CITY OF THESSALONIKI MUNICIPALITY OF THESSALONIKI THESSALONIKI THESSALONIKI

CHALLENGES FOR IMPLEMENTING SUCCESSFUL WASTE COLLECTION SYSTEMS

Recycling Waste temp. Storage - Collection

Туре	Number				
1.100 lt	Packaging waste: 3.854 (1 bin / 85 inhabitants)				
660 lt	Packaging waste: 300				
240 lt	Packaging waste: 50				
2,5 m ³ bell bins	Packaging (glass) waste: 437 (1 bin / 785 inhabitants)				
Total number	11.655				
Total capacity (m ³)	5.542				

~25-29 routes for packaging waste are implemented on a daily basis. Packaging waste is forwarded to Material Recycling Facilities (MRF).

The glass packaging waste from the bell bins is collected by HERRCO (via a contracted operator).

Small batteries are collected by AFIS.

PAPER

E-WASTE

WEEE, CDW and bulky waste streams are collected by the Municipality and forwarded to the alternative management system (either directly or through a contractor). Same applies for ELV waste (making profit for the Municipality).

Additionally, collection of textiles (clothing, shoes)-120 bins have been put in specific areas of the city.



Recycling Waste mixture

RECYCLING WASTE - 2018







Packaging Recycle Stream



Waste Recycled in MRF	2014	2015	2016	2017	2018
Input to MRF (tn/yr)	16.431	16.760	17.774	17.981	19.439
Recovered packaging waste (tn/yr)	10.506	11.183	12.740	12.360	12.492
Recovered packaging waste (% of input)	64	67	72	69	64
Recovered packaging waste (% total packaging waste generated)	39	40	45	44	45
Recovered packaging waste (% total waste generated)	8	8	9	9	9
Residues (tn/yr)	5.925	5.577	5.034	5.621	6.947
Residues (% of input)	36	33	28	31	36

Recycling Waste (other than packaging and Bulky)



ELV (tn) WEEE(tn) Glass (tn) Clothing (tn)

Financial Savings from recycling (gate fee savings)

<mark>``@@@````@@@`````@@@`````@@@@</mark>@



E-WASTE

PAPER



Our goal

- Enhance the aesthetic of the City as well as public health.
- Increase road safety in terms of storage bin placement and collection routes.
- Minimize the cost of collection and transportation.
- Collection of biodegradables.
- Emphasize the source collection.
- Inspire the Re-USE action to the citizens.
- Inform and train citizens on recycling.
- Develop and Organize Civic Amenity Sites and Points around the City.

<u>ୖୄ୶ଢ଼ୠୖୄ୷ଢ଼ଊୖ</u>ୠ୷ଢ଼ୠୖ୷୷ଢ଼ୠୖୠ୷ଢ଼ୠୖୠ୷ଢ଼ୠୖୠ୷ଢ଼ୠୖ

PAPER

Major Challenges faced today

Domestic source collection, has not been initiated yet.

- Poor separate collection.
- Not proper recyclable waste placement in the corresponding bins
- Truck and bin shortage as well as servicing due to financial barriers
- MRF under-capacity and under-expected efficiency
- Bureaucratic incapacities, leading to periods without a contract with corresponding Approved Alternative Management Systems
- No recycling of biodegradables
- Empirical design of truck routes.
- Poor recycling at the open markets
- No civic amenity sites, yet.

<u>ି କାହୁ ଭାଳି କାହୁ ଭାଳି କାହୁ ଭାଳି କାହୁ ଭାଳି କାହୁ ଭାଳି କାହୁ</u>

Steps taken towards the goal

- Immediate (or well ahead of time) issue of Call for tenders in order to attain the continuous operation of the recycling streams (Oils, WEEE, Bulky, ELV, EPS, Plastics & Metals).
- Purchasing of bins and trucks and on-time provision of maintenance services for the existing ones.
- New methodologies based on GIS data, for the placement of new bins and improvement of vehicles' routes.
- Introduction of separate collection of biodegradables.
- Improved terms and Close co-operation with Approved Alternative Management Systems.
- Implementation of circular economy principles. Participation in the Circular Economy Implementation in Greece - LIFE-IP CEI –Greece.
- Communication campaigns (fairs, media, festivals etc.)

PAPER

Ongoing actions for the establishment of the first civic amenity site in the city



Civic Amenity Site (Small Green Point)

Mature project, expecting funding (soon enough!)

In conjunction with the Recycling & Training Center for the source collection (KAEDISP), where training will also be held.

Co-operation with social and solidarity economy partners.

Numerous benefits are expected

PAPER

E-WASTE

Recycle waste accepted: metals, paper/cardboards, plastics, glasses, wood, tetra Pak, furniture, clothing, eligible oils, WEEE, batteries.

Based on the 5th district. Allowable storage volume <200tn, expecting to cover the needs of 10.000-30.000 citizens.</p>

Civic Amenity Site (Small Green Point)

The land belongs to the Municipality of Thessaloniki.

- Some old buildings have to be demolished while the rest will be renovated.
- An exhibition lecturing class will be built. Also, an open air space will be arranged to serve the same purposes.
- Lighting, security equipment, mains supply water, sewage and fire safety networks will be constructed.
- Temporary storage as well as recycling equipment will be installed in the premises.
- ReUSE facilities, beginning with clothing and furniture will be constructed.

PAPER

E-WASTE

Success of the first civic amenity site will commence the necessary actions for more alike points around the city.





Storage and utility equipment

4 open containers 8m³ (skiplift) 4 close containers 8m³ (skiplift) 2 Press containers 8m³ 2 Containers 15m³ (with tent - hooklift) 4 2-door containers 15m³ (hooklift) 2 hydraulic vertical high performance balers 1 brush chipper 2 pallet carriers 2.5t 1 electric powered forklift 2tn 1 Mobile cold water pressure washer 2 pallet tanks 1m³ 4 pallet boxes 700l 1 collection vehicle with crane and peel grapples 1100 lt storage bins Clothing disposal bins Glass disposal bell bins Digital Weighting system – card rewarding scheme



PAPER

E-WASTE

Civic Amenity Vehicles

Major advantages, consist of:

- 1. Financially beneficial solution
- 2. No environmental or other type of permits are necessary
- 3. More neighborhoods can be served (especially distant ones)
- 4. Citizens' awareness is increased
- 5. Reward system scheme can be implemented
- 6. Introductory step to door-to-door collection
- Highly versatile; ideal for serving special occasions (fairs, festivals, street markets etc.).



🚊 👀 🔁 🕋 🊔 👀



Civic Amenity Points

- Serving the small neighborhood, schools, 1. commercial blocks etc...
- 2. Elevation of the aesthetics and enhancement of the state-of-mind of the citizens
- Minimizes the uncontrolled dumping of waste 3.
- Less costs for the collection of the waste, 4. since less bins, trucks, routes, personnel is needed.
- Weather conditions proof 5.





Thank you!



ΔΗΜΟΣ ΘΕΣΣΑΛΟΝΙΚΗΣ

<u>ି କାର୍କ୍ ବାଳି କାର୍କ୍ ବାଳି କାର୍କ୍ ବାଳି କାର୍କ୍ ବାଳି କାର୍କ୍</u> ବାଳି କାର୍କ୍



PAPER

E-WASTE

