



This project is co-funded by the European Union and the Republic of Türkiye.

Technical Assistance for Assessment of Türkiye's Potential on Transition to Circular Economy EuropeAid/140562/IH/SER/TR

End-of-Waste and By-Product Practices in the EU and Türkiye and the End of Waste Project

Oğuzhan Akınç
End of Waste Project - Deputy Team Leader

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Ankara



What is End of Waste status and End of Waste criteria?

The waste material resulting from the recovery of a waste meets the cumulative conditions and requirements set out in the End of Waste criteria in accordance with Article 6 of the WFD and can be used as a secondary raw material or product and is not subsequently treated as waste.



End-of-Waste criteria are a list of conditions and requirements that specify when certain waste ceases to be waste and becomes a product or subsequently a secondary raw material.

Why is it important to implement this process?

Reduces burdens associated with regulations for the transport, storage and handling of materials (waste regulations do not apply)



An important contribution to the concept of circular economy.



Opens new markets for secondary raw materials.

THE LEGAL FRAMEWORK IN THE EU

The legal concept of End of Waste was introduced by the 2008 Waste Framework Directive (WFD)

Directive 2008/98/EC of the EUROPEAN PARLIAMENT and of the COUNCIL of 19 November 2008 on waste and repealing certain Directives

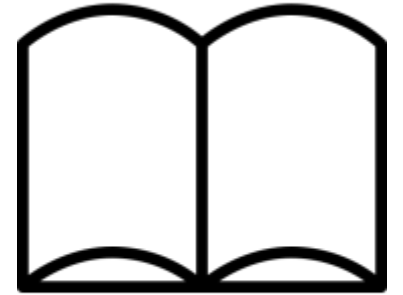
Directive (EU) 2018/851 of 30 May 2018 amending the Waste Framework Directive 2008/98/EC



End of Waste in Article 6 of the WFD

According to Article 6(1) of the WFD, certain wastes may cease to be waste when they are subjected to a recovery process, including recycling, and the product (object or substance) obtained from this process fulfils the following conditions:

- The use of a substance or object for specific purposes,
- The existence of a market or demand for such a substance or object,
- The substance or object fulfils the technical requirements for specific purposes and meets the current legislation and standards applicable to the products; and
- the use of the substance or object does not generally lead to adverse environmental or human health effects.



End of Waste

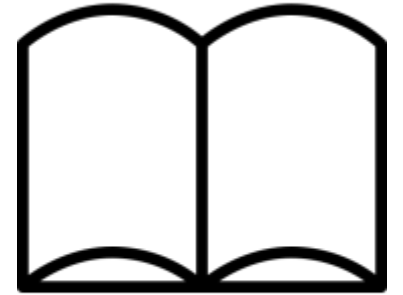


Source: Attard Bason Marie Claire, ERA <https://era.org.mt/topic/end-of-waste-criteria/>

