NATUR VÅRDS VERKET

SWEDISH ENVIRONMENTAL PROTECTION AGENCY

Sweden Sverige

Supporting Albanian Negotiations in Environment, Chapter 27 (SANE27)

Mbështetja e Negociatave Shqiptare në Mjedis, Kapitulli 27 (MNSHM27)

Stöd till Albanien i förhandlingar av miljökapitel 27

Tirana, 14.10.2020

REPUBLIKA E SHQIPËRISË
MINISTRIA E TURIZMIT
DHE MJEDISIT

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Sweden Sverige

Title: Meeting Waste Management Targets

Sub-chapter:

I) Principles of waste prevention

II) Development of separate waste collection system and recycling for recyclables and biowaste

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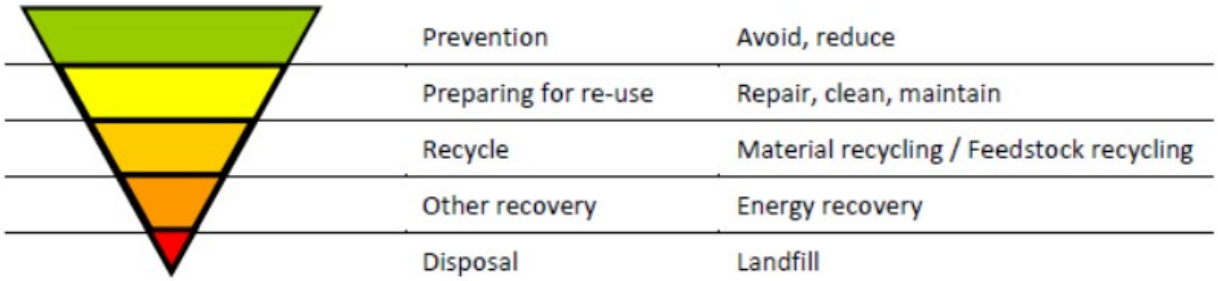
I) PRINCIPLES OF WASTE PREVENTION

- Waste prevention: highest priority in waste hierarchy



- Albanian Integrated WM Plan 2020-2035: *"…encouraging reduced waste generation,…"*
- Framework for waste policy and resource efficiency in the Circular Economy Action Plan
- Revised Waste Dir. (2018): EU MS to take measures to prioritize waste prevention, re-use and recycling

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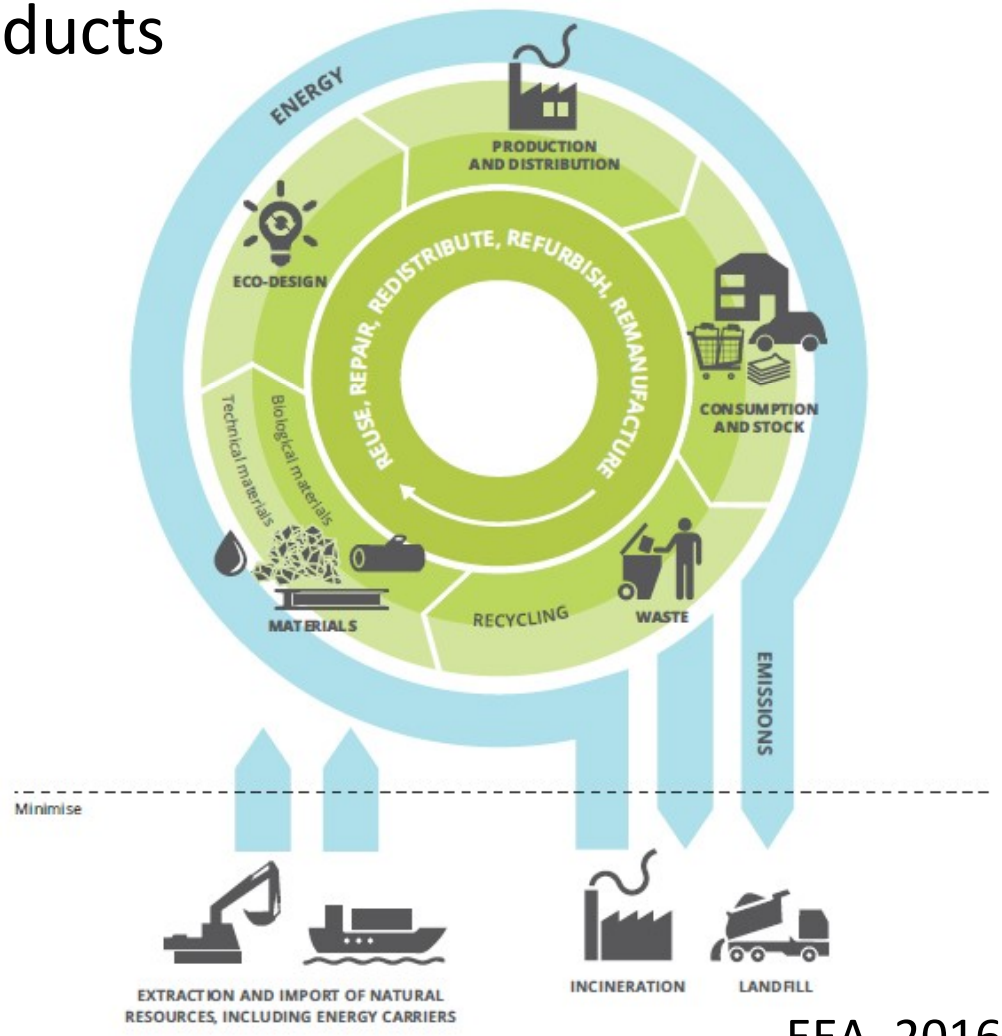
Circular Economy Concept

