



COST RECOVERY AND TARIFFS SETTING IN WASTE MANAGEMENT: *Lithuanian experience*

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Skopje, 29 October, 2015



INSTITUTIONAL SYSTEM FOR COST RECOVERY

Municipalities are responsible for organisation of municipal waste management systems.

**Waste Management Act (16/10/1998)*



“Traditional” system for cost recovery (until 2007)

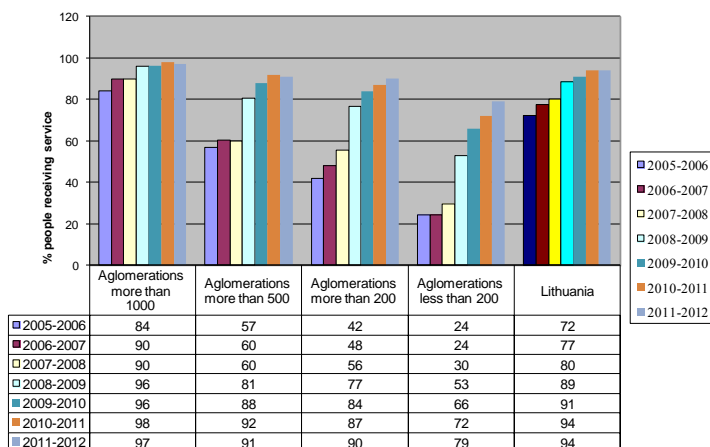
- (Maximum) tariffs/fees are approved by municipalities.
- Waste collection service is provided according to contracts with municipal or private waste management company.
- Fees are collected by the companies providing services.
- Municipal waste management service covers only collection and landfilling of residual municipal waste.
- Fee is based on *residual waste amount (volume) or number of persons (based on registration)*.
- No sanctions for not having a contract or waste



Coverage of municipal waste collection service in Lithuania

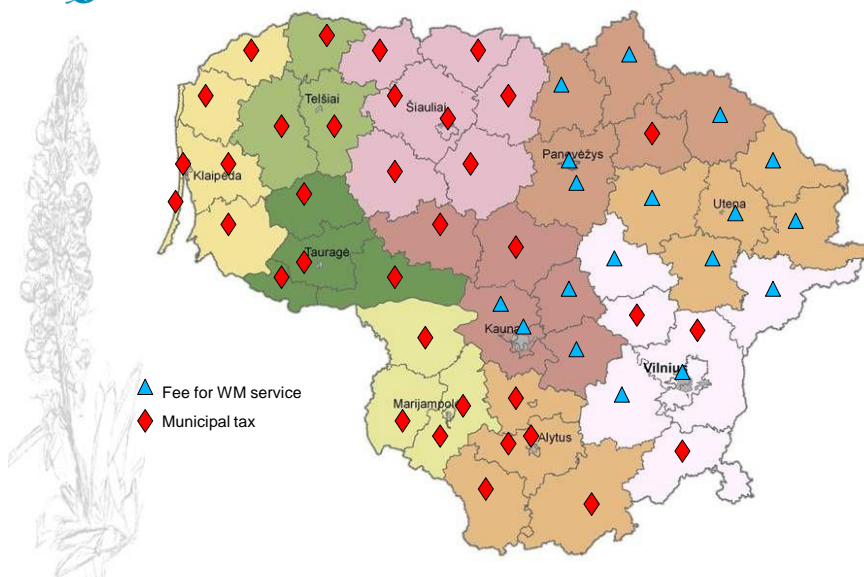
- **Municipalities** have to ensure that waste generators (households /commercial sector) are connected to public waste collection

National Strategic Waste Management Plan (12/04/2002)





Service fee or local tax (situation in 2014)



Who should collect the fees?