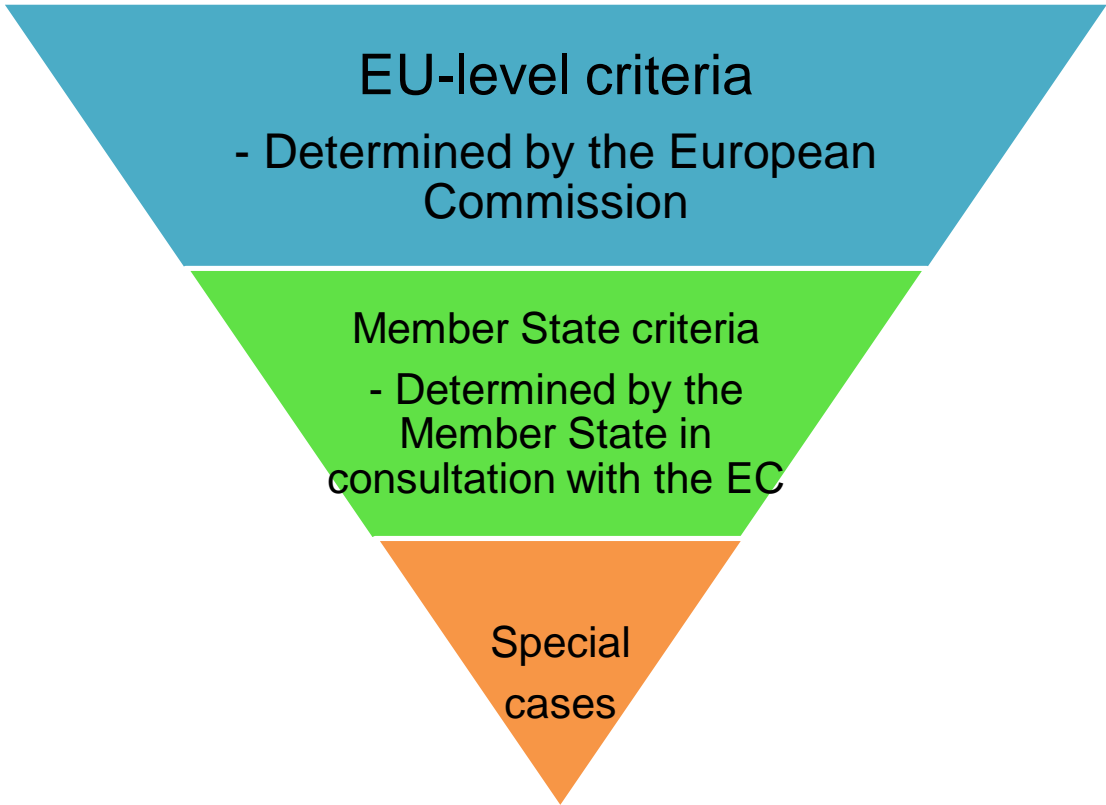
What should the End of Waste criteria include?

Article 6(2) of the WFD specifies what EU-wide (or national) End of Waste criteria should include:

- (a) Waste input material approved for recovery,
- (b) Approved waste treatment processes and techniques,
- (c) Quality criteria for End-of-Waste materials resulting from the recovery process in accordance with applicable product standards, including, where necessary, limit values for pollutants,
- (d) requirements for management systems, including, where appropriate, quality control and self-monitoring and accreditation, to demonstrate compliance with end-of-waste criteria; and
- (e) Requirement for declaration of conformity



How can waste cease to be waste in accordance with the WFD?



EU-recognised End-of-Waste criteria for specific materials
(Union-wide End-of-Waste criteria)



National End-of-Waste criteria
adopted by Member States (in the absence of criteria set at
Union level)



Case-by-case decisions by the competent authority in the
Member States
(in the absence of criteria set at Union or National level)

End of Waste Criteria Determination Studies

The Joint Research Centre (JRC) of the European Commission has prepared a methodology for identifying End of Waste criteria and carried out a series of analyses for various wastes with the greatest potential for proposing specific End of Waste criteria.



End-of-Waste criteria across the Union

On the basis of the JRC's analysis and recommendations and in order to harmonise the different approaches in the Member States, the EU has adopted End-of-Waste criteria applicable across the Union for certain waste types, such as iron, steel, aluminium and copper scrap and glass cullet, in the following Regulations:

- Iron-Steel and Aluminum Scraps:
(EU) COUNCIL REGULATION No. 333/2011
- Copper Scraps:
(EU) COMMISSION REGULATION No. 715/2013
- Glass Shards:
(EU) COMMISSION REGULATION No. 1179/2012

