


## Country factsheet Estonia (EE)

<p><i>Member State</i></p>	<p><b>Estonia</b></p>	
<p><i>Recent achievements</i></p>	<p>[BiPRO WFD 2011], [EC 2012f], [BiPRO 2012b], [BiPRO 2007-2011], [EE MoE 2012], [ETC-RWM 2008], [EE MoE 2012a]</p> <ul style="list-style-type: none"> <li>– Municipal waste generation was significantly reduced between 2008 and 2010 and it remains considerably low compared to the EU average (261 kg/y/inhabitant compared to around 487 kg of average)</li> <li>– Estonia shows decoupling tendencies.</li> <li>– All current 5 landfills for non-hazardous waste that are in operation comply with the requirements of the Landfill Directive and remain in under capacity.</li> <li>– Great efforts have been done to reduce illegal dump sites and to remove illegal and incompliant landfills</li> <li>– The target of the Landfill Directive related to biodegradable municipal waste going to landfills was achieved in 2009 already for the 2013 target. In 2013 only a minor part of bio-waste is expected to be landfilled</li> <li>– High progress in moving up the waste hierarchy due to implementation of new technologies</li> <li>– Decrease of the landfilling rate in the last year</li> <li>– Landfilling, so far dominant part of the municipal waste handling, is expected to drop rapidly because of the investment in MBT and incineration facilities allowing already on 2013 to treat all generated mixed or residual municipal waste.</li> <li>– Nearly full municipal waste collection coverage achieved (~95%)</li> <li>– Separate collection for packaging waste countrywide established</li> <li>– The producer responsibility principle - introduced for packaging waste, old tyres and end-of-life vehicles - has been very successful and is functioning well [ETC-RWM 2008].</li> <li>– Major investments going on in the waste management sector (ca 130 M€ or 100 €/inhabitant), which have been made without any financial support from the public sector</li> <li>– Well functioning waste data management system in place; including information on type, quantity and origin of waste generated and managed in Estonia as well as persons operating in the area of waste handling, waste management facilities, waste permits, waste reporting and hazardous waste handling</li> <li>– The concept on Life Cycle Assessment was included for the elaboration of the current WMP</li> <li>– Research studies on future waste management options are were conducted (e.g. on sorting of mixed municipal waste)</li> <li>– High level of know-how and expertise in relation to waste management; theoretical and own</li> </ul>	

	<p>scientific based approaches</p> <ul style="list-style-type: none"> <li>– Well targeted and planned inspections of establishments and undertakings which carry out waste treatment operations (including establishments that collect or transport waste on a professional basis, brokers and dealers) and establishments or undertakings which produce hazardous waste [BiPRO WFD 2011]</li> </ul>
<i>Population</i>	<ul style="list-style-type: none"> <li>– Total population in 2011: 1,340,194 [EUROSTAT 2012c]</li> </ul>
<i>Population density</i>	<ul style="list-style-type: none"> <li>– inhabitants per km<sup>2</sup>: 29.6 [EUROSTAT 2012c]; [CIA 2012]</li> <li>– ~ 69 % of total population living in urban areas in 2010 [CIA 2012]</li> </ul>
<i>Geographical particularities</i>	<p>Estonia is situated in Eastern Europe, bordering the Baltic Sea and the Gulf of Finland. Along the costs of the Baltic Sea there are many small islands, about 1,520. It covers the area of 45,228 km<sup>2</sup> [CIA 2012].</p> <p>Estonia is a lowland country with very low elevations. Only southern Estonia is known for its hillocks and curved landscapes. About half of the Estonian's mainland is covered with forests. Almost a half of the population lives in the main cities Tallinn (400,000), Tartu (98,000) and Narva (65,000) [EEA 2010].</p>
<b>Features of the national waste management system</b>	
<i>Competent authorities</i>	<ul style="list-style-type: none"> <li>– The Ministry of Environment of Estonia (MoE) is responsible for the waste management policy and implementation of the EU legislations and their transitions into national law, as well as practical enforcement [EE EnvReview 2010].</li> <li>– Local governments organize and prepare waste management plans for their corresponding administrative territory and organize collection, transport, storage, recovery and disposal of waste and technical requirements related to such activities. Several local governments may prepare a joint waste management plan [EIONET 2009].</li> <li>– Environmental supervision of the compliance with the Waste Act is performed by the Environmental Inspectorate (EI) [BiPRO 2007-2011].</li> <li>– The Estonian Environment Information Centre (EEIC) has a primary functions in collecting, analysing, processing and providing environmental information and data<sup>1</sup>.</li> <li>– The Environmental Board (EB) is inter alia issuing waste permits and organising the removal and recycling of waste. It works with a large number of production companies and local governments, monitoring the implementation of their waste treatment regulations and their organisation of waste transport tenders<sup>2</sup>.</li> </ul> <p>The EEIC and the EB manage several IT-solution or databases, namely the national Waste Data Management System ("JATS"), the online Environmental Permits Information System ("KLIS"), the Register of Products of Concern ("PROTO") and the Register of Packaging Waste ("PAKIS").</p> <ul style="list-style-type: none"> <li>– The Ministry of Economic Affairs and Communications elaborates and implements the state's economic policy and economic development plans. It is inter alia responsible for the implementation of the measures for regional development, infrastructure and investments.<sup>3</sup></li> <li>– The Estonian Waste Management Association (ESWMA) is a non-profit association which aims at influencing policies in Estonia by providing advices, developing cooperation between its</li> </ul>

<sup>1</sup> [http://epanet.ew.eea.europa.eu/european\\_epas/countries/ee](http://epanet.ew.eea.europa.eu/european_epas/countries/ee) accessed on 14 May 2012

<sup>2</sup> <http://www.keskkonnaamet.ee/eng/acivities/waste-management/> accessed on 14 May 2012