Private sector:

- Public sector loses the influence in the manner how waste management will be done
- Securing, that each household has a waste management contract, is difficult
- Securing that each household gets an affordable contract, is difficult
- Financing of collection and treatment of residual municipal waste only

Public sector:

- Municipalities get more influence on waste management services
- Fewer default of payment
- Securing a waste collection from each household/facility
- Securing the same price for everybody, even for distant areas
- Securing a uniform waste management system in an area
- Financing of all waste management services (not only collection and treatment of residual municipal waste)



Amendments of Waste management act (1)

- *Amendment of Waste management act (11/12/2011):*
 - Every person is the holder of municipal waste in spite of its legal form or activities
 - The owner of the property is obliged:
 - to pay local tax or
 - to make the contract with the municipality or administrator
 - Standard terms of the contract (approved by the government)
- *Amendment of Waste management act (19/04/2012):*
 - To increase the efficiency of the waste management system all or several municipalities that belong to the municipal waste management region can cooperate together and to establish a legal person - the administrator of municipal waste management system.
 - Administrator of municipal waste management system is a legal entity, established *by one, several or** all municipalities that belongs to region and fulfilling functions of municipal waste management organisation in the area of municipalities and/or providing waste management services.

**Amendment of Waste management act (09/05/2013)*



Amendments of Waste management act (2)

- *Amendment of Waste management act (19/04/2012):*
 - **Functions of the administrator:**
 - to organize selection of waste management companies by tender
 - to fulfill its contractual obligations supervision and control
 - to present the calculation of tariffs/fees for MWM to municipality and collect them after approval of the council of municipality
 - to register municipal waste holders
 - to collect and analyze the information about the fulfillment of the set targets
 - to provide proposals to municipalities concerning the development of the system
 - to perform public awareness rising activity
 - to make contracts with waste management holders



Implementing legal acts

- Minimal quality requirements for municipal waste management service (21/10/2012, MoE regulation)
- Regulation on municipal waste holders registration (20/12/2012, MoE regulation)
- List of real estate types the owners or authorized persons of which has to pay waste management tax or to establish the municipal waste management services contract for the provision of waste management service (20/02/2013, MoE regulation)
- Standard conditions for the provision of municipal waste management services contract (12/04/2013, MoE regulation)



COST RECOVERY SYSTEM – WHAT SHALL BE RECOVERED?



Polluter pays principle

- The users of the service or producer of the product owes the cost for the municipal waste management service to the municipality in accordance with **polluter pays principle**:
 1. *In accordance with the polluter-pays principle, the costs of waste management shall be borne by the original waste producer or by the current or previous waste holders.*
 2. *Member States may decide that the costs of waste management are to be borne partly or wholly by the producer of the product from which the waste came and that the distributors of such product may share these costs.*
- Tariffs/fees for waste management services are constrained by **affordability** and **political acceptability**:
 - Costs for municipal waste should not exceed 1 percent of disposable household income.**

**Directive 2008/98/EC on waste, Article 7 "Costs"*

*** National strategic waste management plan (12/04/2002; 16/04/2014)*



Costs of municipal waste management in Lithuanian regions (2014)

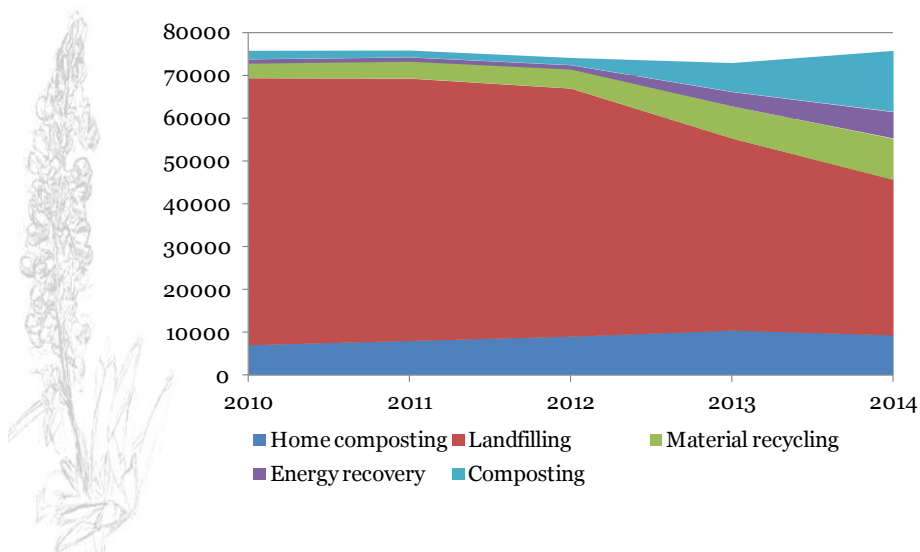
Region	Total costs (Eur/t)	Treatment costs (Eur/t)	Collection costs (Eur/t)
Alytus	94,50	41,70	52,80
Kaunas	86,98	17,21	69,77
Klaipėda	76,48	35,04	41,44
Marijampolė	92,48	28,69	63,79
Panevėžys	81,99	24,07	57,92
Šiauliai	77,93	32,24	45,69
Tauragė	99,49	33,29	66,20
Telšiai	83,46	26,44	57,02
Utena	115,19	41,00	74,19
Vilnius	106,64	37,64	69,00

