

## Activities of the state and local governments in the collection and recovery of municipal waste (National Audit Office of Estonia)

### AUDIT DESIGN MATRIX

Main and sub questions	Criteria	Methodology	Existing information about the current situation
<b>1. HAVE the actions by governments related to waste prevention, collection and recycling been successful?</b>			
1.1 Has the government set clear goals and rules and given financial support that would ensure the reduction and recycling of municipal solid waste (MSW)?	The government has set clear rules, which are understandable to every party, and adopted an action plan for waste reduction and recycling.	<p><b>Documentary analysis:</b></p> <p>*National waste plans (from the years 2002-2007, 2008-2013 and 2014-2020) and their action plans, finding the set goals and deadlines</p> <p>*National plan for waste prevention. The set goals and actions mentioned in the document (which goals are set, are there any deadlines, etc.)</p> <p>*Waste data analysis using the national database (data about different types of waste analysed: MSV, packaging waste, the recycling rates of MSV, PW, biowaste; data about waste sent to landfills)</p>	<p>The total recycling rate is 31%. Estonia will not meet the target set by the EU to recycle 50% of MSW by the year 2020.</p> <p>To achieve the goal, we must increase the amount of biowaste recycled. The Ministry of Environment estimates that we need to increase the amount of recycled MSW by 5% every year.</p> <p>This kind of rapid growth has never happened before. The expert opinion is that today's recycling rate reflects the situation on the market.</p>
	The regulation supports waste prevention and recycling.	<p><b>Documentary analysis:</b> Waste Act, Packaging Act, Environmental Charges Act and analysis of their sub-acts. Whether the acts support the principles of the waste hierarchy.</p>	

		<p><b>Analysis of the packaging tax principles</b> (which taxes are in use to encourage the implementation of the waste hierarchy principles)</p> <p><b>Analysis of international practices</b> (which incentives are different countries using, for example, incineration tax (activities on the lower level of the waste hierarchy, the higher the taxes), pay-as-you-throw)</p> <p><b>Analysis of the legal framework</b> in place to encourage higher level waste management activities (e.g. is there an easy system in place for using waste as a resource, is it easy to bring goods made from recycled material to market)</p> <p><b>Analysis of the costs of the organised waste collection services</b> (organised by the LG based service vs. the service from the free market) Analysing whether there are clear rules in place to ensure clarity concerning service cost calculation</p> <p><b>Interviews:</b> Ministry of Environment, Ministry of Economic Affairs and Communications, Ministry of Finance, Environmental Investment Centre (EIC), Institute of Sustainable Development</p>	<p>All waste types (paper, beverage cans, some packaging waste) which have market value are being recycled. The recycling rate can only grow if the less valuable waste types are recycled by waste generators (household organic waste)</p> <p>The representative from the Tallinn recycling plant estimates today's collection system is not helping to sort and collect waste separately. The amount of mixed waste is around 90%.</p> <p>The government has not done much to help reduce waste generation. Also, it's difficult to estimate.</p> <p>The government has focused on the narrow picture (recycling only one type of waste), but there are many opportunities to create a demand in the market. For example, putting together</p>
	<p>The government has implemented the subsidising scheme to enhance waste prevention and recycling.</p>	<p><b>Analysis of the subsidies available</b> for: environmental sector, renewable energy sector, cogeneration of heat and power plants</p>	