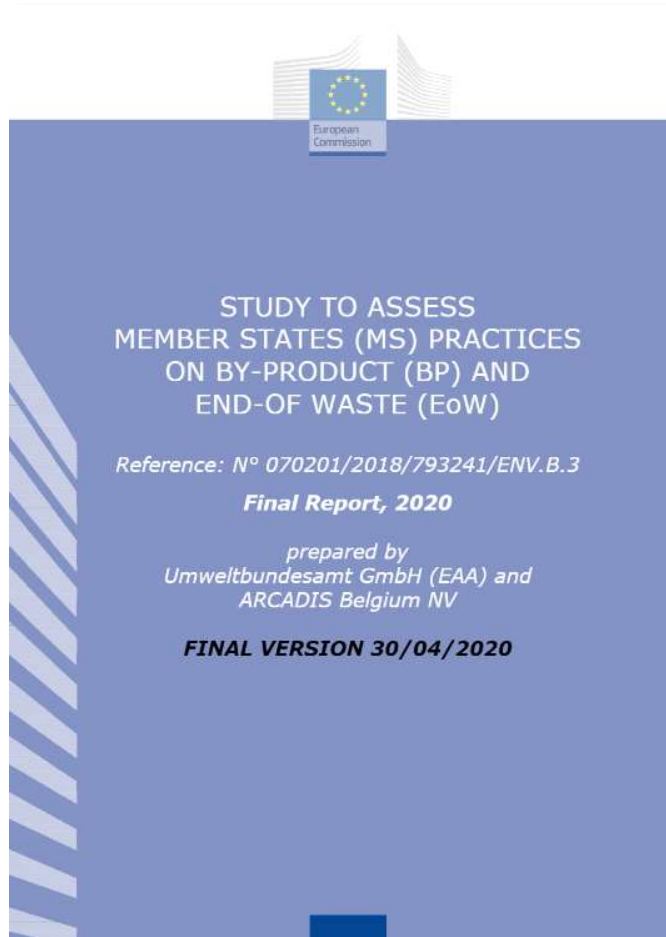


Fertilizer Products Regulation

Article 19 of Regulation 2019/1009 sets out the criteria by which materials constituting wastes as defined in Directive 2008/98/EC may cease to be wastes from the moment of the preparation of the EU declaration of conformity if they are present ... in a compatible EU fertiliser product.



How does waste cessation work in Member States?



In order to support the European Commission by providing more information on national implementation, a study was carried out in Member States to provide key information on the national implementation of the provisions on End of Waste and By-Products in the EU.

The study was conducted in 25 out of 28 Member States in 2019

The provisions of Article 6 of the WFD have been transposed into national law in all Member States analysed



National End-of-Waste Criteria

WFD Article 6 (3)

Where criteria have not been established at Union level, Member States (MS) may establish detailed criteria for the application of the conditions set out in paragraph 1 to specific waste types, fulfilling the requirements set out in paragraph 2. The MS will notify the EC of the new national End of Waste criteria.

The MS shall inform the EC of these criteria



By 2019, most Member States had established national End of Waste criteria/guidelines for at least one waste type.

In most Member States, the criteria have a legal status and are published in the form of regulations, decrees or other legislation.

National End-of-Waste Criteria

On the basis of the EC's work in 2019, MSs have adopted the following national criteria - a few examples

Projected end-of-waste status for the following waste/material types	Member States establishing guidelines/criteria
Building materials, aggregates, construction materials	AT, BG, HR, BE, UK, NL
Waste wood	Austria, France
Substitute fuels, recovered solid fuels, used oils processed for use as fuel	AT, IT, CZ, HR, FR, ES
Compost, fermentation products, biogas fermented products. Fertiliser and soil amendment	AT, BG, EE, CZ, SI, PT, HR, BE, UK
Biochar, drying products or ashes	EE, UK
Tyre crumbs added to the shale oil production process, rubber materials derived from tyres	EE, PT, UK

Decisions on a case-by-case basis

WFD Article 6 (4)

Where criteria have not been established at Union or national level, a Member State may decide on a case-by-case basis or take appropriate measures to verify that certain wastes cease to be wastes on the basis of the conditions laid down in paragraph 1 and, where appropriate, reflecting the requirements laid down in paragraph 2 and taking into account limit values for pollutants and possible adverse environmental and human health effects.

Such case-by-case decisions do not need to be notified to the European Commission.

Member States may publicise information on case-by-case decisions and the results of verification by the competent authorities by electronic means.

Decisions on a case-by-case basis at the MS level of authority

- National
- Regional
- Local
- National/Regional
- National/Local
- Regional/Local

Decisions on a case-by-case basis - how were they implemented by the MSs?

Under a permit (waste or EED permit)

Case-by-case decisions on End of Waste status can be made under the environmental authorisation procedure (waste treatment permit/licence or EED permit for special installations). Licensing and supervision by regional or local government authorities.

Separate decision issued by the competent authority

Competent authorities in MSs do not have a standardised approach to decision-making for End of Waste. In Ireland, decisions are based on a risk management approach.

Self-assessment + audit/verification

Operators are personally responsible for assessing whether the waste is no longer waste after the recycling process. The licence/permit issuing authority monitors and assesses the status of waste phase-out.

