



TALLINNA TEHNIKAÜLIKOOL
TALLINN UNIVERSITY OF TECHNOLOGY

FACULTY OF CIVIL ENGINEERING
DEPARTMENT OF ENVIRONMENTAL ENGINEERING

CREATING COMPOST CERTIFICATION SYSTEM IN ESTONIA – PROGRESS AND SETBACKS

**Komposti sertifitseerimisskeemi loomine Eestis – saavutused ja
tagasilöögid**

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Student: Marit Liivik

Supervisor: PhD Viktoria Voronova

Co-supervisor: Margit Rüütelmann

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Introduction

When Estonia became a member of The European Union in 2004 the requirements and targets for waste handling and recycling limit values were set. Since then The Regulations and Directives have become tougher and stricter year by year. One of the key requirements for Member States from the European waste management regulations is to reduce the biodegradable waste disposal. The easiest and cheapest way to recycle biodegradable waste is composting – which is the most popular method used by the biggest waste management companies.

The Directive 2008/98/EC on waste (Waste Framework Directive) introduced a waste management hierarchy (Figure 1) which EU Member States have to follow. It encourages to develop and implement end-of-waste criterias for certain waste types including biodegradable waste. The waste hierarchy sets most preferable treatment options as waste prevention (using products longer, re using), and to avoid waste disposal (landfilling). Landfilling of biodegradable waste and its decomposition causes landfill gas and landfill leachate.



Figure 1 Waste Hierarchy (European Parliament, 2008)

The first biggest step in the area of waste handling and recycling for Estonia was closing all landfills which were not in compliance with The European Union Directive requirements. As of March 1999, the Landfill Register had data on 565 landfills, including 351 municipal landfills, 131 burial places for animals, 83 industrial waste dumping sites and the landfills for waste from oil shale mining and processing in North-East Estonia (Review of Estonian..., 2004).

Today there are five landfills which meet European Union Landfill Directive. These landfills are distributed all over Estonia:

1. Paikre Landfill
2. Tallinna Recycling Centre
3. Torma Landfill
4. Uikala Landfill
5. Väätsa Landfill

Before the separate collection started in 2008, biodegradable waste formed a bigger part of the municipal solid waste. According to The Waste Act from 1 January 2008, unsorted waste could not be disposed to landfill to minimise negative impacts of landfilling (ground water and surface water contamination, contamination of soil, methane from decomposition).

Joining The European Union also affected the requirements for biodegradable waste handling. In June 2001 Estonia accepted a regulation number 34 „The landfill construction, operation and closure“ which was driven by European Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste. This regulation set high targets for biodegradable waste:

Limit values for landfilling of biodegradable waste in per cent:

- 1) Not more than 45 per cent since 16 July 2010;
- 2) Not more than 30 per cent since 16 July 2013;
- 3) Not more than 20 per cent since 16 July 2020 (Riigi Teataja, 2004)

Achievement of these targets depend on implementation of national biowaste regulations. All the Regulations and Directives targeted the same goal – to increase recycling and decrease the amount of waste disposal. European countries have created different systems to increase recycling – implementing pollution charges, subsidies for environmentally friendly companies etc. The government has pressurized companies to invest more in research and development of recycling technology which provided opportunity to reduce, reuse and recycle more materials and also to prevent production of waste.

The aim of the current study is:

1. to compare compost certification systems in chosen European countries;
2. to develop compost certification system in Estonia;
3. to analyse the setbacks that occurred while developing certification centre and quality assurance system in Estonia;
4. to describe the certification process from application to certificate on the example of Väätsa Landfill;
5. to make amendment proposals.

Summary

The objectives set in the introduction of the thesis were accomplished and compost certification system was developed in Estonia. The quality assurance systems in Austria, Belgium and Germany were compared, the certification process was tested on the example of Väätsa Landfill and amendment proposals were made by the author.

Estonia adapted the compost quality assurance scheme from the European Compost Network. It was planned to develop the whole certification system as it has been done in other European countries (Austria, Germany and Belgium). Estonian Recycling Competence Centre was founded and was expected to become the Certification Centre, but failed because of differences in laws and regulations in Europe. Estonian ordinance was slightly stricter and the systems from European countries could not be used. It was the biggest setback to resolve the problem of certification centre in co-operation with lawyers and Ministry of Environment. Finally, Foundation Certification Centre of Recycled Materials was established.

The key factor for establishing compost quality assurance scheme was Estonian Recycling Cluster which was developed in 2010. During the cluster activities many researches in co-operation with Estonian University of Life Sciences were carried out because overall studies about compost from biodegradable waste were not made before. Cluster made a research to identify compost producers and composting technologies, compost quality with field and germination tests. On the basis of Recycling Cluster Estonian Recycling Competence Centre was founded. It occurred that the compost waste-to-product ordinance stated that the Certification Centre has to be in compliance with “Product Conformity Act” and also has to be established in accordance with standard ISO/IEC 17065:2012 Conformity assessment – Requirements for bodies certifying products, processes and services which means that certification centre cannot have compost producers involved and new certification body had to be established. So ERCC had to establish independent Certification Centre of Recycled Materials in June 2015.

Next drawback occurred when Ministry of Environment interpreted the compost ordinance as all analyses must be accredited. Certification Centre started to seek for co-operation

partner laboratory in Estonia and Europe to carry out necessary analyses given in the compost ordinance. The result was – any of the contacted laboratories in Estonia and Europe could not carry out the analyses by accredited methods. In spring 2015 Ministry of Environment agreed that the Certification Centre should choose a laboratory that has most of the analyzing methods accredited. Certification Centre developed co-operation with the laboratory in Germany where only one analyse method is not accredited.

