FINANCIAL IMPACT OF WASTE MANAGEMENT AUDIT

Jānis Salenieks,
Senior State Auditor

EUROSAI WGEA Spring Session:
from Waste Management to Circular Economy
Kalopanayiotis, Cyprus
7 May 2019
CONTENTS

- Audit Scope
- Waste management in Latvia – who is who?
- Waste management fee in Latvia
- Main results of the Audit and methodology
- Impact of Audit
- Lessons learned
1. Audit Scope

**Audit title:** Municipal Waste Management Compliance with Planned Objectives and Legal Requirements

**Objective:**

- Are only reasonable and economically justified expenses included in the payment for waste management?
- Has separate waste collection been ensured by authorities?

**Audited period:** 01 January 2012 to 30 June 2014

**Audited bodies:**

- Ministry of Environmental Protection and Regional Development
- eight local governments (included in the audit sample)
- three municipal waste disposal companies/managers of landfill sites (included in the audit sample)
2. **Waste management in Latvia – who is who?** (1)

**Ministry of Environmental Protection and Regional Development** -
- drafts waste management policies and legal acts, supervises the sector

**Local government** -
- organises municipal waste management in its administrative territory
- selects, signs and monitors implementation of the contract with the *Waste Manager*
- approves the price (tariff) for municipal waste management, on the basis of estimates submitted by the *Waste Manager*

**Waste Manager** -
- signs contracts with waste producers (including households), collects and transports waste and charges waste producers

**Landfill Site Manager** -
- receives waste from *Waste Managers*, prepares waste for disposal and disposes waste in landfill sites
2. Waste management in Latvia – who is who? (2)

Waste management regions and landfill sites in Latvia

Legend
- Municipal Waste Landfill Site
- Hazardous Waste Landfill Site
- Asbestos-Containing Waste Landfill Site
- Landfill sites and/or waste treatment (sorting) lines included in the audit sample
3. Waste Management Fee in Latvia

Payment set to the waste producers
• for waste management \( (m^3) \)

Payment set by the waste manager
• for waste collection and transportation \( (m^3) \)

Tariff rate of the landfill site
• for disposal of waste \( \text{(in tons)} \)

Natural resource tax
• for disposal of waste \( \text{(in tons)} \)

Basic Waste Management Principles

Polluter pays principle - those who produce pollution should bear the costs of managing it to prevent damage to human health or the environment

Pay as you throw (PAYT) principle - usage-pricing model for disposing of municipal solid waste. Users are charged a rate based on how much waste they present for collection to the municipality or local authority.
4. **Main results of the Audit and Methodology**

**Total of 3,6 million euro were overpaid in 44 local governments**

Waste management regions in Latvia

Local governments, where overpayment has been found
4.1. «Artificial increase» of weight of the waste collected from the waste producers (1)

2 076 380 euro were overpaid in 25 local governments

- **Waste Manager** issues an invoice to waste producers (including households) **IN CUBIC METERS**
- while **Landfill Sites** receive, weigh and accept waste **TONS** and their tariffs and Natural resource tax are calculated as euro per accepted tons

Therefore

In order to issue a final invoice to waste producer, **the Waste Manager converts the amount of waste from tons to cubic meters**
4.1. «Artificial increase» of weight of the waste collected from the waste producers (2)

2 076 380 euro were overpaid in 25 local governments

The final price to be paid by waste producers (incl. households) depends on the calculation (conversion) methodology and manipulation with the conversion methodology is possible.

There are two approaches to convert tons into cubic meters:

• to apply a «conversion factor» determined by Waste Manager as a result of continuous measurements, which reflects the actual weight of 1 m³ of waste in a particular territory;

• to assume that 1 m³ of waste corresponds to 200 kg («conversion factor» equals to 0,2); in all sampled cases, said assumption turned out to be «unfavourable» to waste producers (incl. households), since the actual «conversion factor» varied from 0,11 to 0,15 – thus the actual collected waste was lighter.
4.1. «Artificial increase» of weight of the waste collected from the waste producers (3)

Waste volume – mass conversion factors are summarised in the Manual for Application of Factors in Accounting of Municipal Waste by Conversion from Volume to Weight Units developed in 2002, where a factor of 0.2 is set for mixed non-pressed municipal waste, thus assuming that one cubic meter of waste corresponds to 200 kilograms of waste.
About 1.6 million euro were overpaid due to illegal collection of the natural resource tax for the waste, which was not actually disposed in landfill sites; instead – it was recycled as a result of installation of waste treatment (sorting) lines (according to the national law, the natural resource tax should be imposed ONLY on the waste disposed).

As a result of installation of waste sorting lines the amount of waste disposed in the landfill sites decreased, but the tariff rate of the landfill site and natural resources tax was charged for the previous amounts of waste disposed thus waste producers of 44 local governments, incl. inhabitants, have overpaid total of 1 570 961 euro for the two and a half years period.

- Waste producers are paying to the waste manager:
  - for waste collection and transportation;
  - for disposal of waste at the landfill site;
  - natural resources tax on waste disposal.

- Amounts of waste to be disposed decrease by introduction of waste sorting line.

- Expenses of waste manager for disposal of waste also decrease, as the sorted waste is not taken to the landfill site, but sold for recycling.

- The payment charged from the waste producers, including inhabitants, for disposal of waste in the landfill site and natural resources tax for disposal of waste creates an additional revenue of the waste manager, which might have been used for covering cost of installation of sorting line and its operational costs.
5. Impact of Audit

- Amendments of Waste Management Law have been made (clarification of the calculation process for waste management fee);
- Waste management fees in local governments have been revised;
- Increase of households who have signed waste management agreements;
- Separate waste collection system has been established;
- Waste is disposed in proper landfills.
5.1. **Dimensions of Impact**

- Fiscal stability
- Access to public services
- Impact
- Good governance
- Environmental protection
- Public safety
- Healthy lifestyle
- Impact of audit results
- Fiscal stability
- Access to public services
- Impact
- Good governance
- Environmental protection
- Public safety
- Healthy lifestyle
- Impact of audit results
5.2. Structuring Impact

Impact

Measurable

Consumer

Financial

Other impact

Economic
5.3. Impact of Waste Management Audit

Consumer savings, in euros (Natural resource tax, not imposed on the sorted waste)

<table>
<thead>
<tr>
<th>Year</th>
<th>Savings, Euros</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>1,428,936</td>
</tr>
<tr>
<td>2018</td>
<td>2,179,126</td>
</tr>
</tbody>
</table>
6. LESSONS LEARNED

- Lack of independent experts – filtering experts’ opinions (professional judgement) and try to make independent analysis on our own to support findings;
- Creating criteria – be careful to take audit criteria from scientific workbooks/manuals (especially outdated and taken from the experience of other countries), better try to formulate audit criteria using the terms like “corresponding to the actual situation” etc.
- When comparing waste management fees in different municipalities, take into account if varied package of services is covered under different waste management fees;
- Consider to examine all components of waste management fee during the audit to give the overall opinion on the approved fee and avoid possible disputes that overpayment in one component is compensated by underpayment in other component of the fee;
- When examining separate waste collection system, consider to examine if it is really free of charge or, these expenses are still included in the waste management fee.
Never *waste* an opportunity to learn!

THANK YOU FOR YOUR ATTENTION!

For further information please contact Mr Jānis Salenieks at Janis.Salenieks@lrvk.gov.lv

Summary of the Audit Report (in English) is available [here](#).