<sup>3</sup> <http://www.mkm.ee/eng/> accessed on 14 May 2012

	members and neighbouring countries and organising experience and knowledge exchange campaigns <sup>4</sup>
<i>Informal sector</i>	Years ago the informal collection of waste from landfills was a problem in Estonia. After the closure of all old and non-compliant landfills this problem was solved. Nowadays only metals are collected privately. The percentage is not known [EE MoE 2012a].
<i>State of public awareness</i>	The involvement of the public sector is not sufficient and needs to be improved. Information and awareness campaigns for the public to stop littering and improve environmental protection related to waste issues need to be intensified [BiPRO 2007-2011].
<i>Occurrence of structural dumping, fly tipping and littering</i>	Estonia had as one of the biggest problems in illegal dumping and in addition, with waste burning at homes. Based on the clean-up works, organized and financed by the State Forest Department (they manage ca 25 % of the area of Estonia) and the Environmental Board (is responsible for the clean-up of the 'former private land, which is still State owned' – ca 18 % from total area) especially wild dumping during the last years could be reduced significantly. The reason were next to the clean-up works implementation of municipal waste collection, the 'Let's do it 2008' campaign, later campaigns, better supervisions etc. [EE MoE 2012]. There happens still dumping in forests and littering with the light-weight and mostly packaging waste after consumptions of drinks, cigarettes, candies etc, and it is still an issue on road sides but is not a bigger problem anymore [EE MoE 2012].
<b>Legislation</b>	
<i>National</i>	<p><b>Waste Framework Directive</b></p> <ul style="list-style-type: none"> <li>– The main piece of waste legislation is the Act on Waste Management 2004 [EIONET 2009] which had several amendments since 2004 (obligations and rights of the Municipalities, detailing the Extended Producer Responsibility issues etc), but is also transposing the EU Mining Waste Directive 2006/21/EC (2010) and new Waste Directive 2008/98/EC [EE MoE 2012]. The new WFD was implemented in 2011 [EE MoE 2012]</li> </ul> <p>For more information see:</p> <p><a href="http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:72008L0098:EN:NOT#FIELD_EE">http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:72008L0098:EN:NOT#FIELD_EE</a></p> <ol style="list-style-type: none"> <li>1. Jäätmete taaskasutamis- ja kõrvaldamistoimingute nimistud, Legal act: Vabariigi Valitsuse määrus, number: RT I, 14.12.2011, 4; Official Journal: Elektrooniline Riigi Teataja, number: RT I, 14.12.2011, 4, Entry into force: 17/12/2011; Reference: (MNE(2011)58432)</li> <li>2. Jäätmeseadus, Legal act: seaduse parandus, number: RT I, 09.11.2011, 4; Official Journal: Elektrooniline Riigi Teataja, number: RT I, 09.11.2011, 4, Entry into force: 10/11/2011; Reference: (MNE(2011)57756)</li> </ol> <p><b>Landfill Directive and WAC Decision</b></p> <ul style="list-style-type: none"> <li>– Regulation of Ministry of the Environment (MoE) 29.04.2004, No 38 (RTL 2004, 56, 938) on requirements for establishment, operation and closure of landfills [EIONET 2009]</li> <li>– Currently an amendment of the Landfill Ordinance is in process, transposing the WAC Decision (2003/33/EC), as so far is mainly referred to it, which is found insufficient legally [EE MoE 2012].</li> </ul> <p>For more information see:</p> <p><a href="http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:71999L0031:EN:NOT#FIELD_EE">http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:71999L0031:EN:NOT#FIELD_EE</a></p>

<sup>4</sup> <http://ejkl.ee/en/?75> accessed on 14 May 2012

	<p><b>Packaging Directive</b></p> <ul style="list-style-type: none"> <li>– Packaging Act (RT I 2004, 89, 611) Packaging Excise Duty Act (RT I 1997, 5/6, 31) Regulation of Estonian Government: 26.12.2004 No 346 (RTI 2004, 83, 561) on statutes of the Packaging Register; MoE Regulations: 23.03.2005, No 19 (RTL 2005, 37, 523) on size of deposits for packaging; 15.04.2005, No 24 (RTL 2005, 45, 622) on the markings indicating the size of deposit [EIONET 2009].</li> <li>– Estonia has a transitional period for achieving the targets laid down in the Packaging Directive and shall attain the targets laid down in the Article 6 6(1), (b), (d) and (e) no later than 31 December 2012 [EC 2012c].</li> </ul> <p>For more information see:</p> <p><a href="http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:71994L0062:EN:NOT#FIELD_EE">http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:71994L0062:EN:NOT#FIELD_EE</a></p>
<i>Regional</i>	n/a
<b>WMP and WPP</b>	
<i>National</i>	<p><b>The National Waste Management Plan 2008-2013</b> (RIIGI JÄÄTMEKAVA 2008-2013), available at: <a href="http://www.envir.ee/orb.aw/class=file/action=preview/id=1075105/RIIGI+J%C4%4TMEKAVA+2008-2013.pdf">http://www.envir.ee/orb.aw/class=file/action=preview/id=1075105/RIIGI+J%C4%4TMEKAVA+2008-2013.pdf</a></p> <p><b>Estonian Environmental Strategy 2030</b>, available at: <a href="http://www.envir.ee/orb.aw/class=file/action=preview/id=1101230/inglisekeelne.pdf">http://www.envir.ee/orb.aw/class=file/action=preview/id=1101230/inglisekeelne.pdf</a></p> <p>Environmental Strategy 2030 is implemented through <b>The National Environmental Action Plan of Estonia 2007-2013</b>, available at: <a href="http://www.envir.ee/orb.aw/class=file/action=preview/id=1103821/inglise_keeles_tegevuskava.pdf">http://www.envir.ee/orb.aw/class=file/action=preview/id=1103821/inglise_keeles_tegevuskava.pdf</a></p> <p><b>An own WPP is not in place.</b> The next NWMP for 2014-2019 is already in preparation and will contain a chapter addressing 'Waste avoidance and minimisation' [EE MoE 2012].</p>
<i>Regional</i>	<p>Local governments are obliged to draw up a waste management plan for their administrative territories, though this can also be done on a regional basis in cooperation with other local governments.</p> <p>Examples of local waste management plans:</p> <ul style="list-style-type: none"> <li>- WMP of Tallinn (<a href="http://www.tallinn.ee/g2262s55354">http://www.tallinn.ee/g2262s55354</a>)</li> <li>- Waste plan of Saue Parish, available at: <a href="https://www.riigiteataja.ee/akt/12989576">https://www.riigiteataja.ee/akt/12989576</a></li> <li>- Joint waste plan of Audru, Tõstamaa, Varbla, Lavassaare and Koonga Parishes, available at: <a href="https://www.riigiteataja.ee/akt/12864995">https://www.riigiteataja.ee/akt/12864995</a></li> </ul>
<b>Instruments applied in the field of municipal waste and packaging waste</b>	
Legal instruments	<p><b>Landfill ban/restrictions/diversion targets:</b> From 1 January 2008, the prohibition of acceptance and deposit of unsorted municipal waste applies to all landfills [EIONET 2009]. The ban of landfill of unsorted municipal waste with basic requirements to the municipalities for organizing source separation of paper and cardboard, green garden waste and hazardous waste, as well as packaging waste through the public collection system have been enacted in 2008. Landfilling of non-hazardous waste had decreased by 20 % in 2008, due to higher landfill taxes and decreasing economy [EC 2012].</p> <p>For Biodegradable Municipal Waste (BMW), the NWMP gives a general priority to separate bio-waste from mixed MW; the NWMP suggests separate collection of garden waste in cities and enhances home</p>