Findings from the study in MSs

- Although they have the authority to make decisions on a case-by-case basis, **the number of decisions made by the MSs is quite small.**
- **There is a great lack of transparency.** Case-by-case decisions are often not entered into electronic databases and, more importantly, the databases are not publicly available.
- **Problems related to trade in secondary raw materials from the End-of-Waste process within the EU,** depending on national criteria or case-by-case decisions.
- According to MS officials, **additional EU guidelines are** needed for specific waste/material types or processes related to End of Waste.
- Further harmonisation by the EU and **new specific EU-wide criteria** for other waste streams are needed.

Final utilisation of end-of-waste products/materials



End-of-Waste
Process



Use as secondary raw material in industrial processes



Use as a secondary raw material in the construction industry



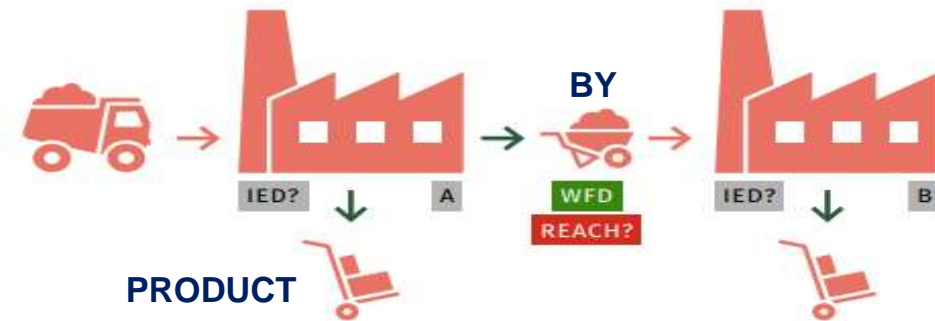
Direct use in the environment (fertilizers)



Consumer markets (reuse of certain products)

End of Waste and By-Products

BY-PRODUCT : Production residue that meets the cumulative conditions/criteria specified in the WFD and will be used as secondary raw material or product and will not be treated as waste.



END OF WASTE: A material recovered from waste that fulfils the cumulative conditions and requirements (or detailed criteria) specified in the WFD and will be used as a secondary raw material or product and no longer treated as waste.

