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WP5: Policy Recommendations

Challenges in the current policy in the project cities

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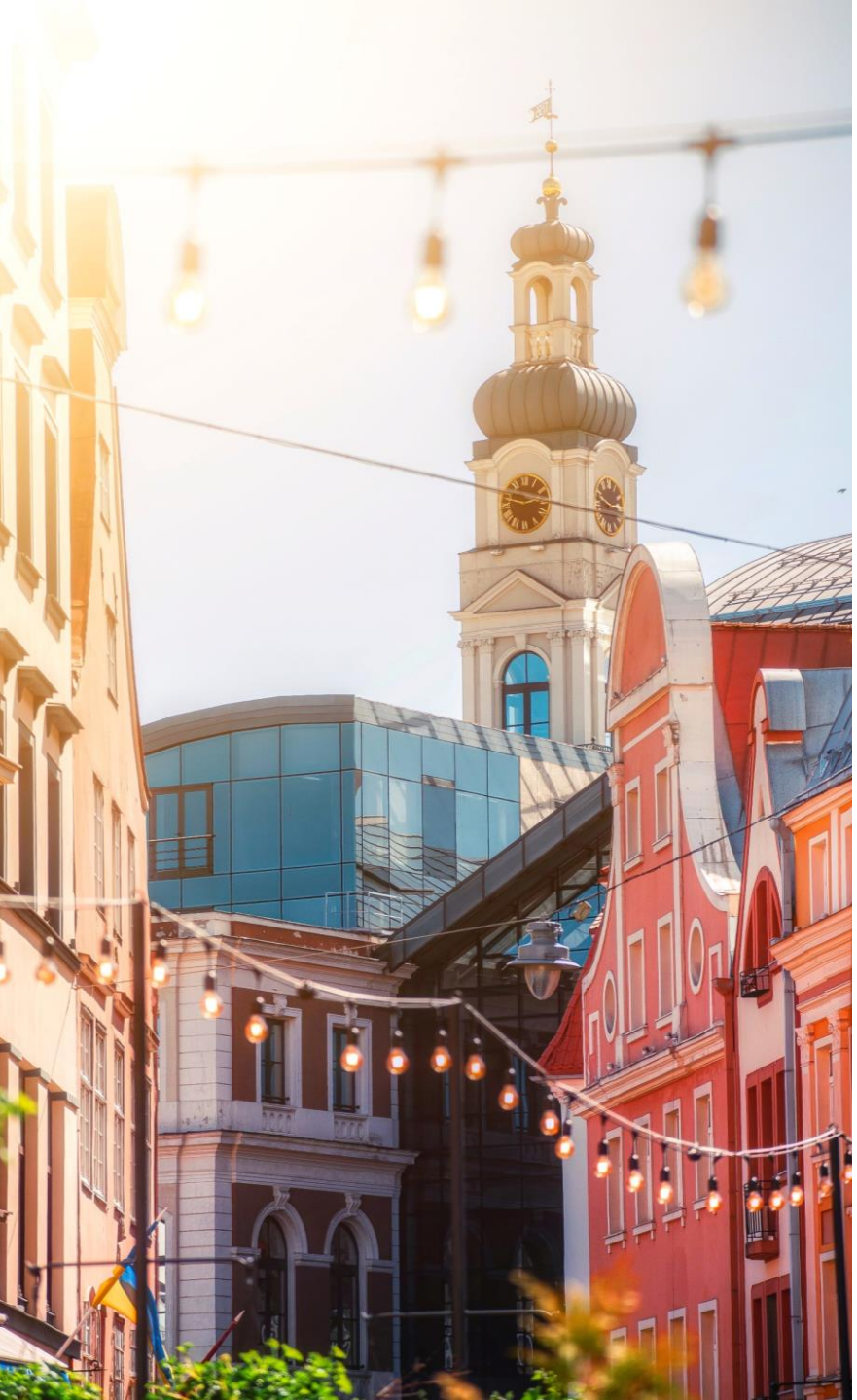
Wednesday, 22/05/2024