composting in rural areas.

According to the NWMP a strategy for reducing BMW has been defined. Landfilled municipal waste must not exceed the following limits for biodegradable content:

- More than 45% by weight from 2010
- More than 30% by weight from 2013
- More than 20% by weight from 2020 [EIONET 2009]

The Estonian strategy to divert BMW from landfills uses two approaches:

1. BMW shall be collected separately in order to allow for recovery operations producing high quality products. The obligation for separate collection refers to bio waste and packaging paper waste.
2. A ban of untreated waste going to landfills [EIONET 2009]

Estonia has set the target dates four years later than those prescribed in the Landfill Directive, taking advantage of the provision granted to countries that disposed of more than 80% of their municipal solid waste in landfills in 1995. However, the targets are stricter than those in the Landfill Directive and would remain realistic only if the incineration of municipal waste is implemented in the coming years. The NWMP stipulates that an increase in the recovery of packaging plays an important role in reducing the amount of BMW deposited in landfills [ECT\_RWM 2008].

**Source separation:** The ban of landfilling unsorted municipal waste with basic requirements for the municipalities for organising source separation of paper and cardboard, green garden waste and hazardous waste, as well as packaging waste through the public collection system has been enacted since 2008 [EEA 2010]. See also information provided under *Landfill ban*.

**Producer's take-back of specific discarded products:** The national Packaging Act (2004) establishes inter alia the obligation to accept packaging material (take-back system). Packaging companies are required to accept, from the final user or consumer, sales packaging and packaging waste, or to arrange for such service based on a contract at another place of sale in the close proximity of the undertakings. The purpose of the measure is to minimise the landfilling of packaging waste and to optimise reuse. The instrument has been in place since 2004 [ETC-RWM 2008].

**Collection, reuse/refill and recycling targets:** The National Environmental Strategy (NES), adopted in 1995, set a benchmark to increase the share of waste recycling up to 50% of all municipal waste. The NWMP for 2003–2007 set objectives and targets for municipal waste. The main objectives in managing municipal waste are inter alia an increase in the recovery of municipal waste with the aim of recovering 30–40% of the waste [ETC-RWM 2008].

The Packaging Act (2004) sets targets for the recovery and recycling of packaging waste in accordance with the Packaging Directive [ETC-RWM 2008].

Since May 1, 2004, companies involved in packaging must guarantee the recovery of packaging waste to the following extent:

- at least 50 % annually of the total mass of packaging waste;
- by way of recycling, at least 25 % annually of the total mass of packaging waste and at least 15 % annually of the total mass of each type of packaging material.

From December 31, 2010, companies involved in packaging must guarantee the recovery of packaging waste to the following extent:

- at least 60 % annually of the total mass of packaging waste;
- by way of recycling, at least 45 % annually of the total mass of packaging waste and at least 15 % annually of the total mass of each type of packaging material.