It occurred that there is no regulation for sample taking from compost, so author had to develop the guidelines. The sample taking method was developed based on the methods used in other countries and other available materials.

The first certification took place 21. and 22. December 2015 in presence of Eesti Akrediteerimiskeskus (Estonian Accreditation Centre EAK). First certification was successful and first compost/waste-to-product certificate in Estonia was granted to Väätsa Landfill on 16 March 2016. The certificate gives an opportunity to use quality compost trademark and to sell the compost as a product, not waste.

Developing the documents and establishing Certification Centre of Recycled Materials took a long time because the ordinance “Requirements for producing compost from biodegradable waste” set requirements for quality assurance system which did not allow to create certification system as in other European countries. Since February 2016 compost of biodegradable waste can become from waste to product.

Kokkuvõte

Töö sissejuhatuses püstitatud eesmärgid täideti ja magistritöö tulemusena loodi Taaskasutatavate Materjalide Sertifitseerimiskeskus SA. Võrreldi Austria, Belgia ja Saksamaa sertifitseerimissüsteeme, Eesti komposti sertifitseerimise protsessi testiti Väätša Prügila AS näitel ja autor esitas parandusettepanekud.

Eesti kohandas Euroopa Komposti Koostöövõrgustiku komposti kvaliteedisüsteemi. Esialgu planeeriti sertifitseerimisskeem luua nii nagu teistes Euroopa riikides (Austria, Saksamaa ja Belgia). Loodi EJKL Kompetentsikeskus MTÜ ning arvati, et see võiks sertifitseerimisega tegelema hakata. Selgus, et Eesti seadusandlus erineb Euroopa omast. Eesti kompostimäärus on rangem kui teistel Euroopa riikidel ja nende riikide süsteeme kopeerida ei saanud. Kõige suuremaks tagasilöögiks osutus sertifitseerimiskeskuse loomine, sest see võttis kaua aega ja nõudis tihedat koostööd advokaatide ja Keskkonnaministeeriumiga. Lõpuks loodi sihtasutus Taaskasutatavate Materjalide Sertifitseerimiskeskus.

Sertifitseerimissüsteemi loomise esimeseks sammuks oli projekt Jäätmete Taaskasutusklastre, millega alustati 2010. aastal. Projekti käigus tehti mitu uuringut koostöös Eesti Maaülikooliga, sest varem ei olnud komposti kaardistavaid uuringuid tehtud. Klastri projektis tehtud uuringute käigus kaardistati kompostitootjad, kompostimistehnoloogiad ning komposti kvaliteet põllu- ja idanemiskatsete põhjal. Klastri tulemusena loodi MTÜ EJKL Kompetentsikeskus. Keskkonnaministri määrusest „Biolagunevatest jäätmetest komposti tootmise nõuded”, mille alusel on võimalik biolagunevatest jäätmetest toodetud kompostist saada toode, selgus, et Sertifitseerimiskeskus peab olema loodud „Toote nõuetele vastavuse seaduse” ja standardi ISO/IEC 17065:2012 „Vastavushindamine. Nõuded asutustele, kes sertifitseerivad tooteid, protsesse ja teenuseid” kohaselt. Seadusest ja standardist ilmneb nõue, et sertifitseerimiskeskuses ei tohi töötada kompostitootjad ja tuleb luua uus iseseisev ja sõltumatu asutus. Seetõttu asutas EJKL Kompetentsikeskus juunis 2015 iseseisva sihtasutuse Taaskasutatavate Materjalide Sertifitseerimiskeskuse.

Järgmine tagasilöök ilmnas Keskkonnaministeeriumi tõlgendusest, et kompostimääruse järgi peavad kõik analüüsimeetodid olema akrediteeritud. Sertifitseerimiskeskus asus otsima koostööpartneriks laborit Eestist ja Euroopast, kellel oleksid akrediteeritud kõik analüüsimeetodid, mis on nõutud kompostimääruses. Selgus, et ükski labor, kellega ühendust võeti, ei olnud võimeline tegema nõutud analüüse akrediteeritud meetodikaga. 2015. aasta kevadel nõustus Keskkonnaministeerium, et tuleb valida labor, kellel oleks akrediteeritud enamik analüüsimeetodeid. Sertifitseerimiskeskus leidis partneriks labori Saksamaalt, kellel on akrediteerimata ainult üks analüüsimeetod.

Selgus, et Eestis pole ühtegi juhendmaterjali kompostist proovi võtmiseks, seega tuli autoril juhendid koostada. Proovivõtjuhend sai loodud Euroopa riikide metoodikate ja teiste saadaolevate materjalide kohaselt.

Esimene sertifitseerimine toimus 21. ja 22. detsembril 2015, milles osales Eesti Akrediteerimiskeskus (EAK). Pilootsertifitseerimine oli edukas ja esimene biolagunevatest jäätmetest toodetud komposti sertifikaat väljastati Väätsa Prügila AS-ile 16. märtsil 2016. Sertifikaat annab võimaluse kasutada komposti kvaliteedimärki ja müüa komposti tootena, mitte enam jäätmena.

SA Taaskasutatavate Materjalide Sertifitseerimiskeskuse loomine ja dokumentide väljatöötamine võttis kaua aega, sest Keskkonnaministri määrus „Biolagunevatest jäätmetest komposti tootmise nõuded” esitas nõudmised kvaliteedihindamissüsteemile, mis ei lasknud kopeerida teiste Euroopa riikide skeeme. Alates veebruarist 2016 on võimalik biolagunevatest jäätmetest toodetud kompostist ehk jäätmest saada toode.