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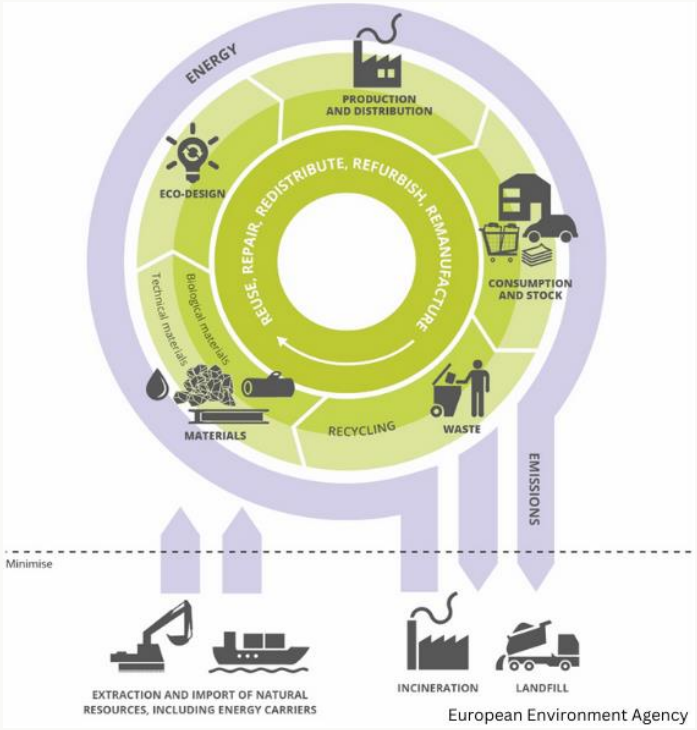
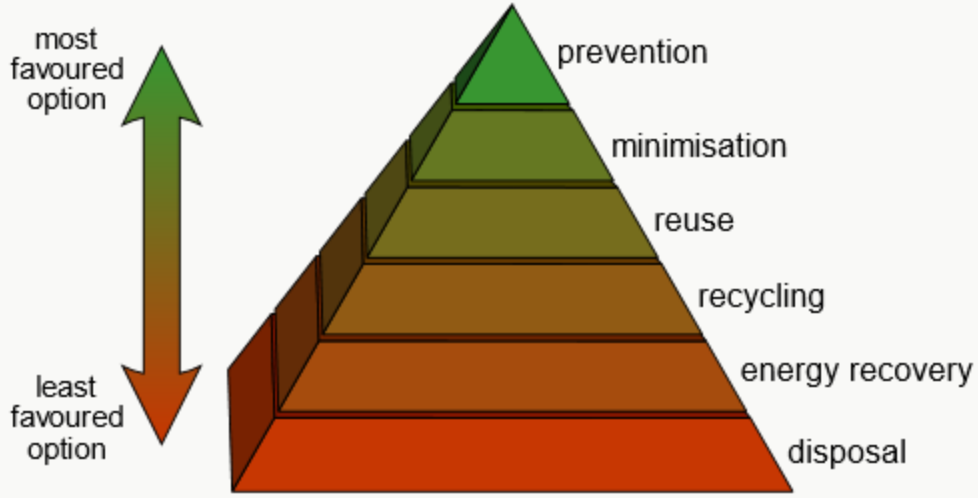
Fit for 55 package - CE - CDW management

In the context of the European Union (EU), the **"Fit for 55" package** refers to a set of climate and energy legislative proposals aimed at achieving the EU's climate targets for 2030. The package is part of the broader European Green Deal, which seeks to make the EU carbon-neutral by 2050.



Construction and demolition waste (CDW) accounts for more than a third of all waste generated in the EU. It contains a wide variety of materials such as concrete, bricks, wood, glass, metals and plastic. It includes all the waste produced by the construction and demolition of buildings and infrastructure, as well as road planning and maintenance. (EUROPA.EU)

Circular Economy (CE): Reduce material and energy use and waste through recycling, repair and reuse, combining economic and environmental gains.



Waste hierarchy, 2023, Wikipedia

Policy framework in the CDW sector

Barcelona

The 2007-2015 National Plan on Construction and Demolition Waste (II Plan Nacional de Residuos de Construccion y Demolicion).

The 2015-2020 State Waste Framework Plan (Plan Estatal Marco de Residuos (PEMAR)). This Framework has a specific section on CDW.

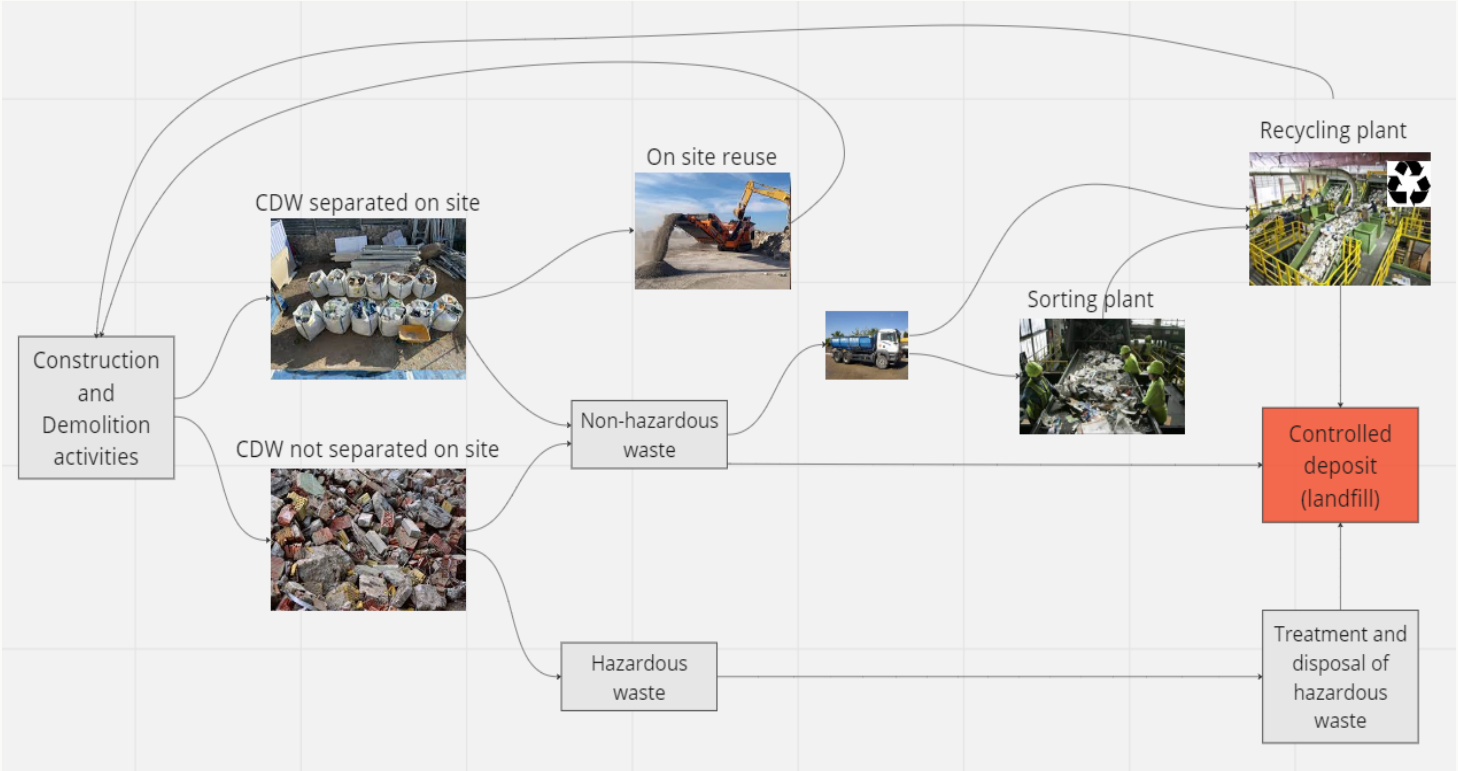
- **Responsibility of collection**:

In case of renovation, construction or demolition, a company authorized by the City Council has to be appointed and will either use a metal containers or bags, that must be collected within 24 hours if located on a non-closed area. Construction and demolition waste such as rumble can be brought to the 7 main CAS* located at the outskirt of the city (they cannot be brought to the smaller CAS located in the city or to the mobile CAS). Fibrocement with asbestos can be brought to one of the CAS (Green Dot of Vall d'Hebron area) by citizens, after being wrapped in a plastic bag.

- Pay-as-you-throw: No
- Description of the fee system: CAS are free for citizen, fees apply for commercial waste

Source: https://ajuntament.barcelona.cat/ca/

*Centre d'Atenció i Seguiment (Centre of Attention and Monitoring)



Home renovation company

1.000 kilos ($1m^3$)

Company is responsible to pick up the waste from the renovations

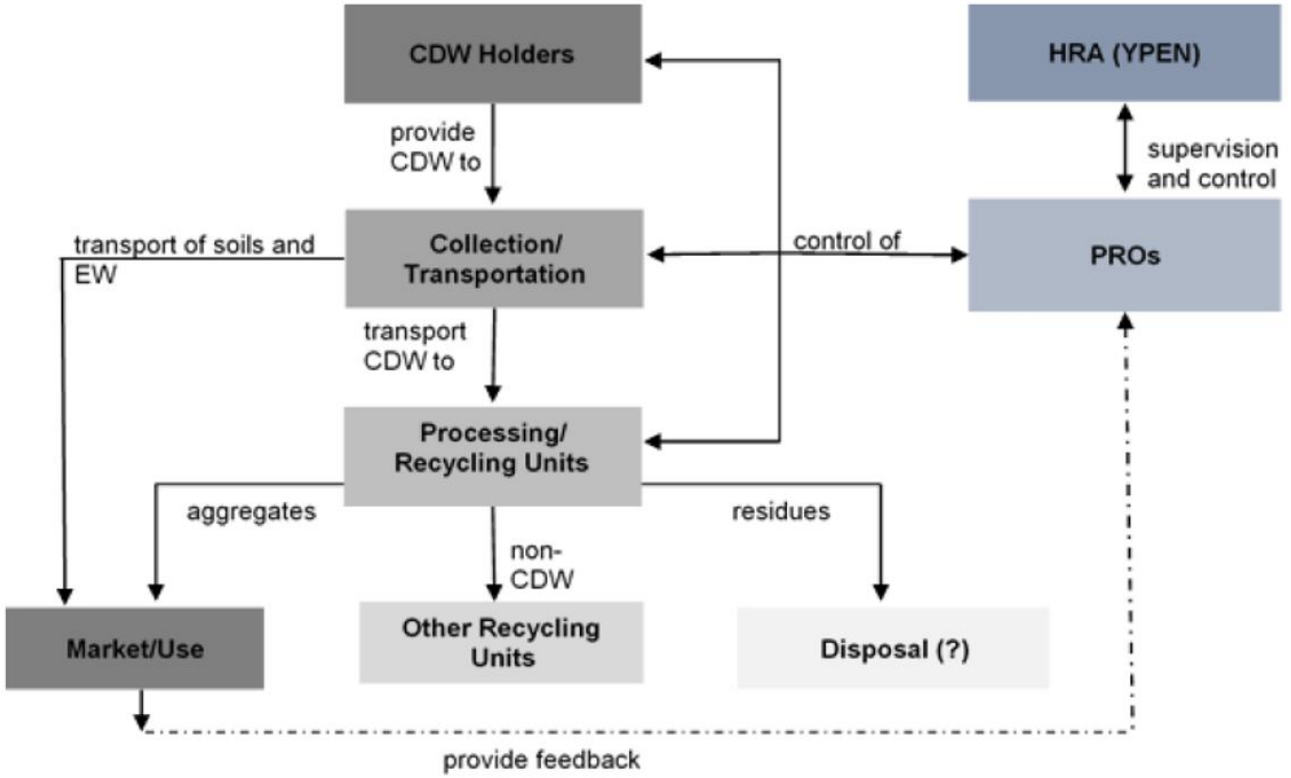
Policy framework in the CDW sector

Kavala

Waste Management Legislation Law 4042/2012, which transposes the EU Waste Framework Directive - WFD (2008/98/EC) into Greek law.

- According to Greek legislation, all producers/holders (manufacturers, traders, importers) are obliged to either organize or participate in Alternative Management Systems.
- The Systems constitute private entities, non-profit, known as Producer Responsible Organizations (PROs) which are set by law for the alternative management of the waste generated by their operations. The development of PROs is satisfactory, covering almost 81% of the Greek territory and 91% of the Greek population.