	<p>According to Article 36 of the Packaging Act the recovery/recycling target (calculated from the amount 'put to the market' ) are from 01.01.2009 on the following (<a href="https://www.riigiteataja.ee/akt/104042012006#para36">https://www.riigiteataja.ee/akt/104042012006#para36</a> ) [EE MoE 2012]:</p> <ol style="list-style-type: none"> <li>1) 70 % of the total weight of waste glass recycling;</li> <li>2) 70 % of the total weight of paper and cardboard, with 60 % of the total weight of recycling;</li> <li>3) 60 % of the total weight of the scrap metal recycling;</li> <li>4) 55 % of the total weight of plastic waste, with 45 % of the total weight of waste plastics recycling plastic waste and 22.5 percent of the total weight of re-processed plastics;</li> <li>5) 45 % of the total weight of wood waste, with 20 % of the total weight of recycling</li> </ol>
<p><i>Economic and fiscal instruments</i></p>	<p><b>Landfill tax:</b> The landfill tax was introduced in 2005 (Environmental Charges Act). The landfill tax has been an essential part of the financial support scheme for environmental investments – including support to build new landfills and close 'old' ones [EC 2012]. This fee promotes the waste recovery and also contributes to financing waste management projects via Environment Investment Centre and local budget. It was collected by the state and after 2004 shared with the municipalities: 75% to local budget, and 25% to state budget of the local government [EIONET 2009]. However, this acts also as a disincentive for diverting municipal waste from landfills as in this way small municipalities lose revenues. The revenue from landfill tax differs significantly between municipalities and depends on several factors such as waste generation per capita, the share of organised waste transport among the population as a whole, the general income of the municipality etc. There are ideas for replacing it with a local waste management tax [ETC_RWM 2008].</p> <p>In the year 2009 the landfill tax rates for basic non-hazardous waste, including residual household waste were as follows [EC 2012]:</p> <ul style="list-style-type: none"> <li>– 10.0 € per tonne on compliant landfills</li> <li>– 20.0 € per tonne on non-compliant landfills</li> <li>– 30.1 € per tonne on old non-compliant landfills</li> </ul> <p>The Landfill tax for non-hazardous waste, incl. municipal waste, will be increased as following:</p> <ul style="list-style-type: none"> <li>– from 2011. of 1 January - 14.38 €/t,</li> <li>– from 2012. of 1 January - 17,25 €/t</li> <li>– from 2013. of 1 January - 20.77 €/t</li> <li>– from 2014. of 1 January - 24.86 €/t,</li> <li>– from 2015. of 1 January - 29.84 €/t;</li> </ul> <p>There are also landfill tax rates for <u>all</u> waste categories, as mining waste, all kind of hazardous waste etc., if waste is disposed, i.e. brought to the landfill or in case of mining waste, deposited on 'mining waste disposal facility' under the 2006/21/EC [EE MoE 2012].</p> <p>The level of the landfill taxes in place remains too low compared to other MS. The available Cohesion Policy funds might be better used to build the required infrastructure [EC 2012f] [EE ESI 2012a].</p> <p><b>Incineration tax:</b> Currently there is no incineration tax, as no incineration facility exists in Estonia, but one is under development (see section planned measures) [EE MoE 2012].</p> <p><b>Municipal waste user charge:</b> Estonia has a direct system of contracts between MW generators and MW collection and transportation companies. The 'User charge' is a fee for collection, transportation and disposal services and is paid directly to the company (which is usually a private-owned company). This fee includes all the waste management costs, also disposal costs (paid by waste collection</p>

companies to landfill operators for operation and closure of landfills) and the landfill tax (waste pollution charge, paid by landfill operators to municipality and state budgets 75:25). Waste collection companies are the receivers. Municipalities have the right to establish the limits of the fees (NWA §66) [EC 2012].

The average fee per person for public waste management service is 15.33 € per person per year. The actual fee varies among municipality and also depends on the type of containers used.

The maximum frequency of collection is once every 2 weeks. The municipalities also provide:

- a food waste collection twice a week in small buckets
- a weekly collection of plastic and cans in 60 l sacks
- a fortnightly collection of paper and card in a 140 l bin systems [EC 2012].

For more information see also “Developing new opportunities for municipal waste management in three Baltic States”: <http://www.recestonia.ee/jaatmed/eng2.pdf>:

**PAYT:** Estonia has introduced a system which is to some extent similar to PAYT scheme (municipally organized collection model). The actual system in Estonia works on the principle of ‘minimum service packages’ defined by the municipalities, the waste holder can choose if he needs more and then has to pay more. That means that the linkage, how the fees are related to the waste amounts, depends also from the package [EE MoE 2012]. The ‘pure PAYT’ model (weighting, or per exact volume) is not implemented in Estonia, as it would encourage all illegal activities, as dumping, bringing waste to the public containers (including residual waste to the public packaging waste containers) [EE MoE 2012].

**Packaging tax:** In Estonia, a packaging tax was implemented as a fiscal measure. The tax is imposed on packages of goods placed on the national market and includes domestic and imported packages [EC 2012c]. In Estonia, the Packaging Act provides for the use of economic instruments to guarantee the functioning of the systems for collection and recovery of packaging and packaging waste. These include the take-back obligation for packaging and the implementation of deposits and excise duty on packaging. Pollution charges for waste disposal and landfilling are set by the Environment Charges Act.

**Packaging excise duty:** The instruments concerning packaging waste separate collection and recovery are inter alia the packaging excise duty (introduced in 1997). The Packaging Excise Duty Act defines who must pay the excise duty imposed on packaging filled in Estonia, acquired in another EU Member State, or imported into Estonia, along with the rates of excise duty and the exemptions [EC 2012c]. The packaging excise duty must be paid only for the amount of packaging material that is missing from the foreseen recovery target [EC 2012]. Recovery of packaging has been promoted with the enforcement of the Packaging Excise Duty Act on alcoholic and non-alcoholic beverage packaging. If the enterprises, which produce or import these products fail to set up packaging and packaging waste collection or recovery systems for min. 60 % of the volume, they are charged excise duty. Enforcement of this economic instrument has been a strong stimulus for recovery of beverage, but this effects only part of packaging waste [EC 2012]. The following rates of packaging excise duty apply: glass and ceramics: 0.64 €/kg; plastic: 2.56 €/kg; metal: 2.56 €/kg; paper and cardboard, including composite cardboard: 1.28 €/kg; other packaging: 1.28 €/kg.

**Deposit refund systems:** Another instrument concerning separate collection and recovery of packaging waste is the deposit-refund system (introduced in 2005) [EC 2012]. The deposit scheme for glass and plastic packaging has been one of the successful waste diversion instruments. Around 250 million is being circulated in the deposit scheme. It is cost neutral for the producers of glass, metal and PET packaging and for retailers. Retailers collect both types of packaging and give them to the collection systems. It is important that no one in the system loses money. Producers pay a producers’ fee per unit. For producers it is cheaper to be a client of the deposit system. The deposit system is very successful and the collection rate is over 80% for PET bottles and over 90% for reusable glass, but only 40% for metal cans. The two main drivers of the success of the system are the financial incentives built into it