		<p>(which subsidies are encouraging and which are hindering the increase of waste prevention or recycling?)</p> <p>Analysis of the Environmental Subsidies programme in the EIC and in the EU. Three programmes are assessed:</p> <ol style="list-style-type: none"> <li>1. The programme for raising awareness and environmental education</li> <li>2. The EIC environmental programme for municipal waste</li> <li>3. The EU funding programme for waste collection, recycling, reuse</li> </ol> <p><b>Interview:</b> Ministry of Environment, Environmental Inspection, EIC, Waste Handlers</p>	<p>organic waste and sewage sludge to produce biogas. This would motivate parties to collect biowaste separately and would help us to achieve the recycling goals for the country.</p>
	<p>Whilst making changes in waste management rules, the government has analysed the influence of the changes to waste management in local governments. The changes made were justified.</p>	<p><b>Analysis of draft acts and protocols from parliament</b> about the following changes made:</p> <ul style="list-style-type: none"> <li>• Creating the organised waste collection system</li> <li>• Not allowing local governments to offer the organised waste collection service</li> <li>• Reforming the organised waste collection system</li> </ul> <p>Before the government made changes in the system, the following aspects were assessed:</p> <ul style="list-style-type: none"> <li>• Availability and accessibility of the service</li> <li>• Cost of the service</li> <li>• Environmental impact</li> <li>• Competitive market</li> <li>• Development of waste sorting and recycling</li> </ul>	

		<ul style="list-style-type: none"> <li>• Effect on investments (viability of the recycling plants in local governments)</li> </ul> <p>Has the government assessed the influence of the changes after they have been made and adopted?</p> <p>Analysis of the assessments made by an independent institute about the influences of the changes in legislation</p> <p>Interviews: Ministry of the Environment, he institute</p> <p>Analysis of the reports on the adoption of the waste plan</p>	
<p>1.2 Have the roles of the state and local governments been set clearly and do governments understand their task of achieving strategic goals?</p>	<p>The tasks for the central government and local governments are defined clearly in the legislation.</p>	<p><b>Analysis of the</b> waste act and other relevant legal acts (Constitution, Local Government Organisation Act)</p> <p><b>Assessing</b> the tasks with a view to allocating certain tasks to the central government and others to local governments</p> <p><b>Analysis</b> of the cases from The Estonian Supreme Court related to waste issues</p> <p>Interviews: Ministry of the Environment, Local governments</p> <p><b>Conduct a poll</b> among local governments consisting of a series of questions about how their waste management is organised and analysing the costs of waste management, supervision, organised waste management, recycling and dumping</p> <p>Analysis of waste management costs in Local Governments</p>	<p>The Constitution of Estonia, Local Government Organisation Act and Waste Act declare that organising waste management is the core task of local governments. There should be enough possibilities for LGs to make strategic decisions and they should have enough resources to fulfil the tasks. In many aspects, the tasks are not clear and local governments don't have enough freedom to make strategic decisions.</p> <p>There were some fundamental changes made to</p>

	As a result of tasks not being specified, no set targets will be met.	<b>Interviews:</b> Ministry of the Interior, Ministry of the Environment, Local Governments <b>Analysis</b> of the result of the poll in aspects of supervision, registry of waste holders, organised waste management and recycling	the Waste Act which limit local governments' possibilities to fulfil the given tasks. As a result of the vague aspects of the Waste Act, LGs interpret the tasks differently and the organisation of waste management varies. Also, LGs have pointed out that there is a lack of financial resources for organising waste management (no right to set waste tax, reduced sums from depositing waste in landfills, etc). Many LGs find it difficult to calculate the exact costs of waste management due to difficulties in financial administration.
	The tasks which are intrinsic to central governments are financed by the central government.	<b>Interviews:</b> Local Governments (if there are any) Ministry of Finance Ministry of the Interior <b>Analysis</b> of the result of the poll in aspects of supervision, registry of waste holders, organised waste management and recycling Analysis of the cost of waste management	
1.3 Has the infrastructure built for sorting (for public use) and recycling (end users) waste met its goals?	Waste infrastructure (waste stations for public use and recycling plants) have been built according to strategic documentation, the effectiveness of which has been assessed.	<b>Analysis</b> of strategic documents (waste management plan and energy sector management plan) to find out whether the infrastructure that has been built is effective (is it under or over designed considering the amount of waste generated in the area) <b>Interviews:</b> Ministry of the Environment Environmental Investment Centre	Local governments and the private sector have blindly made investments into the waste infrastructure without considering the existing infrastructure and the amount of waste generated in Estonia. Many infrastructure