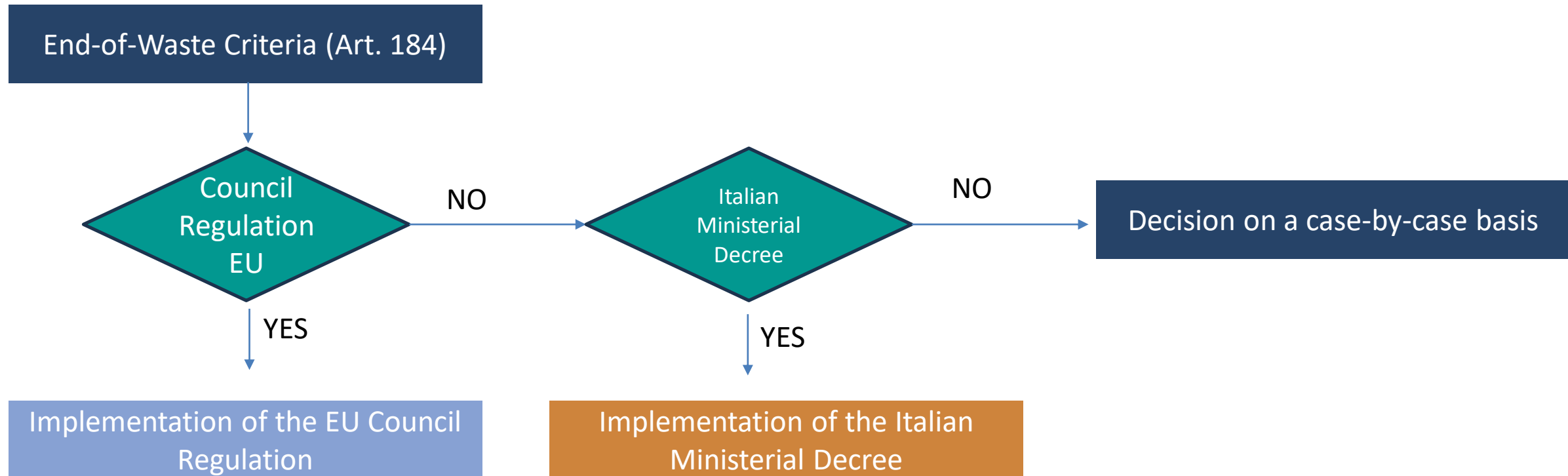


End-of-Waste and By-Product Differences

	End of waste	By-product
Legal basis	Waste Framework Directive Article 6(2) Local MS Legislation	Waste Framework Directive Article 5(3) Local MS Legislation
Technical evaluation	Used for a specific purpose	Accuracy of use
	Market or demand	Used directly without further processing except for normal industrial applications
	Technical requirements, legislation and standards	Produced as an integral part of a production process
	No general adverse effects on the environment or human health	Its use is legal, without any general negative impact on the environment or human health

Evaluation of the Permit Process

THE EXAMPLE OF ITALY



Structure of Legislation

Content of Italian Ministerial Decrees



- Subject
- Definitions
- Criteria for ceasing to be a waste
- Special uses of end-of-waste products
- Declaration of conformity
- Quality management

- Annexes:
 - Criteria (wastes used as input in the recovery process, treatment processes and techniques, quality of materials resulting from the recovery process),
 - Self-monitoring requirements
 - Declaration of conformity with end-of-waste criteria



Content of European Regulations



- Subject
- Definitions
- Criteria for ceasing to be a waste
- Declaration of conformity
- Quality management

- Annexes:
 - Criteria (wastes used as input in the recovery process, treatment processes and techniques, quality of materials resulting from the recovery process),
 - Self-monitoring requirements
 - Declaration of conformity with end-of-waste criteria