Source: https://www.gov.gr/



Policy framework in the CDW sector

Riga

Strategy for Achieving Climate Neutrality 2050 (Latvia). The strategy does not actively highlight the construction sector; however, the construction sector is mentioned among development directions regarding material efficiency, energy efficiency and renewable energy in buildings, including innovative solutions for cultural heritage and historic buildings.

Action Plan for the Transition to a Circular Economy (2020-2027)- Latvia

Waste Management Plan (2021-2028) - Latvia

Law on Waste Management. Latvia's Waste Management Law serves as the primary legislation for waste management, including CDW. It outlines the legal framework for waste prevention, recycling, and environmentally sound disposal.

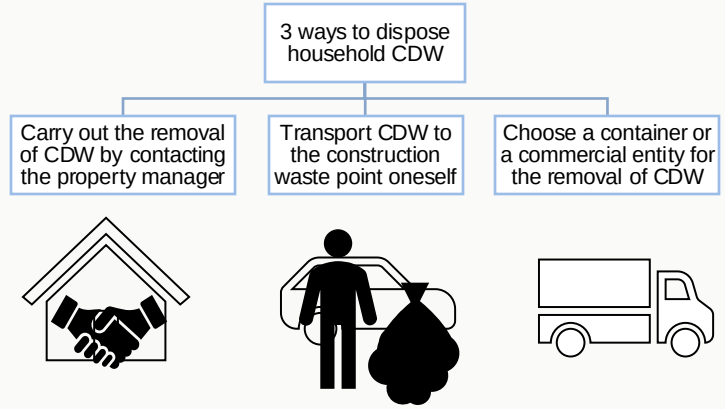
National legislation on CDW management. To date, there are no legal acts or planning documents in Latvia that specifically regulate C&D waste management.

Construction Sector Regulations: These regulations include requirements for waste sorting, recycling, and reporting on CDW generation and management.

- Pay-as-you-throw: No

Source: https://www.oecd-ilibrary.org/

In Latvia there are 11 municipal waste landfills - 2 waste landfills in Riga.



REGULATIONS FOR CDW

The authorized waste management operator:

- Selected by the municipality
- Collects, transports, transfers, sorts, and storages household CDW from the relevant household waste management zone
- By the most economically advantageous offer

Policy framework in the CDW sector

Tartu

Construction and Demolition Waste management in Estonia V3 – December 2015

The **Environmental Charges Act (RT I 2005, 67, 512)** describes the conditions under which the landfill operators should pay landfill tax to the State for receiving waste in landfills**.**

National Waste Management Plan for the period 2014-2020. The goal of Estonia, as described in the WMP, is to reduce landfilling as much as possible and recover the highest possible share of CDW.

Circular renovation project of the city of Tartu (2022-2024). Tartu wants to achieve the mission of 100 climate neutral cities in Europe and be climate neutral by 2030. The construction sector produces 9% of Estonia's waste and the recycling of waste in the construction sector today is of low quality - over 90% of recycled construction materials are used for backfill.

Source: http://www.rmel.ee/tartu-ringrenoveerimine/

In the city of Tartu, there is a relatively well-developed waste management system, with designated sites for depositing construction and demolition waste as soil fillers.

1. Segregate your waste
2. Use designated containers
3. Manage hazardous waste
4. Reuse & Recycle
5. Prevent environmental contamination
6. Pay for waste management
7. Disposal at waste stations

“Polluter Pays” principle

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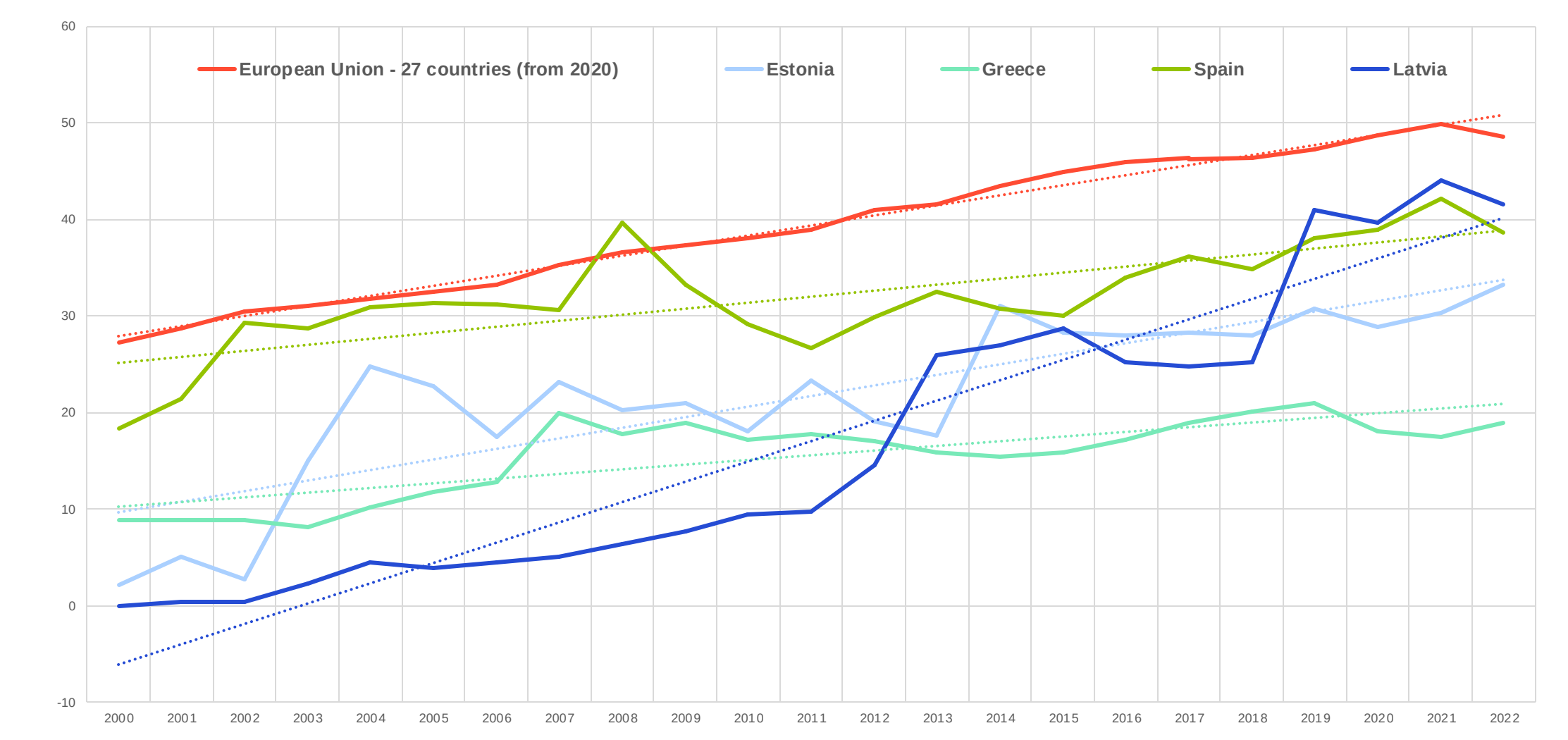
Recycling rate of municipal waste