	<p>and the tradition of many years. In 2005–2006, the Environmental Inspectorate focused its efforts on checking more than 900 sales points and in this way contributing to the uptake of the scheme [ETC_RWM 2008].</p> <p><b>Penalties/fines:</b> In the Waste Act (§ 126. Deposit of untreated waste) following penalties are defined:</p> <p>(1) Acceptance of untreated waste, including mixed municipal waste which has not been sorted in compliance with the requirements of this Act in a landfill and deposit of such waste is punishable by a fine of up to 300 fine units.</p> <p>(2) The same act, if committed by a legal person, is punishable by a fine of up to 50 000 kroons and up to 32000 € since 2012 [EIONET 2009], [EE MoE 2012].</p>
<p><i>Administrative instruments</i></p>	<p><b>Cooperation agreements between municipalities</b></p> <p>In Estonia 226 municipalities are responsible to ensure MSW collection for which tenders have to be issued [EE MoE 2012]. A relatively new legal agreement provides the opportunity for municipalities to issue joint tenders for these regions to reduce the amount of tenders to be published [BiPRO 2007-2011].</p> <p>The generation of municipal co-operation is encouraged by the Centre of the Environmental Investments, receiving applications for financial support from the Estonian own ‘Pollutions charge’ based fund or EU Cohesion fund, which prerequisites, that in case of municipalities only municipal co-operations structures do qualify for application [EE MoE 2012]. But the generation of co-operations is still very low.</p> <p>There are different not institutionalized discussions and quarterly hold meetings between the Ministry of the Environment and Delegations of the Associations of the Municipalities going on, dealing more widely with the land and environmental issues, including waste management issues [EE MoE 2012].</p>
<p><i>Informative instruments</i></p>	<p><b>Eco-labelling scheme:</b> In the Packaging Act (RT I 2004, 89, 611) a requirement regarding the Eco Design for packaging waste is defined: Volume and weight of packaging has to be reduced to the minimum; Packaging has to be designed, produced and distributed in a way that reuse and recovery are possible [EIONET 2009]</p> <p><b>Information campaigns addressing certain target groups:</b> The Estonian MoE provided a short guide to the environment (Väike keskkonnateatmik) containing a section about packaging, organised workshops and meetings with actors of the packaging waste sector. Roundtable meetings presenting the goals of the Packaging Act and the obligations imposed by it have been held for the relevant professional organisations. The MoE commissioned a study on mixed municipal waste conducted by the Sustainable Estonia Institute revealed that about 30% of municipal waste is packaging waste [EE EnvReview 2010]. Education programme for school children and kindergartens was initiated in 2010 by the MoE on waste prevention and waste awareness (Let’s do it with Ferda<sup>5</sup>). This initiative put a start to a larger cooperation project “Let’s do it! My Estonia”, a volunteer based programme for waste reduction and awareness.</p> <p><b>Eco shopping guide/information:</b> There are on certain levels eco-shopping guides used, trying to promote both local and eco-food or other products, but also to reduce packages, trying to avoid ‘one-way’ packaging etc. [EE MoE 2012].</p> <p><b>Capacity building:</b> On capacity building several training events are launched, currently 10 modul based trainings ( 1-2 day each) for the representatives of the municipalities, but also for the private sector [EE MoE 2012].</p>

<sup>5</sup> <http://www.prewaste.eu/waste-prevention-good-practices/detailed-factsheets/item/250-09-acr-ferda-estonian-schools.html>



	<b>Awarding:</b> There are also several award schemes both from behalf of the private sector and also from State institutions, to highlight the remarkable result in waste avoidance/sorting/implementation of new technologies etc. [EE MoE 2012].	
<i>Others (to be specified as required)</i>	The Estonian MoE has signed four voluntary agreements with different companies and organizations. In principal there are no associated financial obligations to the parties of the contract. The Companies undertake to fulfill certain environmental obligations that are not directly required in the regulatory documents, but that significantly improve the environment [EIONET 2009].	
<b>Municipal waste generation in 2010 as available at EUROSTAT in 2012</b>		
	<b>MS</b>	<b>EU 27</b>
<i>Total amount of MW generated (in kt)</i>	417	252,095
<i>Total amount of MW generated per capita (in kg)</i>	311	502
<b>Collection infrastructure (municipal waste including bio-waste and packaging waste)</b>		
<i>Collection coverage for MW (in %)</i>	79 94-95 (in 2011) [EE MoE 2012]	96.6
<b>Collection systems and related infrastructure</b>		
<p><b>Collection coverage of urban, rural and remote areas:</b> According to Eurostat approximately 79 % of the population was connected to waste collection services, predominantly in urban areas, in 2010. The Estonian MoE stated that this figure is from a study carried out by the statistical department in 2001 and since then no new evaluations were carried out and the figure from 2001 is transferred to EUROSTAT every year. The waste collection system changed step wise since 2005 and currently all inhabitants should be covered by municipal waste collection services. Because of the huge number of municipalities the exact number is difficult to evaluate and the MoE estimates the percentage connected to waste collection services to 94-to 95%. Nevertheless, they estimate that most of the waste which is not collected directly is thrown in public bins or containers and only about 1% ends up in dump sites (littering) and/or is burned without appropriate flu gas treatment system, leading to risk to human health and hazardous emissions to the environment [EE MoE 2012].</p>		
<p><b>Organisational aspects (involvement of private/public operators):</b> In Estonia 226 municipalities are in charge to ensure MSW collection for which tenders have to be issued (Estonian Waste Act) to private companies who collect the waste. Since 2007 municipalities have a legal option, to organize the municipal waste collection in a way that all waste holders should pay their fees to the municipality instead of paying them directly to the waste management company. This model is already in the Waste Act and it would allow them to calculate all needed costs to the one basic fee (then to differentiate it to the service packages). That would mean, they could collect the money directly from the waste generators and would not have to rely only on State organized collections and re-distribution models, what the Environmental Charge model would be [EE MoE 2012].</p> <p>In the frame of developing the new WMP 2014+, ways should be evaluated to improve the current situation of municipal waste management. The municipalities are in average rather critical, complaining, that the Waste Act has just put them obligations, but does not give the finances. On that respect there is the option to introduce the charge for mixed municipal waste treatment (recovery), to keep motivation for more recycling trough the price signals, but also to find some additional finances for the municipalities [EE MoE 2012].</p>		
<p><b>Municipal waste collection schemes:</b> A so called “municipally organized collections model” has been implemented step by step since 2005 and entails the following tasks:</p> <ul style="list-style-type: none"> <li>– Set up a list of waste holders (companies, households) according to the register;</li> <li>– Define service packages (volume of collection) on waste management including terms for source separation</li> </ul>		

(households are free to choose a service package);

- Define collection(s) area(s) up to 30,000 inhabitants
- Organize a tender and choose the best service offer, within a contract period which can be up to 5 years; then only the contract partner is allowed to collect the municipal waste in this specific area.