Structure of Legislation

Examples of Italian National Criteria



**INERT
AGGREGATES
(2022)**



**PAPER AND
CARDBOARD
(2021)**



**VULCANIZED
RUBBER FROM
DISCARDED
TIRES (2020)**



**BABY
DIAPERS**



**BITUMINOUS
PEBBLE (2018)**

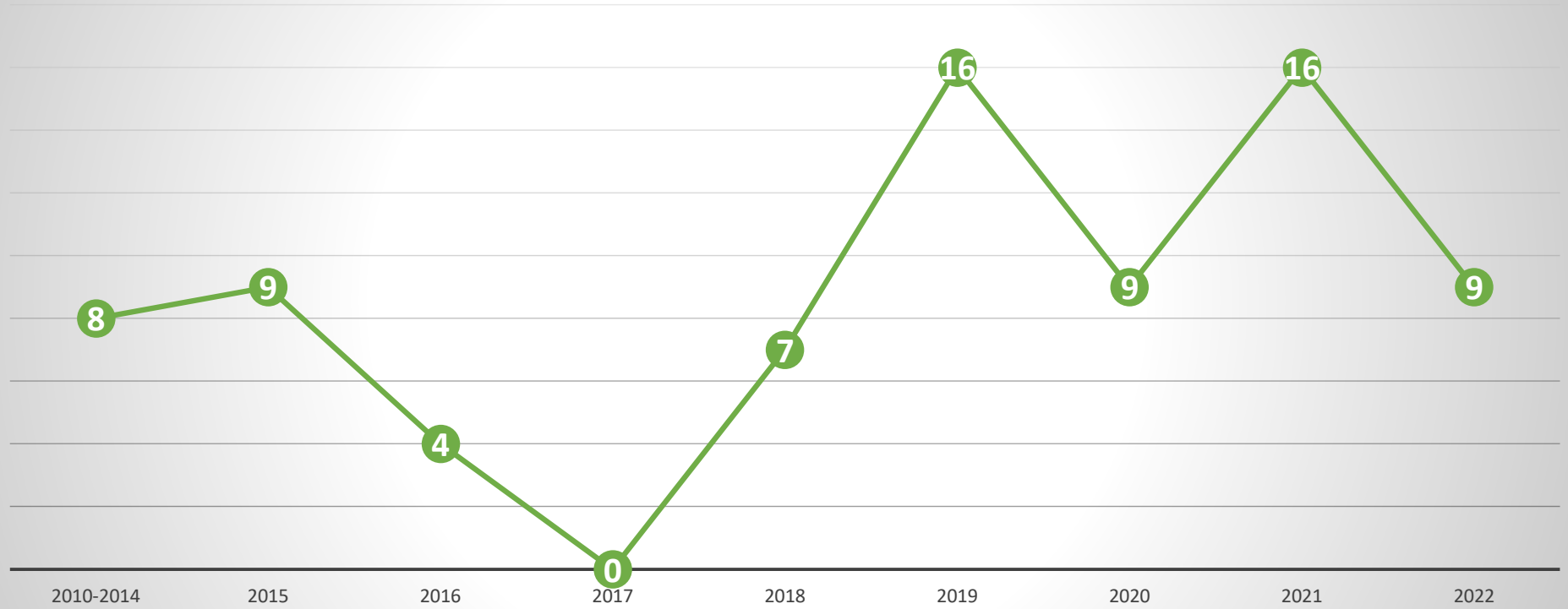


**SOLID
RECOVERED
FUELS (2013)**

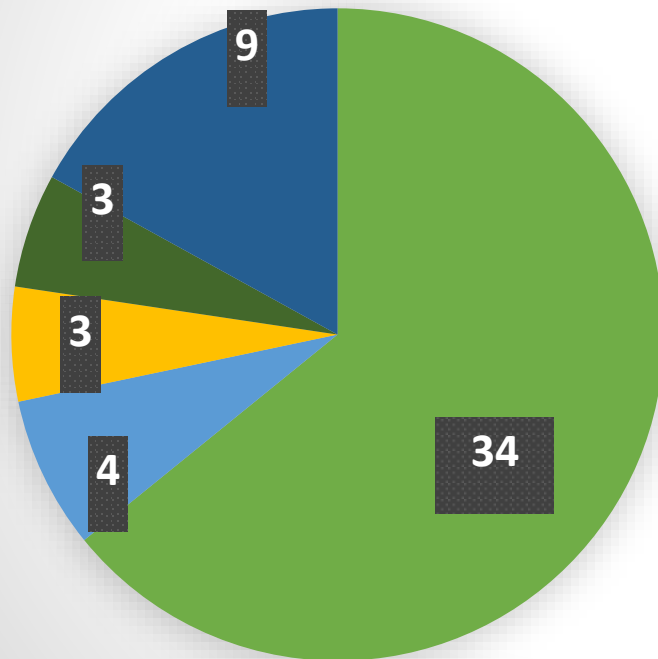


**SPECIAL REGULATORY PROVISIONS FOR
BIOMETHANE**

End-of-waste applications received in 2010 to 2022



Current end-of-waste application pending decision (by material)