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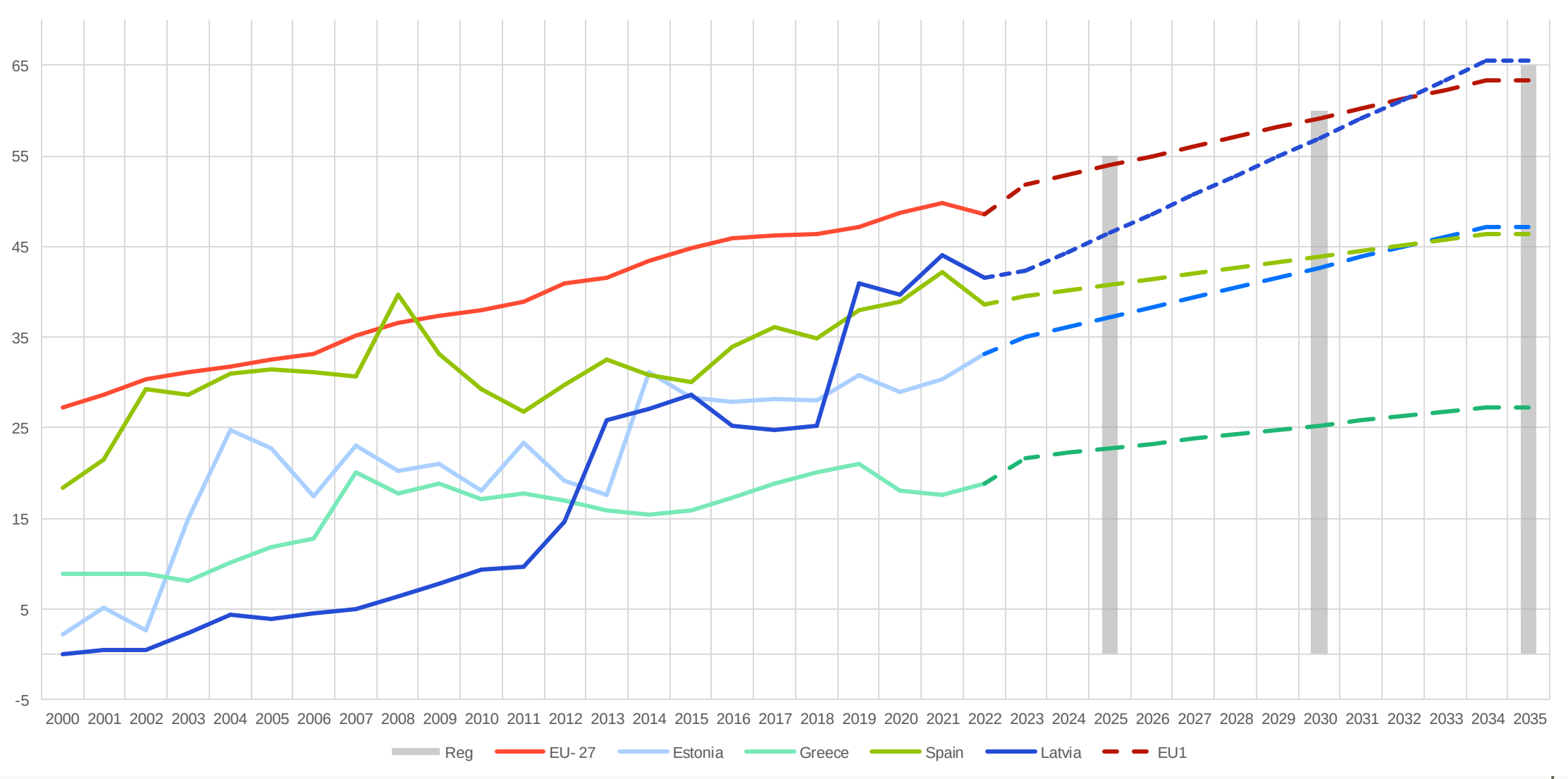
Projections of recycling rate of municipal waste (2000-2035)