- Wider strategy on waste prevention addresses the entire life-cycle of products
- Create less waste – Consume fewer resources – Spend less to recycle or dispose of your waste
- Ecodesign – Products sharing – Extend lifespan



EEA, 2016

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Waste Prevention: Key Factor in WM Strategy

- Waste Prevention Programmes
- Food waste prevention
- Ban single-use plastics
- Green public procurement
- European week for waste reduction
- e-waste prevention

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Actions of WPP

1. Communication actions:
   - Information actions
   - Awareness campaigns
   - Information on waste prevention techniques
   - Training programmes for competent authorities
   - Ecolabelling
2. Promotional actions:
   - Voluntary agreements
   - Promotion of reuse & repair centers
   - Environmental management systems
3. Regulatory actions:
   - Planning measures
   - Taxes and incentives
   - Extended Producer Responsibility policies
   - Green Public Procurement policies

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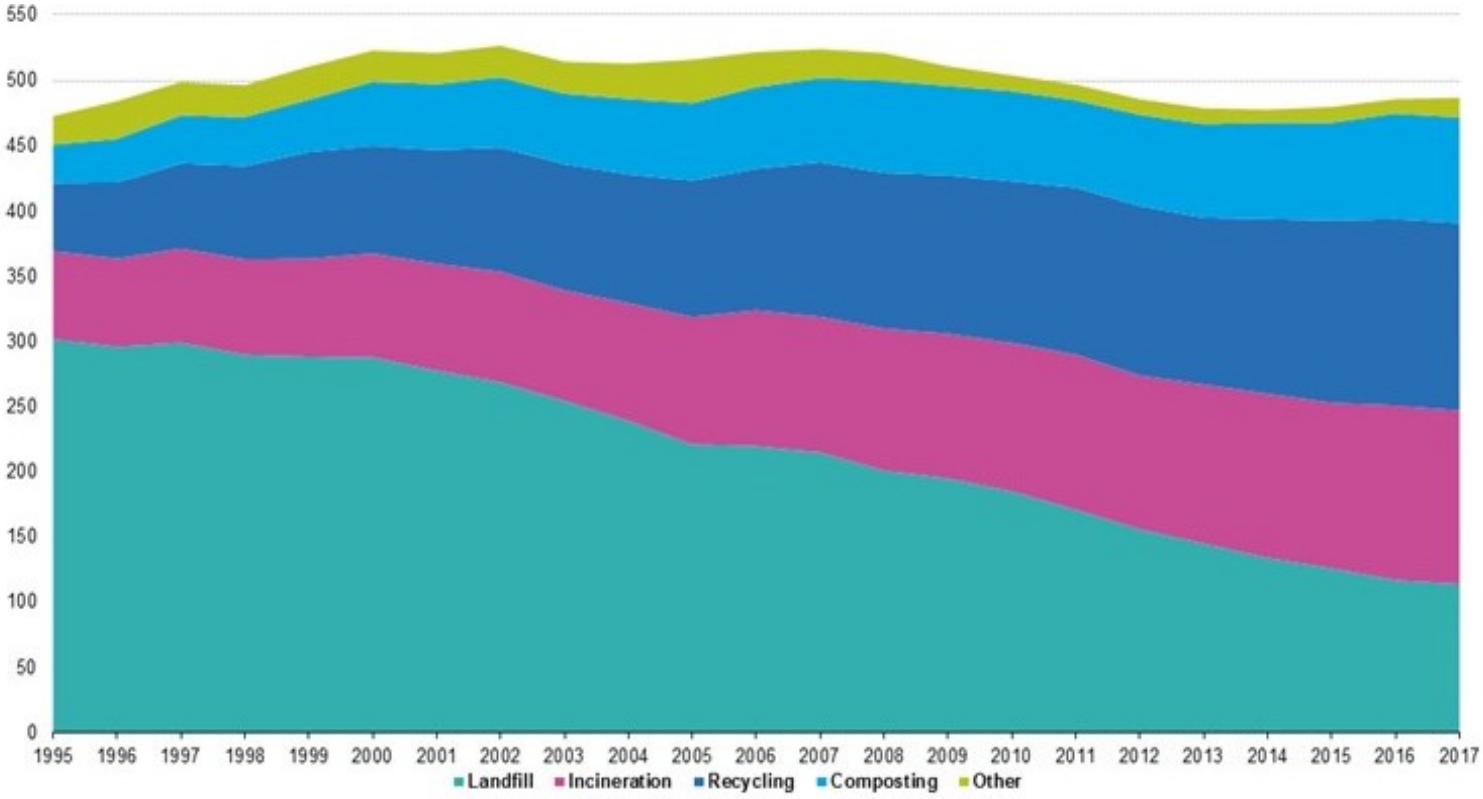
II) SEPARATE WASTE COLLECTION