The service fees are fixed in the contract between the municipality and the contractor, differentiated in different service packages, whereas the minimum package is for the given type of house mandatory, i.e. each waste holder has to choose a package. The aim of municipally organized collections was clearly to join as much as possible waste holders to the collection scheme. The outcome with a remarkably lower level of service fees has been as bonus. In several areas the households pay around 1 €/month, although the average is 4-6 €/month. Those fees are paid directly to the private service provider [EE MoE 2012].

A relatively new legal agreement provides the opportunity for municipalities to issue joint tenders for these regions to reduce the amount of tenders to be published. The system that tenders are issued by municipalities is criticised as the following deficits were observed: The free-market is limited by only few waste companies and no real competition is given; and the system is not flexible and cannot react in case a service provider fails to offer a service on the expected level [BiPRO 2007-2011].

In 2007, Estonia had 29 waste stations, while in 2008, there were already 61 waste stations and collection points for recoverables in domestic waste [EE EnvReview 2010].

In Estonian there are about 100 recycling centres in 2012, so called 'waste stations' (jäätmejaam), mainly built with the State or EU support (80-90 %), but operating costs are covered by municipalities (ca. 20-40,000 €/y per facility) [EE MoE 2012]. They have been established for special waste, such as waste in large volumes, waste electrical and electronic equipment, hazardous waste from households, waste tyres, etc [EC 2012b]. The coverage of the cost has been considered the part of the landfill tax so far, but as this is ending up, the gap in financing would negatively affect the normal operation of the waste stations in many municipalities, which are a very important part of source separation and thus recycling [EE MoE 2012].

**Packaging waste collection schemes:** Since 2002, there is established a separate collection for packaging waste [EE EnvReview 2010]. Under the Packaging Act (2004) there are four packaging organisations so far accredited by the Ministry of the Environment. [ProEurope EE 2012], [EE MoE 2012]: the Estonian Recovery Organisation (ETO) – Green Dot Estonia, Estonian PackCycling (EPC) and the Producer Responsibility Organisation (TVO) [EE MoE 2012] and the Eesti Pandipakend LLC (EPP) is established for the purposes of organising the recovery of packaging subject to the payment of a deposit [ETC\_RWM 2008].

The three container collection organisations are obliged to organize a country-covering collection network and to agree with each municipality, how to collect (plastic bags on spot or public containers) and where to collect (sites for the containers etc). In a number of cases the municipalities do not have such agreements and the collection schemes differ widely from place to place. In several municipalities the waste collection companies also offer to rent a packaging waste container for the one multi storage houses (taking into account, that by idea in radius of some hundred meters there should be one public). Quiet many houses use such a service, although they have to pay for the service, which is available free of charge on range of short walk, but not necessarily near the house [EE MoE 2012].

According to [ProEurope EE 2012] for collecting waste from packaging without a deposit, recovery organisations shall ensure the following density of points of collection:

- 1) at least one point of collection within 500 metres from waste holders in urban areas with a population density of more than 1000 people on one square kilometre;
- 2) at least one point of collection within 1000 metres from waste holders in urban areas with a population density of more than 500 people on one square kilometre;
- 3) one point of collection for 500 people in settlements on the territories of local governments where the population density is less than 500 people on one square kilometre.

**Separate collection (paper, plastic, metal, glass and bio-waste):** The Ordinance on Municipal waste sorting (2007) stipulates, that the municipalities have the obligation to organise the separate collection of the park- and garden waste. Usually this is done via the waste stations (public amenity sites). The collection of kitchen- and food waste is for the municipalities voluntary, so far Tallinn and some smaller towns and municipalities have implemented the option and all multi-storage houses should have a container for kitchen-food waste separate collection [EE MoE 2012]. But the uptake of the separate collection of kitchen waste is

expected to be slow because of lack of tradition. Traditional schemes like the deposit scheme for glass and plastic and the separate collection of paper are successful because of the habits of the population [ETC\_RWM 2008].

The exact amount of the actual amount of park waste generated is not reported, and it is difficult even to estimate the actual generation and therefore also the separate collection rate. From the reported amounts just a fraction still goes to the landfill (if very contaminated), as landfill gate fees (50-55 €/t) are here a contra-motivation. Often the park- and garden waste from the cemeteries is the most 'mixed waste' similar waste type [EE MoE 2012].

From the total kitchen waste so far ca 15 % is source-separated and goes to composting facilities. In Tallinn there are sometimes serious problems with the quality of the separately collected bio-waste [EE MoE 2012].

Waste management in rural areas addresses the increase of source separation of biodegradable waste and composting in gardens [ETC\_RWM 2008].

**Statement on sufficiency/insufficiency of waste collection:** A major challenge identified in Estonia is to reach the new recycling targets set by the WFD; separate waste collection will have to be implemented and considerably improved. The conditions for separate collection should be improved by information campaigns and infrastructural investments including adopted collection schemes [WMP 2007-2011].

