastewater leakage rates into the soil and storm water infiltration rates into the sewerage are both high.

Approximately 320 million EUR should be invested in sewage systems between 2000 and 2010.

### **B. Solid Wastes**

The national waste management plan is a strategic document regulating and targeting national waste management in Estonia. The waste management plan is one part of Estonian environmental policy and is in compliance with the Environmental Management Plan based on Estonian environmental policy, also with other national strategic documents.

The main aim of the waste management plan is to structure waste management at all levels. The waste management plan provides systematic waste management for the state as a whole, sets objectives and tasks for counties, municipalities.

The waste management plan is a strategic document in the process of change. After a certain time the waste management plan will be reviewed, activities that have taken place will be assessed, the plan will be supplemented in compliance with the changes in emphasis and needs. The changes are necessary also due to changes in environmental policy, developments in legislation, developments and changes in economic and technological possibilities that promote waste management.

### **C. Hazardous Wastes**

See under Solid Wastes.

### **D. Radioactive Wastes**

Paldiski PHARE project 2002/000/632.03.01: Safe Long-Term Storage of the Paldiski Sarcophagi and Related Dismantling Activities. The objective is to maintain the long-term storage safety of the Paldiski sarcophagi containing the reactor compartments of nuclear submarines and to establish safe conditions of the Paldiski sarcophagi for a period of at least 50 years. During the project studies, works and investments are made to guarantee storage safety.

## **Status**

### **A. Basic Sanitation**

There has been achieved progress on building and renovating pipes, wastewater collecting systems and wastewater treatment plants. But still approximately 320 million EUR should be invested in sewage systems between 2000 and 2010.

### **B. Solid Wastes**

In the Waste Act great importance is attached on waste management planning on three levels - national, county as well as rural municipality and town level - shall be drawn up. A waste management plan shall relate to the situation of waste management in the country or within an administrative unit, planned objectives in organizing and making waste management more efficient

as well as measures taken to achieve these objectives. The municipalities are drawing up their waste management plans within the framework of their municipal development plans in compliance with the Local Government Act and Waste Act.

The situation in the waste management has constantly improved in Estonia in 1990-ies. Waste collection, sorting, transport and recovery is largely done by companies in private law. Waste treatment as a service (mainly organised transport and collection of waste) is accessible all over Estonian territory.

The main means of handling municipal waste is disposal at landfills. There are no facilities for incinerating or composting domestic waste. According to the inventory of landfills in 1995, there were 279 functioning municipal landfills in Estonia, most of them in rural areas. Landfills that are not in compliance with requirements have been closed. In 2005, there were 23 functioning municipal landfills in Estonia, four of them are modern and environmentally sound landfills.

Companies carrying out transport and treatment of waste have organised sorting and recovery of waste. This especially concerns so-called profit-making waste types. It means waste types which collection and sorting costs stay below incomes from secondary raw materials or energy sales. The amount of profit depends a lot also on prices in the world market: e.g. sorted metal waste and part of plastic waste are exported. There is no necessary system in Estonia to recover that waste.

### **C. Hazardous Wastes**

In the beginning of 90-ies, when, in the frames of Estonian-Danish bilateral cooperation, a preliminary and feasibility studies were carried out. Based on that a hazardous waste landfill at Vaivara has been opened and separate collection of hazardous waste is developed on a national level.

The principal structure of hazardous waste handling system has been following:

- state system comprises hazardous waste, generated in Estonia (excl. oil shale industry waste);
- the system is essentially decentralised, i.e. unified centre for hazardous waste handling will not be established, but the existing possibilities will be used (e.g. incineration in cement-burning kilns);
- four hazardous waste collection centres (Tallinn, Pärnu, Tartu and Ida-Viru County) and one final site for disposal will be established for hazardous waste.

In 1998 a hazardous waste collection centre was opened in Tallinn and in 2000 Vaivara hazardous waste handling complex was opened in Ida-Virumaa, in 2001 a temporary storage facility was added for hazardous waste storage.

The control of the waste management is performed via the system of issuing of waste permits and treatment licenses for hazardous waste. A waste permit is a document which gives a right for disposal and recovery of waste, collection and transport of hazardous waste and transport of non-hazardous waste on commercial service basis. Waste permit determines also the conditions for the realization of this right. A waste permit is required for the generation of waste, while operating in such fields of activities which are significant for environmental protection and waste management. These activities are listed in the Waste Act and specified in a relevant Governmental Regulation. In a hazardous waste handling license more strict control and responsibilities are put on persons handling hazardous waste on commercial service basis. The licenses are issued by the Minister of the Environment while the waste permits are issued by the county environmental services. In January 2005 there were 67 companies with hazardous waste treatment licenses.