- Average municipal waste generation in EU-28 (2017): 487 kg/cap (Eurostat). Albania: 383 kg/cap (2017)
- 46% recycled or composted and 23% landfilled



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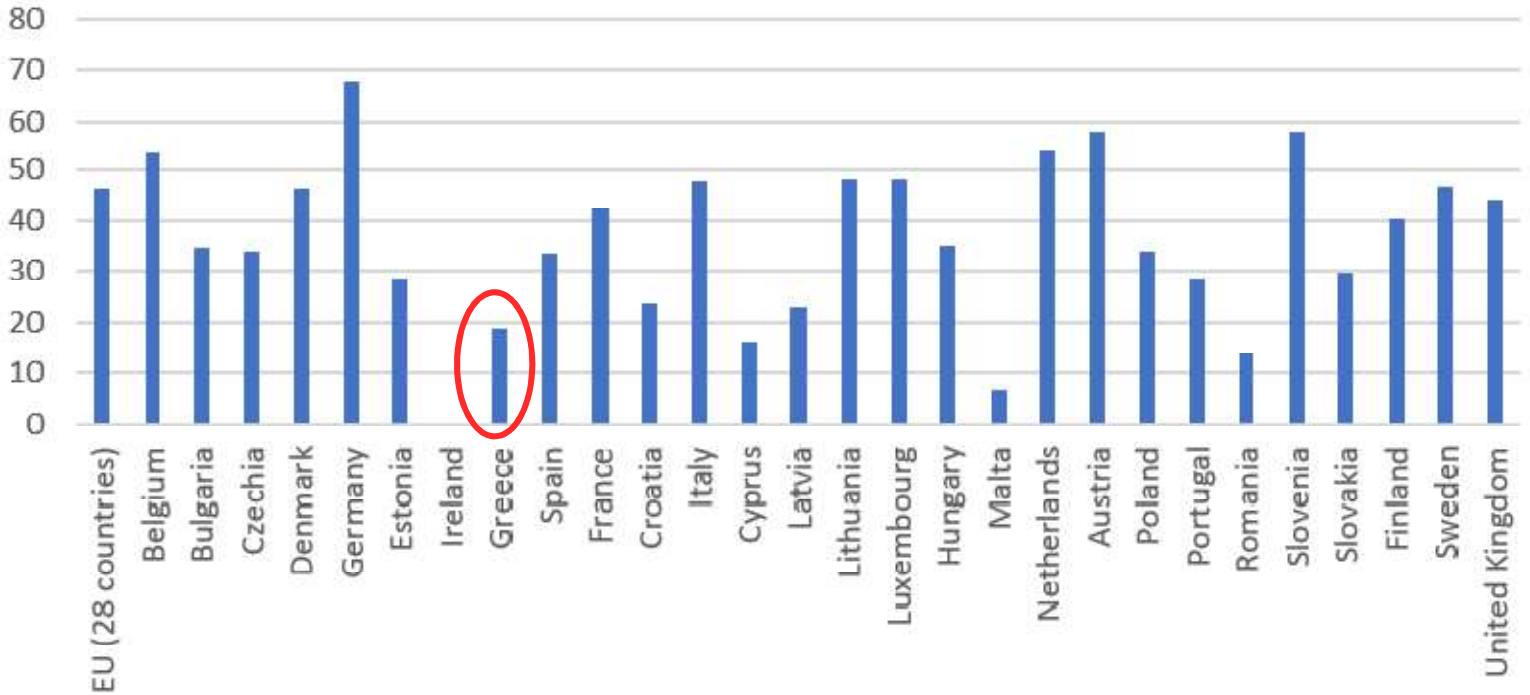
Recycling in the EU