Source: Association of Lithuanian Regional Waste Management Centres



Case study: Alytus region

Waste management 2010-2014



Case study: Alytus region

Annual costs of MSW management

	Year 2013, Eur		Year 2014, Eur	
Residual waste collection	2.399.672	57%	2.123.643	50,1%
Waste disposal at regional landfill	442.685	10%	416.787	9,8%
Sorting of mixed municipal waste	54.721	1%	144.873	3,4%
MBT plant (mechanical treatment only)	0	0%	123.690	2,9%
Civic amenity sites and composting sites	331.996	8%	491.982	11,6%
Monitoring and after care of old landfills	161.902	4%	191.502	4,5%
Administration of EU funded projects	123.266	3%	54.444	1,3%
Collection of waste taxes and public information	361.103	9%	353.343	8,3%
Organisation of waste collection services	18.209	0%	34.904	0,8%
Distribution of home composting boxes	44.021	1%	4.541	0,1%
Control of MSW system	32.417	1%	33.447	0,8%
Other administration costs	261.669	6%	267.318	6,3%
Total	4.231.659	100%	4.240.474	100%

Population: 184 182

Number of households: 82 476



Application of solidarity principle

- **Solidarity principle in national regulation:**

- *The municipal waste management tariff/fee should not depend on the distance to the regional waste management facilities. The price should be the same for all municipal waste holders of the region if they have the same scope and quality of the services**

* National strategic waste management plan (31/10/2007)

- **Solidarity principle in practice:**

- Partly: only disposal costs distributed (landfill gate fee is set based on the distance to the landfill), applied in most regions.
- Full solidarity: all costs distributed among municipalities in the region based on one parameter (e. g. per tonne of residual municipal waste), applied in Alytus region.



TARIFFS SETTING PROCEDURES AND METHODOLOGY





*It is recommended to gradually introduce waste management service charges (fees or local taxes) based on volume of container and number of emptying instead of based on number of persons.**

* National strategic waste management plan (12/04/2002)





Municipal waste taxes/fees in 2014, Eur

Region	Household /year 	Area (m ² /year) 	Person/ year 	Volume provided (m ³) 
Alytus		0,59		
Kaunas		1,01	15,64	10,14-10,72
Klaipėda		0,87		
Marijampolė		0,87	33,60	
Panevėžys			22,96	
Šiauliai			16,22-22,01	
Tauragė		0,83		
Telšiai	45			
Utena			24,22	10,14
Vilnius		1,11		
% of municipalities	8%	37%	45%	10%



Flat rate fees (not based on waste amount)

Advantages:

- No incentive for illegal dumping
- Easy to administrate if the fee is linked to known data like area of the house, number of residents...
- Predictable revenues

Disadvantages:

- Polluter pays principle is not realised
- Not fair, no incentive for reducing waste quantity i. e. by separate collection or composting
- Difficult to administrate if no data is available, or numbers are changing often (number of persons)



Amendments of Waste management act (19/04/2012)

- **Tariff/fee setting for municipal waste management:**
 - Tariff/fee is determined in accordance with the solidarity, proportionality, non-discrimination, cost recovery and “polluter pays” principles
 - The tariff/fee of municipal waste management must be based on the municipal waste management costs
 - The tariff/fee of municipal waste management must ensure the long-term operation of the waste management infrastructure
 - The price of municipal waste management services and the tariff for municipal waste collection from waste holders and waste management is determined by the municipality, taking into account the methodology approved by the Government