#### Treatment infrastructure for municipal waste

Self-sufficiency for disposal of total waste (in %)	100 (2009) [EC 2012b]	
<b>Treatment rates in 2010 as available at EUROSTAT in 2012; additional data for 2011 provided by EE MoE 2012</b>	<b>MS</b>	<b>EU 27</b>
Recycling rates of municipal waste (in %)	14.3	24.9
Composting rates of municipal waste (in %)	9.5	14.7
Composting rate of municipal waste (in %) in 2011	7.8 <sup>6</sup> [EE MoE 2012]	-
Recovery rates of municipal waste including incineration with energy recovery (in %)	0.0	17.2
Recovery rates of municipal waste including recycling, composting and incineration with energy recovery (in %) in 2011	34.9 <sup>7</sup> [EE MoE 2012]	-
Incineration rates of municipal waste (incineration without energy recovery) (in %)	0.0	-
Incineration rates of municipal waste (incineration without energy recovery) (in %) in 2011	0.48 <sup>8</sup> [EE MoE 2012]	-
Disposal rates of municipal waste (in %)	76.5	38.2
Disposal rates of municipal waste (in %) in 2011	57.3 <sup>9</sup> [EE MoE 2012]	
<b>Information on treatment facilities, compliance/BAT and capacity</b>		
Pre-treatment facilities	Two mechanical biological treatment plants for municipal waste are installed with a capacity of ca 250 th t/year, primary aim is selling the high caloric fraction to cement kilns for co-incineration [EC 2012b], [EE MoE 2012].	

<sup>6</sup> own calculations on the basis of data submitted by the MoE for 2011

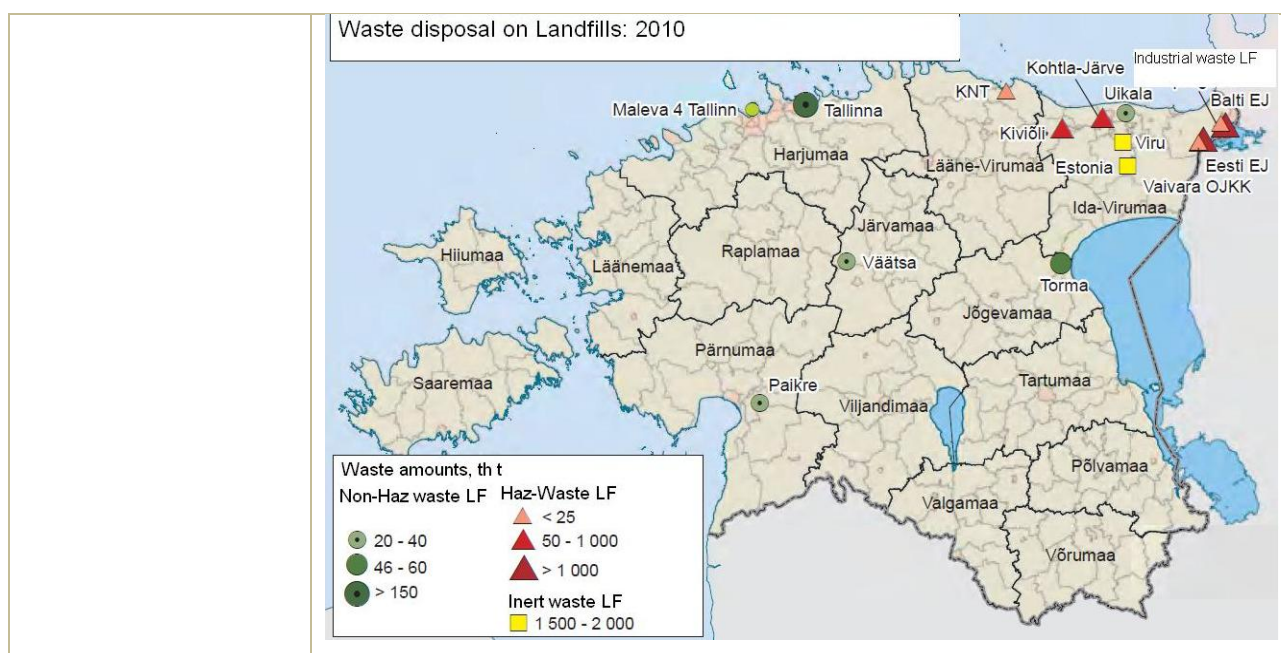
<sup>7</sup> own calculations on the basis of data submitted by the MoE for 2011

<sup>8</sup> own calculations on the basis of data submitted by the MoE for 2011

<sup>9</sup> own calculations on the basis of data submitted by the MoE for 2011

<i>Recycling facilities</i>	<p><b>Composting:</b> There are several composting facilities for park waste, less for kitchen- and food waste, as those require also recognition under the Animal by-product Regulation on behalf of the Veterinary Board. In general the current treatment capacities are 2-3 times bigger, than actual treated amounts. The Animal by-product Regulation recognition means, that the operators have to guarantee certain temperature profile, usually whether closed reactor composters in first stage or covered and computers controlled applications [EE MoE 2012].</p> <p>In rural areas, home composting is developed, but unfortunately systems for the separate collection of garden waste are not developed so far. In Tallinn, the measure was introduced in 2007 [ECT_RWM 2008].</p> <p><b>Paper recycling:</b> For paper recycling there are limited capacities in Estonia, paper is mainly exported to Lithuania etc. Some medium scale projects are in preparatory stage [EE MoE 2012].</p> <p><b>Glass recycling:</b> For glass recycling on glass packaging factory exists, but it requires a very good quality (the quality from the glass collected through the deposit system is good, but the quality from the glass collected through the containers is mostly not good enough (mixed glass)) and does not accept the green glass. Some of the glass is used to produce street pavements, stones etc, the rest is still exported. Several other recycling projects are in a certain stage, getting 50 % support from the EU Cohesion program. But they are still unable to proceed, as the unclarity around the waste sector is still too big for the financial institutions to provide rest of the financing [EE MoE 2012].</p> <p><b>Plastic recycling:</b> There are several smaller recyclers, also some of the mixed plastic etc, and new capacities are installed due to the EU support. Some materials are still exported, not only because of lack of capacities locally, but because of higher prices outside the EU [EE MoE 2012].</p> <p><b>Metal recycling:</b> No facilities for metal recycling exist in Estonia (except the lead-acid accumulators recycler), all waste is exported [EE MoE 2012].</p>
<i>Incinerators with energy recovery</i>	<p>Near Tallinn a municipal waste incinerator (capable to accept several other waste types also) is under construction with the nominal capacity of ca. 220 kt/y and will come into operation in summer 2013. The investment is ca 105 M€ (no State or EU support) and it will fully comply with the EU waste incineration requirements. The main contractor is the French company CNIM. The owner is the 100% State owned energy Company Eesti Energia Ltd. [EE MoE 2012].</p>
<i>Incinerators without energy recovery</i>	<p>In 2008 no incineration facility in Estonia was available [WMP 2007–2011], but there are co-incineration in 2011 amounting up to 0.48 %<sup>10</sup> if treatment of municipal waste [EE MoE 2012].</p>
<i>Landfills for non-hazardous waste</i>	<p>Estonia closed all non-compliant landfills by 16 July 2009. All of the five existing landfills for non-hazardous waste were constructed between 2000 and 2006 and comply with the requirements of the Landfill Directive [EC 2012b], [EE MoE 2012a].</p>
<i>Map with all major installations</i>	<p>The following figure shows the operating landfills in Estonia in 2010. In April an additional landfill was permitted to be constructed. The disposal capacity is estimated by national authorities to be sufficient for the current disposal rate but as such shall and will decrease; overcapacity in landfills is forecasted [BiPRO 2007-2011], [EE MoE 2012].</p>