- Average recycling rate in EU-28: from 17% in 1995 to 46% in 2017 (Eurostat)
- Need for structural reforms
- Applying good practices from forerunners



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New Targets

- Revised WFD (2018/851), LD, PPWD & SUP
- Targets: principles of Waste Hierarchy & Zero Waste, and main concepts of Circular Economy policy

Reference	Subject	Target	Deadline
Waste Framework Directive (WFD), Art 11	Preparing for re-use and the recycling of municipal waste	2020 – minimum 50% by weight 2025 – minimum 55% by weight 2030 – minimum 60% by weight 2035 – minimum 65% by weight	
WFD, Art 22	Biowaste segregation	**Biowaste is either separated and recycled at source, or is collected separately and is not mixed with other types of waste.**	Dec 31st, 2023
WFD, Art 22	Counting outputs of biowaste treatment towards recycling	Member States may count municipal bio-waste entering aerobic or anaerobic treatment as recycled only if, in accordance with Article 22, it has been separately collected or separated at source.	Jan 1st, 2027
Landfill Directive, Art 5	Amount of municipal waste landfilled	Member States shall take the necessary measures to ensure that the amount of municipal waste landfilled is reduced to 10% or less of the total amount of municipal waste generated (by weight).	2035
Packaging and Packaging Waste Directive (PPWD), Art 6	Packaging recycling target	Paper and board: 60-75-85% Glass: 60-70-75% Metal: 50% (2020) Ferrous Metal: 70-75% (2025-2030) Aluminium: 50-60% (2025-2030) Plastic: 22.5-50-55% Wood: 15-25-30% Total recycling/composting: 55% (2020) Total prepared for re-use/recycled: 65-70% (2025-2030)	2020-2025-2030

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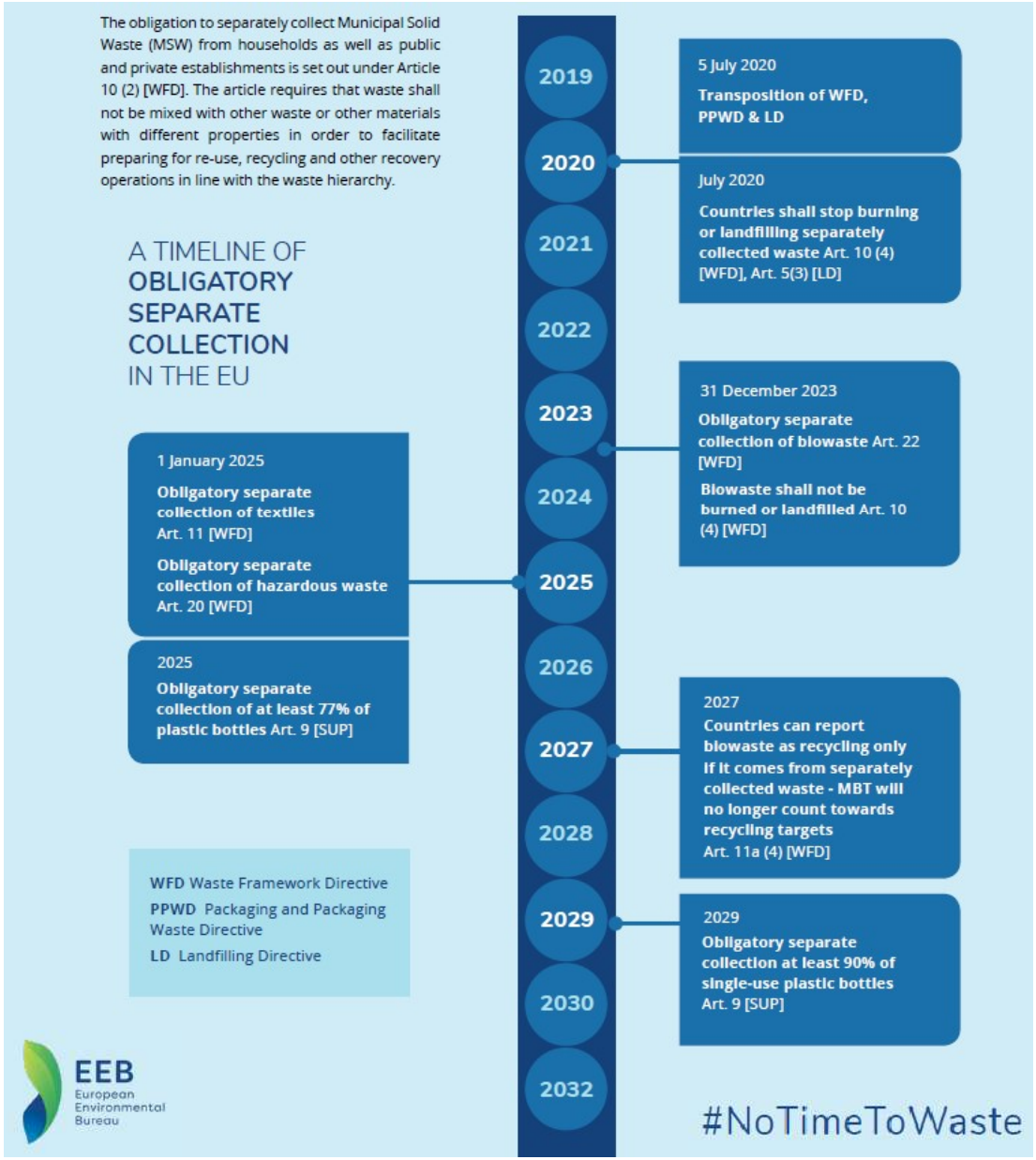
Obligatory Separate Waste Collection