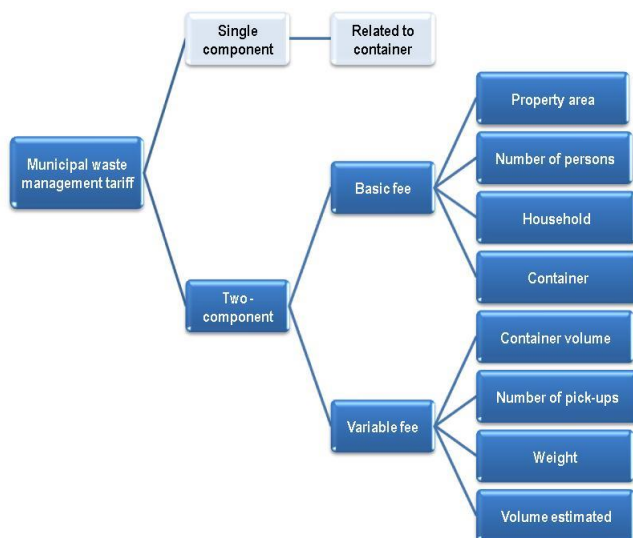
Methodology for setting taxes or other fees for municipal waste collection from waste holders and waste management (24/07/2013, Government resolution)

- I. Calculation of municipal waste management costs:**
 - Identification of all waste management costs
 - Classification of costs into fixed and variable costs
- II. Calculation of two-components fee for municipal waste management:**
 - **Basic fee** based on fixed costs
 - **Service fee** based on waste amount (weight or volume)

Introduction of Pay-As-You-Throw system (*approach aiming to charge people in accordance to the amount of waste which they actually generate*)



Calculation of two-component tariff for municipal waste management



Fees based on waste amount (volume or weight)

Advantages:

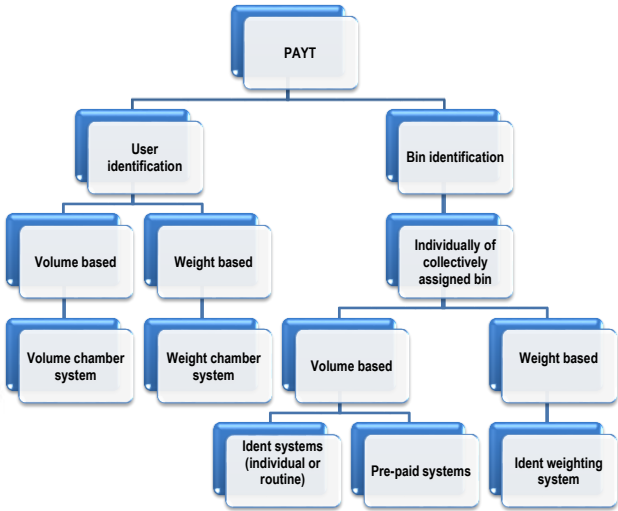
- *Fair system:* the more waste generated, the more to pay (Polluter Pays Principle)
- *Enforcement of the waste management hierarchy:* motivation for waste prevention, home composting, sorting of recyclable
- *Higher transparency of service* and thus promotion of a more reliable public image of waste services

Disadvantages:

- People can try to avoid paying by illegal dumping
- Each house has to have its own container to be used only by residents of this house
- Implementation barriers in multi-apartment buildings
- Uncertain revenues because of the uncertain waste generation
- Possible increase of administrative, managerial and operational cost
- Possible social unfairness towards families with kids, low income citizens



Technical approaches for PAYT implementation



Source: Billtewski, B., Werner, P., Reichenbach, J. (Eds.). Handbook on the Implementation of Pay-As-You-Throw as a Tool for Urban Management. Dresden University of Technology, Book 39. 2004.



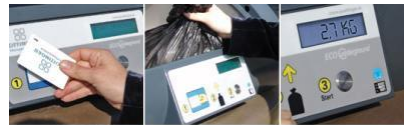
PAYT in urban territories

Level of PAYT	Blocks - large buildings	Blocks - small buildings	Single family housing
6	chamber system	chamber system	chamber system
5			ident weighing system
4		ident weighing system	individual system / pre paid
3	ident weighing system	ident weighing system	routine system
2	individual system / pre paid	routine system	
1	routine system		
0	flat rate	flat rate	flat rate

Source: Billtewski, B., Werner, P., Reichenbach, J. (Eds.). Handbook on the Implementation of Pay-As-You-Throw as a Tool for Urban Management. Dresden University of Technology, Book 39. 2004.