	<p>The infrastructure built for sorting and/or recycling waste has met the goals – the amount of waste received. The site is open for public use (including on weekends)</p>	<p><b>Analysis</b> of the selected funded projects (Environmental Investment Centre) – applications, reports and final assessments  <b>Analysis</b> of the waste stream received in waste stations. Comparison of the planned amount and actual amount of waste received, using the data collected by the Environmental Inspection and the data from the registry of waste permits  <b>Analysis</b> of the conditions set by the EIC for project funding  Analysis of the practice of waste sorting and collection in five EU member states</p>	<p>objects are oversized and are too big, considering the amount of waste they actually receive.</p>
	<p>The waste sorting and recycling stations are working efficiently.</p>	<p><b>Analysis</b> of the business plan of the waste station, annual financial reports, research papers (if they exist)  <b>Interviews:</b> Local governments, the EIC, Waste Managers</p>	
	<p>The waste sorting and recycling stations are being used for their intended purpose.</p>	<p><b>Analysis</b> of the projects funded (applications, reports, final assessments)  <b>Analysis</b> of the reports from Environmental Inspections visiting the sites  <b>Analysis</b> of waste station reports (waste streams, amounts of waste, etc.)</p>	
	<p>Waste stations are accessible to the public – the location of the waste station is at least 10-20 km from every household and is easily accessible. If not, the collection of sorted waste is otherwise organised.</p>	<p><b>Analysis of Geodata Info System</b> – mapping the locations of waste stations to find out how many households are not in the waste station (10-20km) service area  Data collection from the relevant databases   <b>Conduct a poll among citizens</b> asking whether the waste stations and the service of handing over sorted waste is accessible and user-friendly</p>	

1.4 Does the collection system for package waste help to improve waste sorting?	The proportion of package waste in municipal solid waste is reducing.	<b>Analysis of the research paper</b> by the Stockholm Environment Institute Estonia about waste generation and the contents of the municipal solid waste <b>Analysis of the statistical data</b> about package waste generated and collected	
	During the last five years, there has been an improvement in the collection and reuse of package waste.	<b>Analysis of the recommendations from the NAO Estonia</b> audit about package waste Information from local governments	
	The locations of package waste containers follow the rules set out in the Package Law.	<b>Analyses of Geodata Info System</b> – mapping the locations of package containers to find out how many households do not have access to the containers	
<b>2. Have local governments organised waste collection in a way that ensures the maximum amount of municipal solid waste is collected and recycled or reused?</b>			
2.1 Have local governments created the regulation and strategic documents for maximising waste sorting and collection?	The local governments' development plan includes waste management and covers the amount of waste generated, different types of waste (paper, glass, organic, etc.), the origin of waste and the future trends of waste generation.  The strategic document describes direct actions on how to prevent waste and sort collected waste.	<b>Interviews:</b> Local governments <b>Analysis of the strategic documents</b> of the local governments (waste plans, development plans)	The auditing of local governments can only be done by assessing the compliance. The NAO Estonia cannot carry out the performance audit in local governments. All the criteria are based on the rules in the National Waste Act, the local governments' waste plan or the local governments' waste handling rules.
	Local governments have set the rules for waste collection.	Analysis of local governments' waste handling rules	

	<p>In densely populated areas, local governments have made the subscription to the organised waste transport service obligatory for all households.</p> <p>Local governments have organised the collection of municipal solid waste and chosen the recycling methods following the waste hierarchy (prefer reuse and recycling).</p>	<p>Analysis of LGs' waste handling rules, LGs' waste plan and LGs' general plan (to detect the densely populated areas set out in the general plan)</p> <p><b>Analysis</b> of local governments' <b>waste plan</b> and local governments' <b>waste handling rules</b>  <b>Analysis of the public procurement</b> process organised by local governments (conditions set for waste collectors and recyclers)  <b>Analysis of the capacity and the recycling methods</b> of the recycling plants the local governments have chosen to send the collected waste from their territory  Interview: local governments</p>	
2.2. Have local governments organised waste collection according to law?	<p>*The Local government has organised waste collection and has used public procurement to find the service provider.  *The fee for waste collection follows the rules determined by a local government's council.  *Waste collection covers every area in which the service is obligatory.</p>	<p><b>Analysis</b> of LGs' Waste Management Act  Interviews with local governments  Analyses of the public procurement documents  Analyses of the documentary related to waste fees  Analyses of the contract drawn with the waste collection service provider to find out what kind of rules have been implemented</p>	
2.3. Do local governments have an overview of their waste generators and their activities?	<p>*LGs have created the waste generators' registry.  *Every waste generator is registered in the registry.</p>	<p>Interviews with LGs  IT systems analysis  Cooperation with Tallinn Technical University who developed the methodology for locating the missing waste generators (Geodata analysis and the site visits)</p>	<p>Local governments have created the registries, but the registries are incomplete. There is not enough information about the waste generators who are not included in the registry and</p>