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High-Quality Recycling

- WFD [Art. 11 (1)]: MS to promote high-quality recycling through separate collection of textiles, hazardous material and biowaste (no longer mixed with other waste streams and collected separately for recycling or composting)
- SUP Dir.: targets for separate collection of disposable plastic bottles (77% by 2025 and 90% by 2029)

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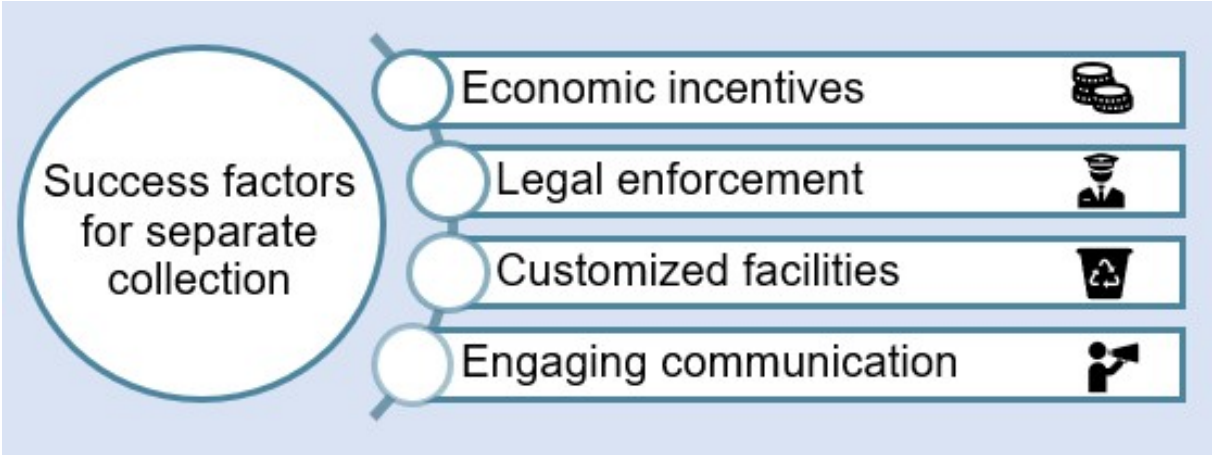
Integrated Approach



Policy instruments that give economic incentives for separate sorting

	Target actor	Waste stream	Primary objective	Secondary objective	Priority
Extended Producer Responsibility (EPR)	Producer/ consumer	Recyclables/ reusables	Cost internalization Sorting/recycling	Eco-design Waste prevention	High
Pay-As-Your-Throw (PAYT)	Consumer	Mixed waste	Sorting/recycling	Cost internalization	High
Landfill and incineration taxes	Municipalities and companies	Mixed waste	Sorting/recycling	Cost internalization	High
Deposit-refund	Consumer	Beverage packaging or other	Anti-Litter Sorting		Medium