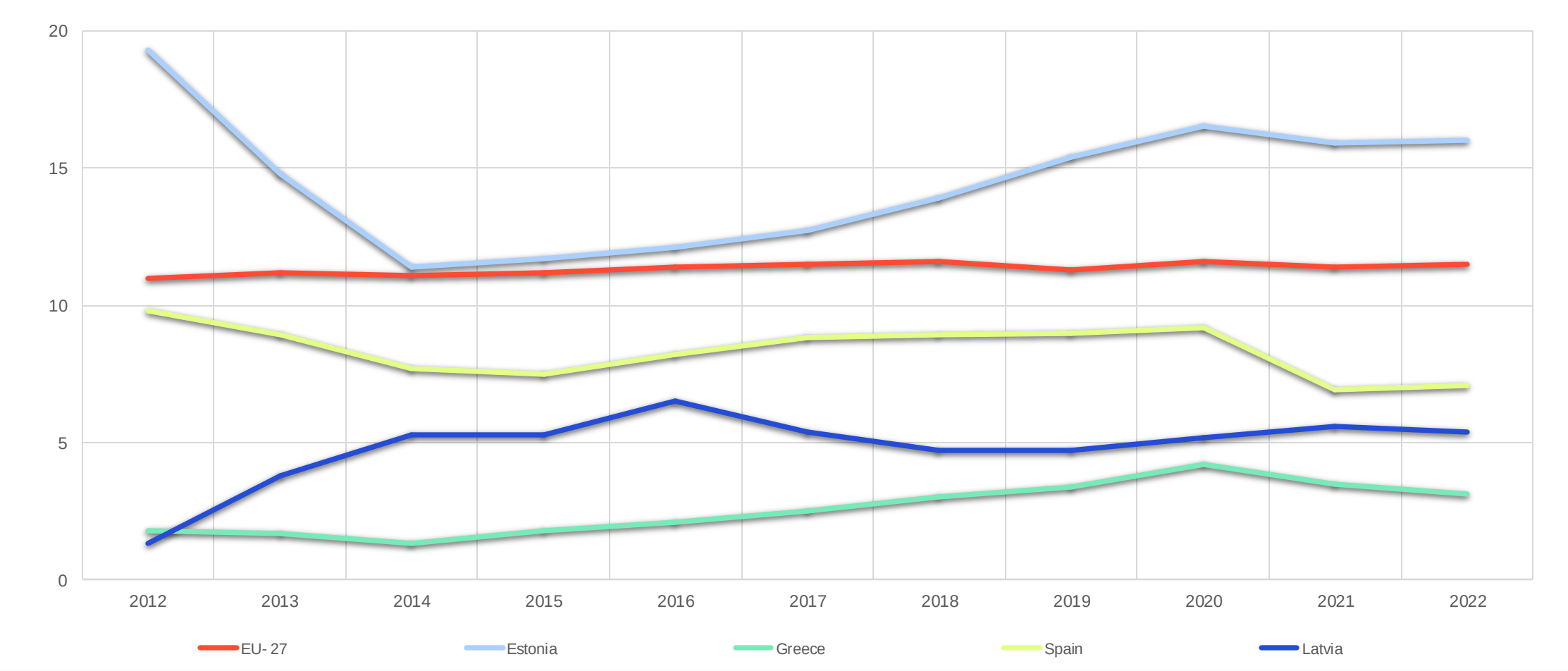
Comparison Table| Municipal Waste | Legal Instruments

	Greece	Spain	Estonia	Latvia
Waste Management Law	Law 4042/2012 transposing EU Waste Framework Directive (2008/98/EC)	Spanish Law 22/2011 on Waste and Contaminated Land	Waste Act (2014)	Waste Management Law (2010)
National CDW Plan	National Strategic Plan for Waste Management (2020-2030)	National Waste Plan 2016-2022	National Waste Management Plan 2014-2020	National Waste Management Plan 2021-2028
Extended Producer Responsibility (EPR)	Implemented for packaging, EEE, vehicles, and batteries	Implemented for packaging, EEE, vehicles, and batteries	Implemented for packaging, vehicles, EEE, and batteries	Implemented for packaging, EEE, vehicles, and batteries
Landfill Ban	Ban on biodegradable waste since 2009, CDW ban in process	Ban on untreated waste in landfills	Ban on landfilling separately collected waste	Planned landfill ban on recyclable waste by 2030
Separate Collection System	Mandatory for specific waste fractions (paper, plastics, glass, metal)	Mandatory for specific waste fractions (paper, plastics, glass, metal)	Mandatory for specific waste fractions (paper, plastics, glass, metal)	Mandatory for specific waste fractions (paper, plastics, glass, metal, bio-waste)
Deposit Return System (DRS)	Not available	DRS implemented for glass and PET bottles	DRS implemented for plastic, glass, and metal beverage containers	DRS implemented for plastic, aluminium, and glass beverage containers
Packaging Law	Law 2939/2001 on Packaging Waste	Royal Decree 105/2008 on Packaging Waste	Packaging Act (2015)	Packaging Law (2002)
National Recycling Targets	Minimum 55% recycling rate for municipal waste by 2025	Minimum 55% recycling rate for municipal waste by 2025	Minimum 55% recycling rate for municipal waste by 2025	Minimum 55% recycling rate for municipal waste by 2025
Quality Management System for Compost	Not yet available	National standards and QMS for composting	National standards and QMS for composting	Developing national standards and QMS for composting