<sup>10</sup> own calculations on the basis of data submitted by the MoE for 2011



### Infringement procedures and court cases related to WFD and Landfill Directive

Number of infringement procedures and cases brought to the CJEU

Number of procedures: 1

Number of court cases: 1

### Fulfilment of targets related to biodegradable waste going to landfills

Fulfilment of target of the Landfill Directive on biodegradable waste going to landfills

Target fulfilled; Reduction target status: 48.4 % in comparison to 1995 [EC 2012a]

### Statistics on packaging waste<sup>11</sup>

	Plastic packaging waste		Paper packaging waste		Metal packaging waste		Glass packaging waste		Total packaging waste	
	MS	EU	MS	EU	MS	EU	MS	EU	MS	EU
Total amount generated (in kt)	53	14,590	57	29,783	10	4,544	37	16,006	162	76,593
Total amount generated per capita (in kg)	39.2	29.2	42.7	59.5	7.2	9.1	27.9	32	120.6	153.1
Share of total packaging waste (in %)	32.6	19	35.4	38.9	6.0	5.9	23.2	20.9	100	100
Recycling rates (in %)	22.7	32.2	69.1	83.4	36.1	69.5	89.9	67.6	57.2	62.5
Recovery rates including incineration with energy recovery (in %)	27.5	59.7	69.1	90.7	36.1	69.9	89.9	67.6	58.9	51.1

<sup>11</sup> Eurostat waste statistic data are partly diverting from the national statistic data for these waste streams

<i>Disposal rates (in %)</i>	72.5	40.3	30.9	9.3	63.9	30.1	10.1	32.4	41.1	25.4
<b>Fulfilment of target of the Packaging Directive on recycling [EC 2012c]</b>	n/a <sup>12</sup>	n/a	yes <sup>13</sup>	n/a	n/a <sup>14</sup>	n/a	n/a <sup>15</sup>	n/a	n/a <sup>16</sup>	n/a
<b>Next steps planned by CA</b>	<b>Measures planned</b>								<b>Implementation likely?</b>	
<i>Economic instruments to move up the waste hierarchy</i>	The introduction of the tax for municipal waste incineration and MBT (equally, as those two options are in sharp competition for mixed municipal waste, which endangers the implementation of the waste hierarchy in coming years) is therefore considered as one option, but nothing has been decided so far. The aim of this tax would be to equalize the economic conditions, as MBT and incineration both seem to offer remarkably lower treatment (20-35 €/t) prices in comparison to the current landfill gate fees (ca 50-55 €/t) and such a development would weaken the motivation to deal with source separation and recycling. Secondly, the income from such a charge could be an alternative to work out some support model, if the landfill tax as revenue for municipalities will end-up [EE MoE 2012].								Implementation depends on negotiations with operators of incinerators	
<i>Collection</i>	Detailed measures will be defined within the WMP 2014+ [EE MoE 2012]								yes	
<i>Minimise landfilling</i>	Stepwise rising of the landfill tax [EE MoE 2012]; Construction of MBT facilities and an incinerator so that more than sufficient capacity for municipal waste is provided in 2014 at the latest. It is expected that from 2014 on only incinerated bottom ash (if no other alternative is found) and MBT 'fine residue' is landfilled. That would mean the drop of 'municipal waste related waste' landfilling ca 5-6 times from the 2010 level [EE MoE 2012]								yes	
<i>Treatment</i>	Continuous improvement of technical conditions for waste processing and recycling [BiPRO 2007-2011]								yes	
<i>Treatment</i>	Extension of the municipally organized collection scheme, with the aim of 'near 100 %' coverage of all waste holders, strengthening of the supervision systems, better campaigns etc. [EE MoE 2012]								yes	
<i>Enhance involvement of municipalities</i>	No clear options, will be modified with the WMP 2014+ [EE MoE 2012]								yes	
<i>Awareness campaigns</i>	No clear options, will be modified with the WMP 2014+ [EE MoE 2012]								yes	
<i>National Legislation</i>	Adjustments of some details of the already implemented new WFD (for example - how to imply better the waste hierarchy, connections to the waste permitting procedures, how to imply more precisely the 'principle of proximity' etc.) [EE MoE 2012]								yes	

<sup>12</sup> Transitional period for achieving target until 31.12.2012, however in 2008 already 22.0% achieved, therefore it is expected that the target will be achieved in 2012

<sup>13</sup> Transitional period for achieving target until 31.12.2012, however in 2008 the target already achieved

<sup>14</sup> Transitional period for achieving target until 31.12.2012

<sup>15</sup> Transitional period for achieving target until 31.12.2012

<sup>16</sup> Transitional period for achieving target until 31.12.2012

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<sup>17</sup> Searchable at

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