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Good Practices

- EC-DG ENV “Assessment of separate collection schemes in the 28 capitals of the EU” (11/2015): very good performance in short period (Ljubljana, Helsinki, Tallinn, Dublin, Vienna), plus Milan and Barcelona
- These cities apply different collection systems (door-to-door collection / bring points and strict separate collection / partly co-mingling approach) and show different development over time (short-time versus long-time development)

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Good Practices – Main Conclusions (1)

- Waste **composition** and seasonal variations
- Where **mandatory separate collection** of certain municipal waste fractions was introduced (e.g. paper or bio-waste), high municipal recycling rates have been achieved
- More visible results when **door-to-door** systems are applied. Door-to-door collection of biowaste ~ 300 g/inh.day and contamination 8%, while from bring systems <150 g/inh.day and contamination 15%.
- **Door-to-door** separate collection = best quality recyclables
- **Separate collection system** from households: recommended to start with dry recyclables and then bio-waste
- **Separate bio-waste** collection: target first large producers. **Pilot projects** in residential areas is a good practice before scale-up. Existence of proper **waste treatment facilities** is a prerequisite (anaerobic digestion is preferable for treating food/kitchen waste, composting for green garden waste).

Good Practices – Main Conclusions (2)

- Collection **frequency**: important factor for source separation
- **Civic amenity sites**: potential to improve recycling rate. Condition: convenient to use (close-by and suitable opening hours) and the number of sorted fractions is significant.
- Cities where the municipality and the **producer responsibility schemes** or free market mechanisms for recyclables are combined smartly, can achieve higher collection rates
- **PAYT system**: charging more for residual waste and cross-financing the collection of other separate collected fractions, increases public's participation
- **Co-mingled** approach can work well only if little unwanted contamination. Reducing contamination in co-mingled bin is the biggest challenge.
- **Communication** to households: very clear what to place in each bin. Public interest about how waste is managed.
- **PATIENCE**: it takes some years for a waste collection system to become established in a society

The Waste Collection System in Thessaloniki

- Expansion and Optimization of the Waste Collection Services in the Integrated Municipal Waste Management System of the Municipality of Thessaloniki
- European Investment Bank: Framework Agreement to support EIB Advisory Services (EIBAS) activities inside and outside EU-28 / Lot 4: Smart growth, social infrastructure and Horizon 2020
- Thessaloniki Municipal Infrastructure Preparation (to be implemented under an EIB framework loan)
- 12/2018 – 9/2020

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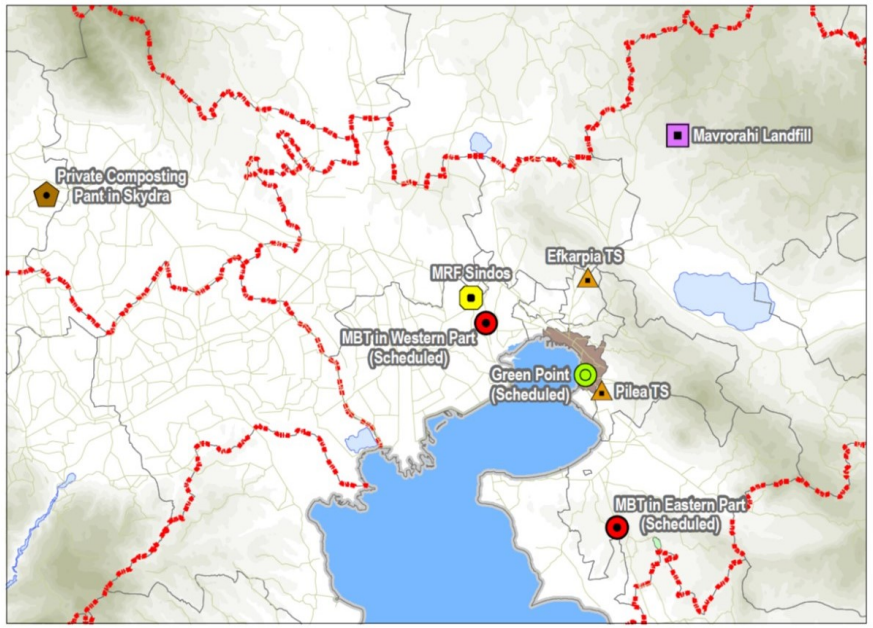
Current Situation (1)

- Waste collection system: separate collection of co-mingled packaging waste and glass packaging waste, WEEE and bulky waste and collection of mixed residual waste
- Co-mingled packaging waste to MRF, glass packaging to recycling company and WEEE to 4 management facilities
- Residual and bulky waste to sanitary landfill, directly or via the 2 transfer stations
- Mixed residual waste and biowaste treatment facilities expected to operate in 2024