Comparison Table| Municipal Waste | Economic Instruments

	Greece	Spain	Estonia	Latvia
Landfill Tax	Incremental tax from €25/ton (2017) to €45/ton (2023)	Varies by region: €21/ton to €53/ton	Incremental tax from €12/ton (2015) to €29/ton (2022)	Incremental tax from €25/ton (2017) to €95/ton (2023)
Incineration Tax	Not available	Not available	Incremental tax from €7.5/ton (2015) to €12.7/ton (2022)	Incineration tax of €15/ton (2021), no escalator
Pay-As-You-Throw (PAYT)	Not implemented	Implemented in several regions (e.g., Catalonia, Basque Country)	Pilot projects in some municipalities (Tartu is among them)	Implemented in only one municipality
Deposit Refund System (DRS)	Not available	Implemented in a few regions	Implemented nationwide	Implemented nationwide
Packaging EPR Fees	Modulation in progress	Modulation varies by region, fees based on weight and recyclability	Advanced fee modulation based on recyclability, recycled content	Basic fee modulation in progress (advanced fee modulation planned)

Circular material use rate (%)



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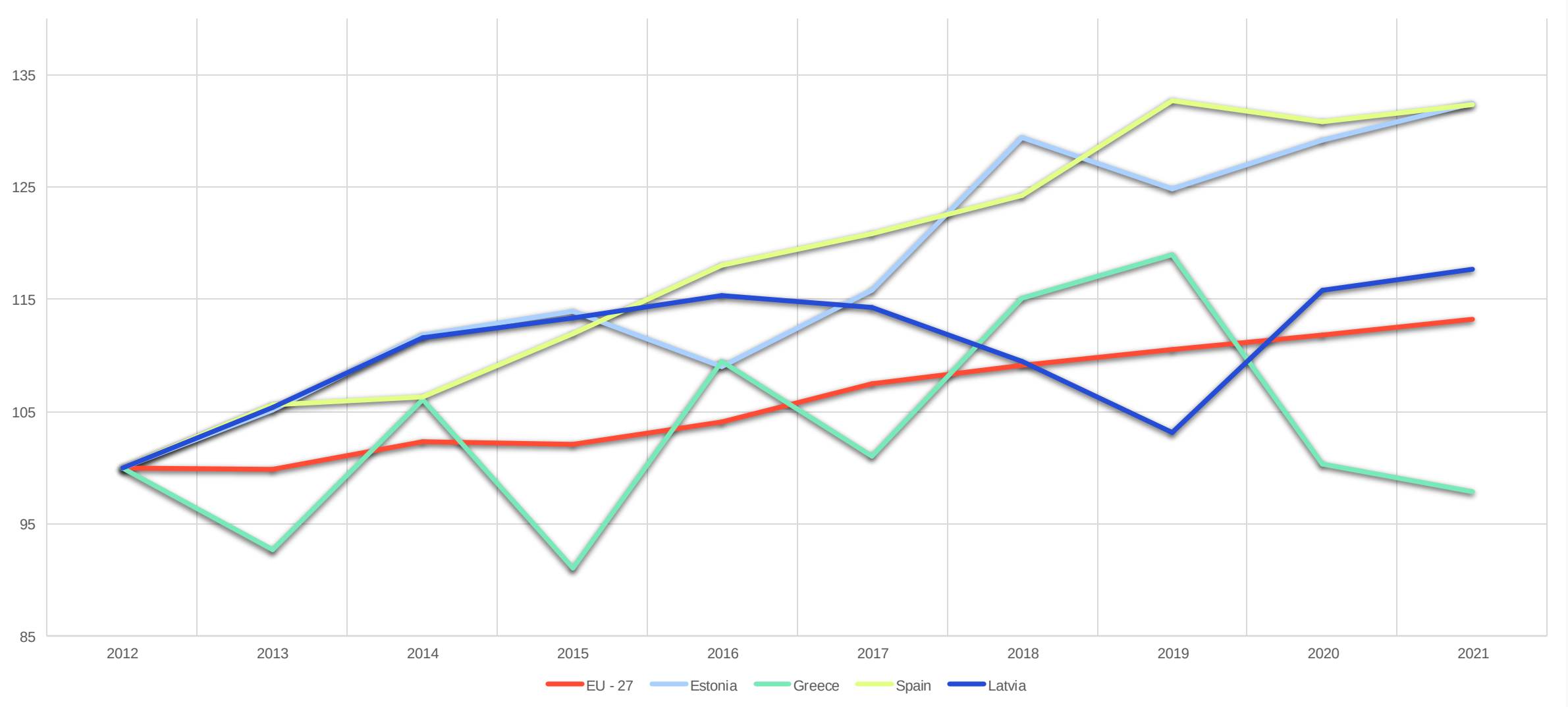
Persons employed in circular economy sectors (2012=100)



Comparison table | Legal Instruments | CDW

	Greece	Spain	Estonia	Latvia
CDW Management Law	Law 4042/2012 transposing EU Waste Framework Directive (2008/98/EC)	Royal Decree 105/2008 on Construction and Demolition Waste	Waste Act (2014)	Waste Management Law (2010)
National CDW Plan	National Strategic Plan for Waste Management (2020-2030)	National Waste Plan 2016-2022	National Waste Management Plan 2014-2020	National Waste Management Plan 2021-2028
CDW Recycling Targets	70% by 2020	70% by 2020	70% by 2020	70% by 2020
Waste Permitting System	Permits required for demolition activities	Permits required for demolition activities	Permits required for demolition activities	Permits required for demolition activities
Quality Protocol for Recycled CDW	Planned	Developed for recycled aggregates	In progress	No specific protocol yet
Selective Demolition Guidelines	Available	Available	Available	Available
Hazardous CDW Regulations	Asbestos and lead regulations	Asbestos and lead regulations	Asbestos and lead regulations	Asbestos and lead regulations

European Environment Agency (2024)