Hazardous waste or its packaging shall be labeled by the waste holder according to the procedure

established by the Regulation of the Minister of the Environment. The consignment note, which shall be composed by the original deliverer of the waste and shall be handed over to the receiver with every dispatch of hazardous waste, should guarantee the control over hazardous waste movements inside the country. The form of the consignment note, instructions for filling in, handling and registration are established by the Regulation of the Minister of the Environment.

The classification of hazardous wastes is based on the Estonian Waste Classifier (1991) and since 1999 waste is classified into hazardous and non-hazardous waste according to the waste catalogue based on the European Waste Catalogue.

Annual waste generation (according to data registered in 2003) was 10.9 million tons. Of this, approx. 7.5 million tons can be characterized as hazardous waste. The greatest amount of wastes are generated in oil-shale mining, chemistry and oil-shale based power production activities.

#### **D. Radioactive Wastes**

Because of uranium processing at Sillamäe, there is large uranium milling tailings depository, which remediation project is in the final phase: the final coverage will be finished by 2007. At the moment Silmet plant produces some of radioactive waste, which is kept in the local storage facility. By the end of 2005 there must be presented plan for the future management of that waste. The central radioactive waste management agency ALARA Ltd is situated at the Paldiski site and there are preparations for the Tammiku site EIA process, to finalize the status of that temporarily closed radioactive waste storage facility.

### **Capacity-Building, Education, Training and Awareness-Raising**

#### **A. Basic Sanitation**

Many training courses are organized for water companies by the Estonian Water Works Association.

#### **B. Solid Wastes**

The development of modern waste handling is not only a technical but also a social problem. Implementation of the aims Waste Management requires the involvement of people and the relevant awareness raising activities.

Reduction of waste generation, source separation and on-site handling of waste depend largely on the willingness of people to advance waste handling. Willingness, in turn, is linked to motivation – to improve the living environment as a whole, to reduce the cost of waste handling, etc.

Awareness raising activities for achieving involvement of people can be divided into two types:

- general systematic environmental education, incl. promotion of sustainable waste management, addressed to all target groups (youth projects, training for different target groups, publications);
- awareness-raising prior to the launching of and during the implementation of specific waste handling programmes (media, campaigns, environmental events).

An important role in these activities (disseminate information and organise counselling, training and raising of the awareness of different target groups) lies with the relevant authorities and local governments. City and rural municipality governments have the task of improving the awareness of people.

The Ministry of the Environment has the following task: to advance awareness-raising and education concerning environmentally sustainable attitudes targeted to the population and local governments, to define the main objectives for promotion work in this field and organise training of the relevant specialists.

Educational institutions play a very important role in raising the environmental awareness of children and the youth.

### **C. Hazardous Wastes**

See under Solid Wastes.

### **D. Radioactive Wastes**

People dealing with the radioactive waste have been mostly trained through the courses organized under the bilateral co-operation with Sweden and also under the technical co-operation with IAEA. In the beginning the great help was international expert groups organized both for Sillamäe and Paldiski.

## **Information**

### **A. Basic Sanitation**

Information concerning basic sanitation is available in the Ministry of Environment, its county environmental services and in local counties.

### **B. Solid Wastes**

In the Waste Act are presented the provisions on waste recording by the waste holders, obligations to report to the competent authorities on waste related activities and on databases where data according to the type, amount and origin of the waste generated and managed in Estonia, on the persons operating in the field of waste handling, on waste management facilities intended for waste disposal, on waste permits and hazardous waste handling licences and on transboundary movements of waste are accumulated – the National Waste Register. The Act on the Environmental Databases was adopted in 2002, then the Waste Register became an essential part of general National Database where the most of environmental data will be integrated.

Generation and further handling of waste is characterised on the basis of official waste statistics from 1995–2003 published in annual overviews of waste handling issued by the Environmental Information Centre (Overview of waste handling in Estonia).

Until 1999 companies were required to submit statistical reports on waste handling based on the lists elaborated by the Environmental Information Centre. It was up to county environmental services to decide whether a waste permit was required for an activity. Reliability of data at the municipal, county and national level depended largely on the reports of enterprises.

Passing of the Waste Act in 1998 and establishment of the relevant secondary legislation changed this procedure through the following changes:

- the List of Waste Categories, Types of Waste and Hazardous Waste based on the European Waste Catalogue entered into force;
- the Waste Act and Regulation No. 236 of 22 October 1998 of the Government of the Republic identified the activities, production volumes and threshold values for waste volumes in the case of which a waste permit is required for generation of waste.

Pursuant to the Environmental Register Act, waste data is now included in the environmental register. The database on waste contains information on the types, amounts and origin of waste generated and handled, on handlers, generators and dealers of waste, on waste permits and hazardous waste handling licences and on trans-national transport of waste. The waste data in the register is structured according to waste handlers, waste generators and waste dealers.