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Current Situation (2)

- Directorate of Recycling and Municipal Waste Management of MoT: collection, transportation, cleanliness
- Hellenic Recovery Recycling Corporation (HERRCO): PRO for packaging waste (blue bin), in collaboration with MoT
- Association of Solid Waste Management Agencies of Central Macedonia: temporary storage, transfer, treatment, recovery and disposal of MSW, in the Region
- MoT: bring systems for curbside collection of mixed residual and co-mingled packaging waste (green and blue bins)
- Overall WM cost in MoT ~75€/tn (mainly for waste collection, transfer and transport). Services charged with local municipal tax (depends on total property area / average 1,45 €/m^2.year for 2020) and collected with electricity bills.

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Gaps and Proposed Option

Demand and Gap Analysis

	Current situation at MoT (2019)	LWMP targets for 2020	Projected separate collection rates to be achieved by 2030
Total separate waste collection (% of total MSW)	14%	50%	60%
Separate waste collection of recyclables: plastics, metals, paper/cardboard and glass (% of total recyclables)	31%	65%	72%
Separate collection of printed paper (% of total printed paper)	-	70%	70%
Separate collection of biowaste (% of total biowaste)	<1% (900 tn/yr green waste)	40%	57%

Options Analysis

- Selected Option: in line with international best practices (start with pilot projects) and following a staged approach: mainly curbside (as it is) separate collection for residual waste, biowaste, glass and comingled recyclables (and printed paper in city center), plus pilot projects for door-to-door collection and separate collection of multiple recyclable fractions

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Investment Plan

- New waste collection system will contribute to meeting legal requirements and targets
- Targets achievement will depend on adoption and enforcement of legislation (landfill tax, EPR, PAYT) and success of circular economy policies and strategies
- Investment cost breakdown in 3 phases:

	Phase I: 2020 – 2023	Phase II: 2024 – 2025	Phase III: 2026 – 2030	Total
Waste collection equipment (bags, bins, containers)	2.281.536	4.436.678	2.342.640	9.060.854
Waste collection trucks (incl. GPS tracking systems in existing and new fleet)	1.431.000	2.380.000	1.987.000	5.798.000
Green points / Recycling corners	6.508.000			6.508.000
Studies	550.000			550.000
Technical assistance	40.000	60.000		100.000
Public awareness campaigns	70.000	120.000	310.000	500.000
GRAND TOTAL	**10.880.536**	**6.996.678**	**4.639.640**	**22.516.854**

Priority Investment Project (PIP) and Scale-up

Phase I: Period 2020-2023 (**includes PIP**):

- Deployment of **3 pilot schemes** for separate collection of biowaste and recyclable fractions:
  - City centre (mixed use area, total surface ~0,08 km^2):
    - ✓ Households (~365): curbside collection of 3 separate fractions (bio-waste, paper/ cardboard and plastic/metals/composites) in addition to mixed residual waste
    - ✓ Large producers: door-to-door collection of 3 fractions (co-mingled recyclables / packaging, printed paper (~255 producers) and bio-waste (~175 producers))
  - Ano Poli (mostly residential, ~225 households in ~0,02 km^2): door-to-door collection of 3 fractions (bio-waste, paper/cardboard and plastics/metals/ composites) in addition to residual waste
  - "Macedonia" street food market (~1 km): separate collection of 3 fractions (biowaste, paper/cardboard and plastic/metals/composites) in addition to residual waste
- 2 **central green points**, 25 **neighbourhood green points** and 35 **recycling corners**
- Deployment, city-wide, of **bell type containers** for separate glass collection

Phase II: Period 2024-2025 (**scale-up** to ~30% of total population)

Phase III: 2026 and onwards (**final scale-up**)