Comparison table | Economic Instruments

	Greece	Spain	Estonia	Latvia
Landfill Tax (CDW)	Incremental tax from €25/ton (2017) to €45/ton (2023)	Varies by region: €21/ton to €53/ton	Incremental tax from €12/ton (2015) to €29/ton (2022)	Incremental tax from €25/ton (2017) to €95/ton (2023)
Incineration Tax (CDW)	Not available	Not available	Incremental tax from €7.5/ton (2015) to €12.7/ton (2022)	Incineration tax of €15/ton (2021), no escalator
PAYT System (CDW)	Not available	Available in some regions (e.g., Catalonia, Basque Country)	Pilot projects in some municipalities	Not available
Deposit Refund System (DRS)	Not available	Not available	Implemented nationwide	Not available
Recycling Incentives (CDW)	Planned	Regional incentives in some areas	Tax exemptions for recycling companies	Planned

European Environment Agency (2024)

Comparison table | Bulky Waste Management

	Greece	Spain	Estonia	Latvia
Separate Collection System	Bring points and civic amenity sites	Bring points and civic amenity sites	Bring points and civic amenity sites	Bring points and civic amenity sites
Recycling Target (Bulky Waste)	55% by 2025	55% by 2025	55% by 2025	55% by 2025
Producer Responsibility Scheme	Not available	Available for packaging waste	Available for packaging waste	Available for packaging waste
Reuse Centers	Planned expansion of existing facilities	Regional reuse centers available (e.g., Basque Country)	Available in Tallinn	Available in Riga

European Environment Agency (2024)

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Barriers in implementation of circularity in CDW management 1|2

Environmental	Economic	Cultural
Lack of storage species in reverse logistics, adaptive use and deconstruction site access limitations	Undeveloped market for recycled materials	Lack of awareness and demand
Health and safety risks from contaminated materials	High or equivalent cost of secondary material compared to primary materials	Cultural resistance of the stakeholders
Emissions from transport and reconditioning for 3R and prefabrication	High purchasing costs for circular materials	Lack of systematic vision regarding sustainable buildings, reverse logistics, DfD
	Low cost of landfilling	Uncertainty regarding quality of recycled materials
	Costs of labor and time-intensive nature of deconstruction and reuse	Lack of awareness about the benefits
	High upfront investment costs	
	Limited funding for circular projects	
	Profit-driven decision-making	

Gherman, I.-E., Lakatos, E.-S., Clinci, S. D., Lungu, F., Constandoiu, V. V., Cioca, L. I., & Rada, E. C. (2023). Circularity Outlines in the Construction and Demolition Waste Management: A Literature Review. Recycling, 8(5), 69. https://doi.org/10.3390/recycling8050069

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Barriers in implementation of circularity in CDW management 2|2

Organizational	Technical	Regulatory
Lack of information, experience and skills	High costs for new technology	Lack of standardisation
Lack of partnership networks between stakeholders	Lack of tools for material recovery	Lack of global consensus about CE
Operating in a linear system	Lack of circular design guidelines	Limited circular procurement
Limited top management commitment and support for circularity	Lack of an information exchange system	Uncertainty regarding future legislation
Lack of time and human resources		
Poor partnership with the supply chain		

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Drivers for implementation of circularity in CDW management 1|2

Environmental

Scarcity of landfill sites

Reduction in use of virgin material

Energy and carbon footprint reduction

Economic

Funding for circular projects

Circular business model

Financial incentive to use circular or secondary materials

Lower costs for recovery actions

Development of secondary material market

Increased landfilling costs

Cultural

Social awareness

Education, training and workshops

Awareness-raising event and projects

Increased awareness of the benefits of the CE in CDW management

Organizational

Commitment and support from the management

High priority on circularity within the organisation

Collaboration between stakeholders

Promoting the green image of the companies

Integrating CE principles in the design phase

Availability of storage space

Technical

Development of tools and guidelines (collection and separation)

Development of enabling technologies

Development of digital marketplace for secondary materials

Development of circular procurement system

Regulatory

Global agreement on regulations

Waste management directives

Policy support

Circular economy legislation

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Next steps for CURE+ | Call for participation

- Develop a MCDA model (ELECTRE) to identify policy gaps and rank the countries on CDW management effectiveness.
  - To pinpoint strengths and weaknesses
  - To guide targeted improvements
  - To address the disparities in CDW management and promote best practices across municipalities

Common elements of a best practice strategy plan at national, regional and local scale

National Plan	Regional Plan	Local Plan
Identifies and quantifies CDW management opportunities	Implements national policies	Involves local industry and contractors
Involves stakeholders from the construction industry	Quantifies the needs for collection, treatment and recycled material demands	Prioritizes waste prevention in local construction projects by establishing environmentally-friendly public procurement policies
Defines CDW management targets and environmental policies	Establishes investment plans for treatment facilities, research and development needs	Establishes buildings re-use schemes
Prioritizes waste prevention	Provides or helps in the development of tools for the industry for the safe recycling of materials	Establishes minimum waste sorting requirements
Provides a realistic regulatory framework for the industry, including codes of practice	Defines a performance baseline on past quantifiable information	Aims to clear guidance for small waste producers and SMEs

Some final questions

- How can municipally-run URCs navigate regulatory challenges to enhance recycling rates for CDW and bulky waste?
- What legal and economic instruments have proven most effective in encouraging selective demolition practices?
- How can cities ensure consistent quality in recycled CDW materials, given varying national and regional standards?
- What role do reuse centers and circular economy principles play in improving bulky waste management?
- How can municipally-run URCs work together to influence EU-level policy and standardization?
- What are the biggest opportunities and challenges facing municipally-run URCs in achieving Fit for 55 and circular economy goals?

THANK YOU

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TARTU

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