### **C. Hazardous Wastes**

The division of waste by hazardousness is based on the Waste Classification, regulation no. 14 of



the Minister of Environment from Sept.24, 1991. Classification of waste applied clearly substance-principle. Hazardous waste was divided into four classes of hazardousness. The Waste Classification was in force until 1999. National statistical reporting in Estonia was based on the Waste Classification until 1998. Since 1999 waste is classified into hazardous and non-hazardous waste according to the waste catalogue based on the European Waste Catalogue. The present waste catalogue does not use classes of hazardousness. In 1999 both classifications were used in reporting and in 2000 reporting was based on the Estonian Waste Catalogue.

Hazardous waste generation (mln tons)

	1995	1996	1997	1998	1999	2000	2001	2002	2003
Hazardous waste generation	7.27	7.68	7.36	6.27	5.62	5.97	6.21	6.40	7.50
Incl. oil shale ash, semi-coke etc.	6.94	7.22	7.19	6.12	5.59	5.95	6.04	6.17	7.10
Incl. other hazardous waste (excl. oil shale processing waste)	0.33	0.45	0.17	0.15	0.02	0.02	0.17	0.23	0.40

#### **D. Radioactive Wastes**

Some information is available on the homepage of the organizations. Also the licenses for radioactive waste management have to undergo the public procedure.

### **Research and Technologies**

#### **A. Basic Sanitation**

Information available in the Ministry of Environment. Research concerning new technologies is carried out in Tallinn University of Technology and in Tartu University.

**B. Solid Wastes:** The Estonian Environmental Research Centre (EERC) is specialized in chemical analyses in the field of environment protection. The Center is accredited by the German accreditation bureau Deutsches Akkreditierungssystem Prüfwesen GmbH (DAP) (Reg no DAP-P03. 131-00-97-01) and the Estonian Standard Board (Reg no L008). Research concerning new technologies is carried out in Tallinn University of Technology and in Tartu University.

#### **C. Hazardous Wastes**

See under Solid Wastes.

#### **D. Radioactive Wastes**

There are some safety studies carried out during the EIA process together with Tartu University and Geological Survey of Estonia.

### **Financing**

#### **A. Basic Sanitation**

Approximately 320 million EUR should be invested in sewage systems between 2000 and 2010.

#### **B. Solid Wastes**

The activities will be financed from the state budget and local government budgets, owner's equity, Environmental Investment Centre, foreign aid and loans. The costs necessary for improving the system of waste handling cannot be covered without foreign aid and loans. It is possible to apply for financing from Cohesion Fund and from the Structural Fund. There are possibilities for financing the activities on the basis of bilateral agreements. The Government of Estonia has established special fees for waste disposal. The fees used as financial resources for investments and research in

the field of waste management.

The responsibility of the waste generator or holder for the environmentally sound recovery or disposal of waste generated as a result of their activity and the introduction of “polluter pays” principle in financing of the waste management activities. The Waste Act defines the possibility to put into practice the producers responsibility to organize, partly or entirely, the handling of waste formed from the products causing hazard to human health or to the environment and to cover the costs connected with waste management.

### **C. Hazardous Wastes**

See under Solid Wastes.

### **D. Radioactive Wastes**

Financing for the management of the radioactive waste comes partly from the state budget and partly the owners of the radioactive sources have to pay for the disposal of their sources.

## **Cooperation**

### **A. Basic Sanitation**

Estonia is implementing EU requirements concerning wastewater treatment. Estonia has got financial aid from other states (Sweden, Denmark etc.) for building and renovating pipes, wastewater collection systems and wastewater treatment plants.

### **B. Solid Wastes**

All types of waste generated in Estonia cannot be treated in Estonia today, or in the future. The more important type of waste that need to be treated abroad also in future are recoverable metal waste. At the same time, there exists some possibilities in Estonia for the handling of certain types of waste generated in other countries. International partners in this field are the countries of the Baltic region, Finland etc.

### **C. Hazardous Wastes**

The most important area of international cooperation is control over the movements of and environmentally sound handling of hazardous waste. The UN Basel Convention on the Control of Transboundary Movements of Hazardous Waste and their Disposal entered into force for Estonia in 1992. Since then there has been extensive cooperation within the Baltic Sea region and with other European countries and organizations.

International cooperation acquired a new dimension at the end of the 1990-ies when the process of Estonia's accession to the European Union started. The EU sets high requirements on the organization of hazardous waste handling, but also on waste management as a whole. Close cooperation with all EU member states, especially the countries of the Baltic Sea region – Finland, Sweden, Denmark and Germany – is of great importance in advancing waste management.

### **D. Radioactive Wastes**

There is active bilateral co-operation with Sweden and also Estonia takes part of the technical co-operation programmes under IAEA, some of which cover also management of the radioactive waste.