PAYT in urban territories



Chamber system with weighing

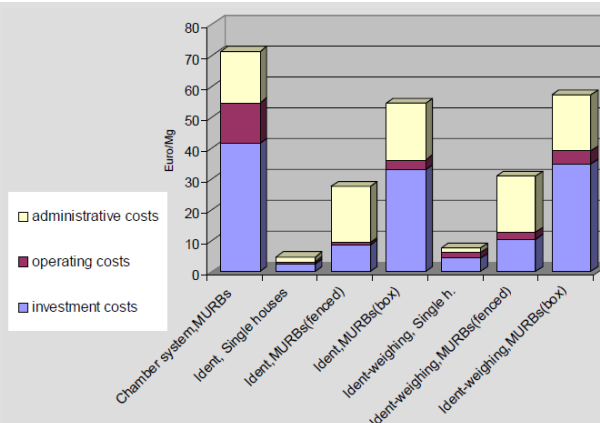


Volume chamber

Source: Bilitewski, B., Werner, P., Reichenbach, J. (Eds.), Handbook on the Implementation of Pay-As-You-Throw as a Tool for Urban Management. Dresden University of Technology, Book 39. 2004.



Estimated incremental costs for the introduction of PAYT



Source: Findings from an assessment of incremental costs based on actual expenses for different components for PAYT implementation conducted within the case analyses of RTD-project "PAYT", see table Tab. 16

Source: Bilitewski, B., Werner, P., Reichenbach, J. (Eds.), Handbook on the Implementation of Pay-As-You-Throw as a Tool for Urban Management. Dresden University of Technology, Book 39. 2004.

Additional costs of sophisticated measurement systems might be higher than individual savings!



Factors that influence the success of PAYT

1. Technical aspects and convenience:

- Possibility for waste separation (availability and distance to collection facilities and services for source separated waste)
- Handling of the collection; relationship between available container volume and frequency of collection (collection service efficiency)
- Transparency of the waste management system, trustworthiness of the collection and calculation of charges/fees

2. Economic aspects, incentives and pricing:

- Variable part of waste charges/fees
- Fair treatment of all citizens and equity and fairness of the pricing

3. Policy aspects, authorities and enforcement:

- Legal framework for introducing PAYT
- Legal orders against littering/illegal dumping and application of legal orders in practice (penalties' size and application in practice)

4. Social circumstances:

- Financial status, educational level of the citizens
- Environmental consciousness/citizens attitudes towards the environment

Source: Bilitewski, B., Werner, P., Reichenbach, J. (Eds.). Handbook on the Implementation of Pay-As-You-Throw as a Tool for Urban Management. Dresden University of Technology, Book 39. 2004.



Case study: Alytus region (1) Organisational measures



• Preparation for PAYT system (2013-2015)

- Possibilities for waste separation:
 - Containers for each individual house for sorting of recyclables
 - Contracts with producer responsibility organisations (PROs) for packaging waste (to ensure free service to households)
 - Civic amenity sites in each municipality
 - Composting bins for green waste to individual houses
- New type of contracts for waste collection service:
 - Fixed amount as payment for routine service
 - Variable amount based on "pick-ups of containers"
 - Identification of containers
- Establishment of control unit at the Regional waste management centre



Case study: Alytus region (2)

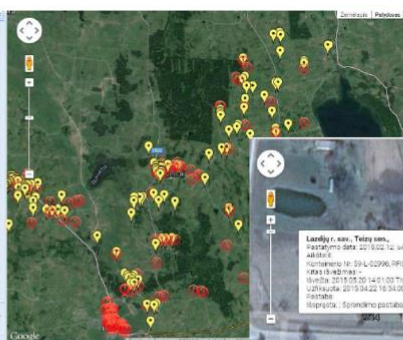


- Updated register of municipal waste holders:
 - *Information on containers, possibilities of waste sorting, home composting*
- New IT modules:
 - *Containers module*
 - *Module for control of sorting quality (checks/sanctions)*
- Data exchange with waste collectors' IT system
- Different possibilities for calculation of tariff
- Analysis / reports



Case study: Alytus region (3)

Control of waste collection service





Ideal waste tariff – is it possible?