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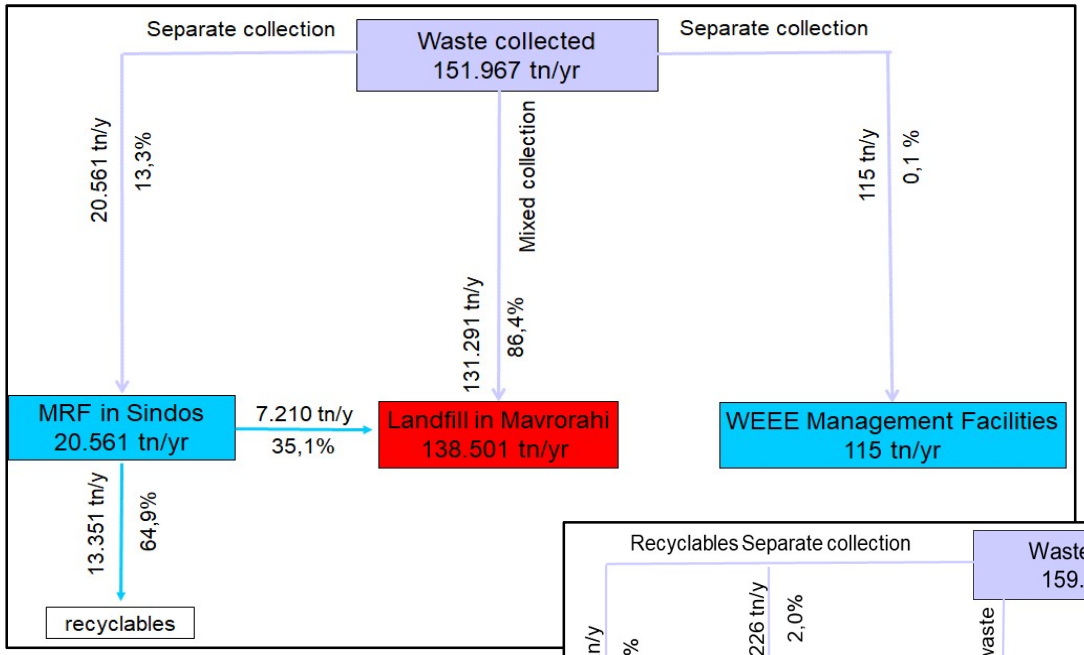
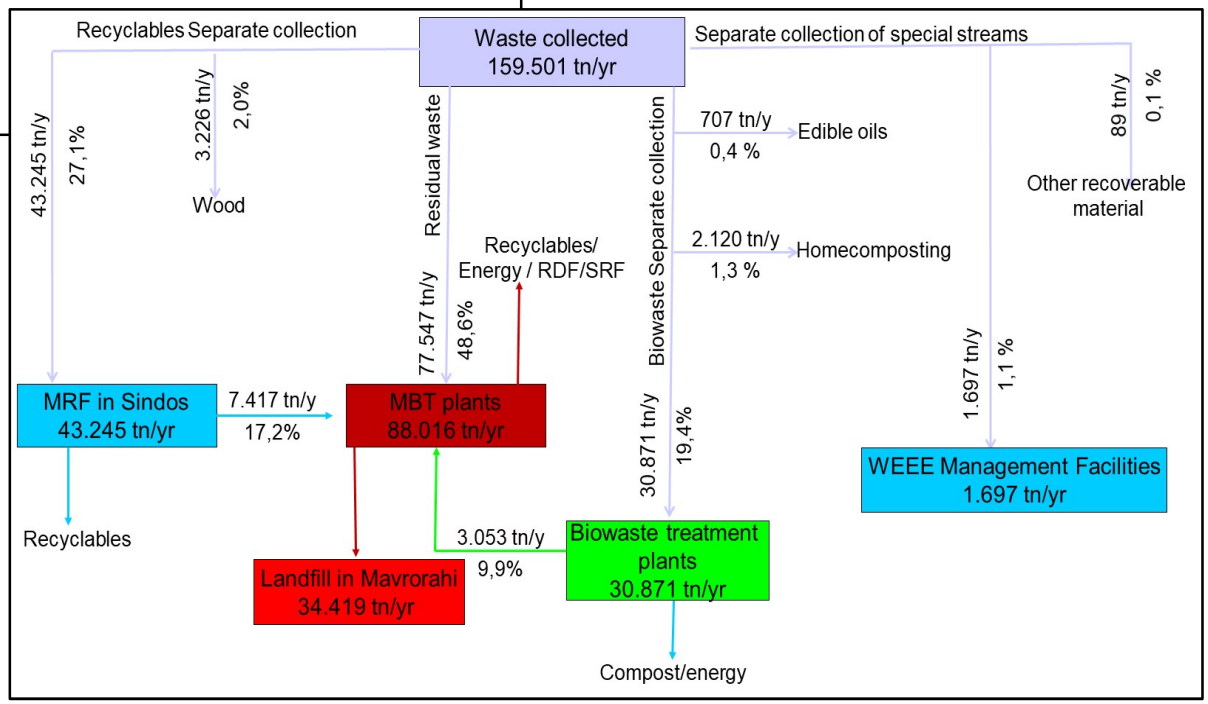
Existing vs New System



Existing system (2019)

New system (2025)



Annual decrease in GHG emissions (apparent from 2024 and onwards): average 11.600 tn CO_2/yr

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Thank you for your attention!!!

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