			therefore not included in the waste collection system.
<b>3. Does the supervision organised by state and local government guarantee that municipal solid waste is collected and recycled?</b>			
3.1.Does the state have credible information about the waste collected and recycled?	Information about waste collection systems guarantees that the information collected from waste collection service providers and local governments is correct.	<ul style="list-style-type: none"> <li>*Analysis of the waste law and other legal acts which regulate waste information collection</li> <li>*Analysis of the waste permit registry and waste data collected</li> <li>*Interviews with the supervisory bodies (Environmental Inspection, Local Governments, Police and Border Guard Board)</li> </ul>	The data collection system does not allow to carry out operative controls about the correctness of the waste data to be made. The data from waste management companies is delayed. It is easy to give misinformation about recycling activities. Statistical information about recycling activities varies in states' registries, and the information sent to the European Union may not be correct.
	The methodology of the statistical information collection and data processing of the waste generated gives the correct information, and the information is comparable with that of other countries in the European Union.	<ul style="list-style-type: none"> <li>*Analysis of the methodology of waste data collection to find out why the statistical information in the state's registries varies</li> <li>*Analysis of the academic studies about statistical data processing</li> <li>*Interviews with the Environmental Department responsible for data processing</li> </ul>	
3.2 Does the supervision over waste management executed by the state guarantee that 50% of municipal solid waste is recycled?	The result of the state supervision is that the municipal solid waste, which is collected separately, is not burnt or used as a source of waste fuel, but is recycled	<ul style="list-style-type: none"> <li>*Analysis of waste data in the national registry about the recycling and export of waste.</li> <li>*Analysis of the documentation Environmental Inspection has collected on the activities of waste management companies</li> <li>*Interviews with the state supervisory body</li> </ul>	The state does not control whether waste management companies recycle the amounts they declare.
	The supervision is efficient and there is less littering as a result.	<ul style="list-style-type: none"> <li>Analysis of the Environmental Inspection's annual workplan and the complaints received</li> <li>Analysis of the data about littering and clean-up activities (data from the Forest management centre and Environmental Agency)</li> </ul>	
3.3 Do local governments	Local governments have created the supervision system and		

supervise waste management in their territory?	execute supervision over waste generators and waste collection companies.		
<b>4. Are people motivated to sort waste and hand over the collected waste?</b>			
4.1 Are people aware of the necessity of waste sorting?	People know that sorting waste is important and they know where and how they can hand over the separately collected waste.	Conduct a poll to find out about the awareness of people and their recycling habits. Also find out whether people are happy with the waste collection service and whether they would be willing to pay more for a better service.	Earlier research showed that people's awareness of the sorting and collection of waste separately is low.
	The state and local governments organise awareness campaigns.	Analysis of the information from the media and Ministry of Environment and local governments' workplans about the campaigns.	
4.2 Do people sort waste and are they economically motivated to do so?	People sort waste daily and they hand over the sorted waste.	Conducting a poll to find out people's behaviour related to waste sorting	
	People are motivated to hand over the sorted waste; the collection system is user-friendly and cost-effective enough to encourage people to participate.	Conducting a poll to find out about the collection system and people's motivation regarding waste sorting Interviews with Local Governments and government bodies	