Recycled aggregates

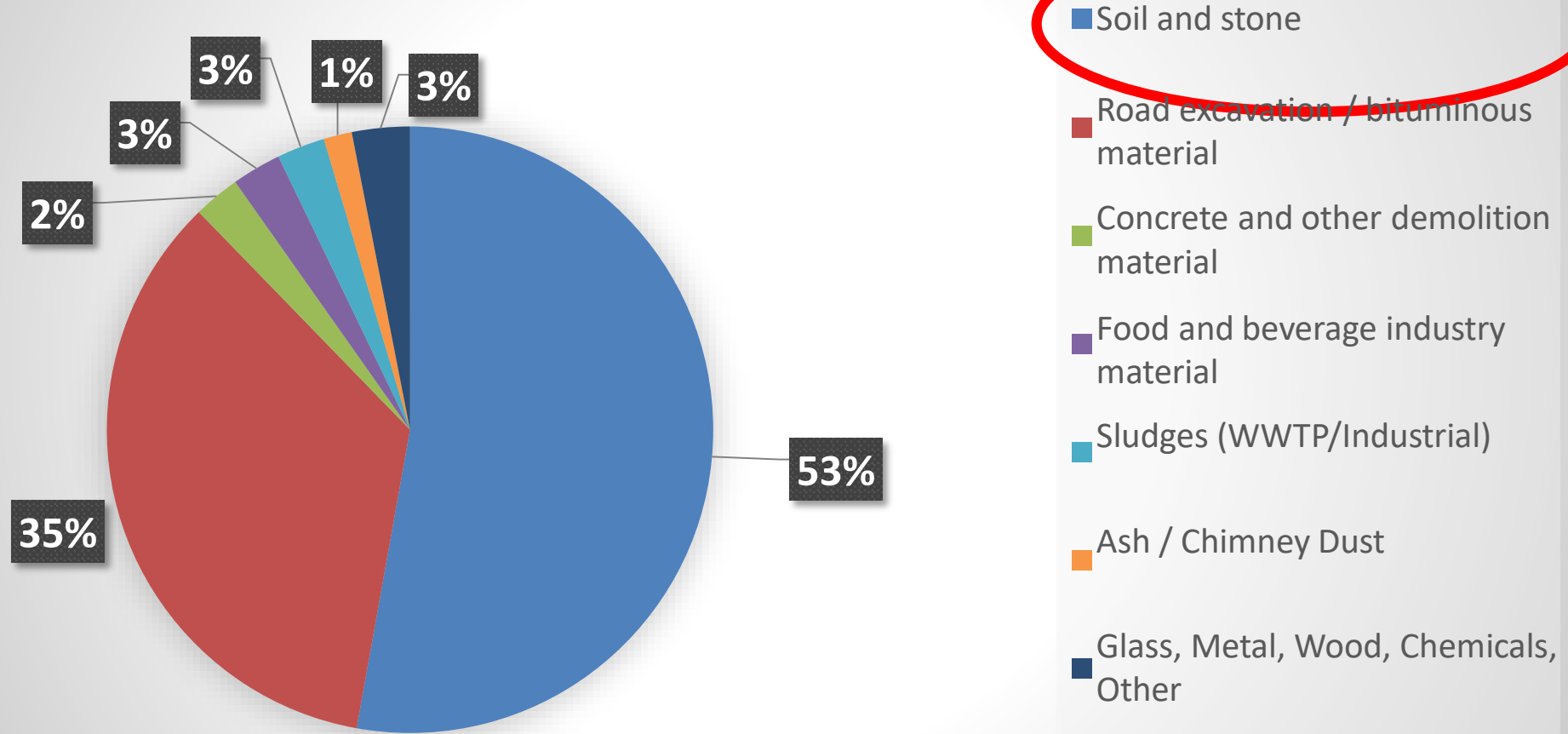
Plastic

Tyre

Wood

EPA - Current Position - by-products

Current notifications pending determination (on a material basis)



Advantages of End-of-Waste Application

- Reduces the waste to be disposed of
- Increases recycling
- Reduces administrative burdens
- Improves legal clarity
- Facilitates the material trade
- Products can be utilised with fewer restrictions than waste
- Increases user confidence
- Protects the environment
- Quality criteria that protect health and the environment are taken into account

Deficiencies of the End of Waste Application

- It is difficult to trace a material after it has ceased to be waste
- Traceability may be lost compared to remaining in waste legislation
- New obligations such as REACH may apply
- May be more expensive for users
- Emerging pollutants can be ignored
- May not always be well adapted to existing recycling chains
- Additional tax obligations such as VAT arise.

New Waste Shipment Regulation (EU) 2024/1157



The new Waste Shipment Regulation was published on 11 April 2024 and entered into force on 20 May 2024.

Some additional regulations are coming in the shipment of non-hazardous wastes such as textiles, rubber, metal, glass, especially plastics, to other countries.

For more information:

https://environment.ec.europa.eu/topics/waste-and-recycling/waste-shipments_en

Waste Shipment Regulation:

<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32024R1157>

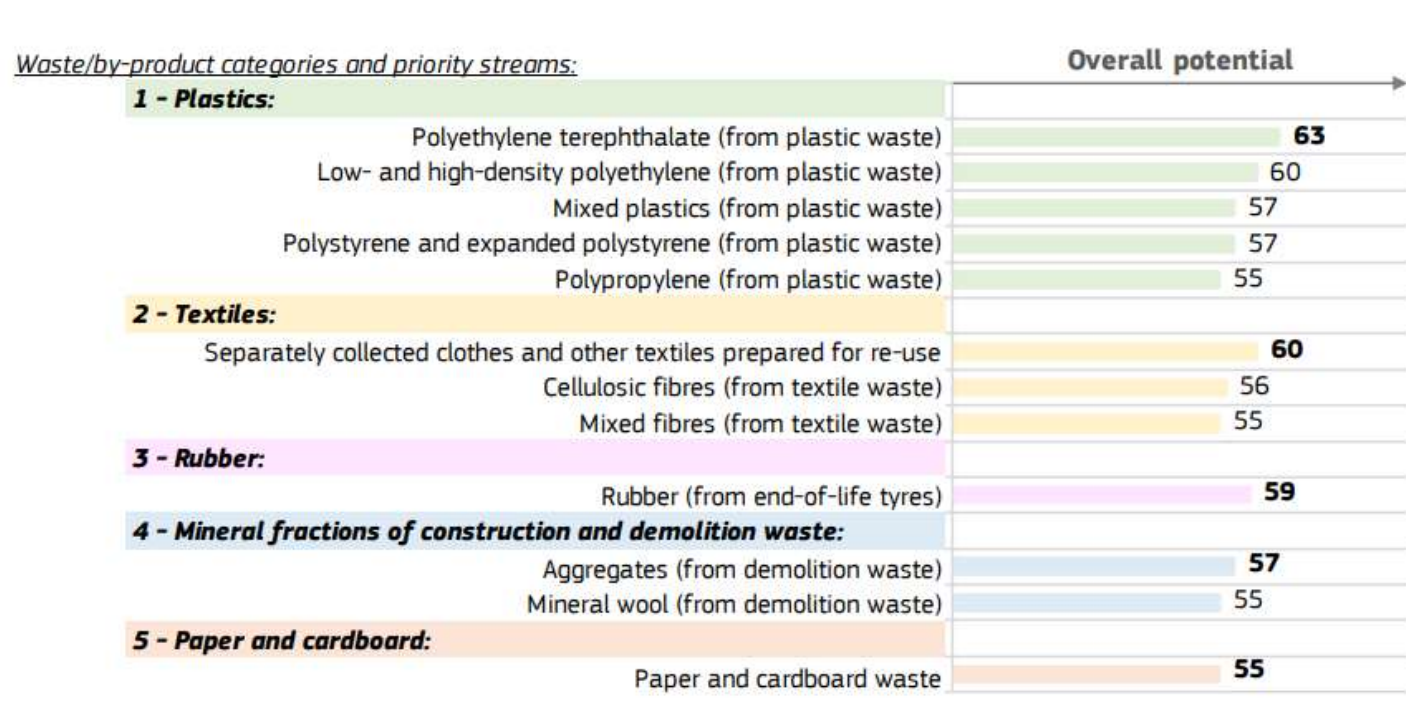
New Waste Shipment Regulation (EU) 2024/1157

- Member States and companies exporting waste will need to monitor whether the facilities to which they send their waste have received these approvals.
- It is known that supervision and approval will be carried out by the EU, but it is not yet clear whether external auditors or accredited auditors from other countries will be approved. This will determine the functioning of the process.
- The easiest way to overcome this additional regulation of waste shipments is through End of Waste approval.
- As the restrictions that will come with the Waste Shipment Regulation increase, there will be more demand for the **End of Waste** concept and new criteria are expected to be set.

New End-of-Waste Criterion Determination Studies

The European Union is currently planning to carry out studies specifically on Textile, Plastic, Rubber, Construction and Demolition Wastes and Paper.

Figure 3: List of priority streams grouped per category, and ranked based on their overall potential





Bu proje Avrupa Birliđi ve Türkiye Cumhuriyeti tarafından finanse edilmektedir.

Türkiye’de Atık Sonu Kavramının Geliştirilmesi için Teknik Destek Projesi

PROJECT INFORMATION

Project Title	: Technical Assistance for the Development of End of Waste Concept in Türkiye
Budget	: 1.191.601,- Euro
Project Duration	: 24 months
Project Period	: 25.04.2023 – 25.04.2025
Opening Ceremony	: 15.06.2023
Contracting Authority	: Ministry of Environment, Urbanization and Climate Change, Directorate General for EU and Foreign Relations, Directorate of EU Investments Department
End Recipient	: MoEUCC, General Directorate of Environmental Management, Department of Circular Economy and Waste Management



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OUR CONSORTIUM STAKEHOLDERS:



NIRAS, a consulting and engineering company with more than 2,400 employees working with funding organisations worldwide.



RAST Engineering, a multi-disciplinary consulting and engineering company.



EuRIC (European Recycling Industries' Confederation) represents the recycling sector at European level.



Sweden's leading environmental research institute **Swedish Environmental Research Institute (IVL)**.

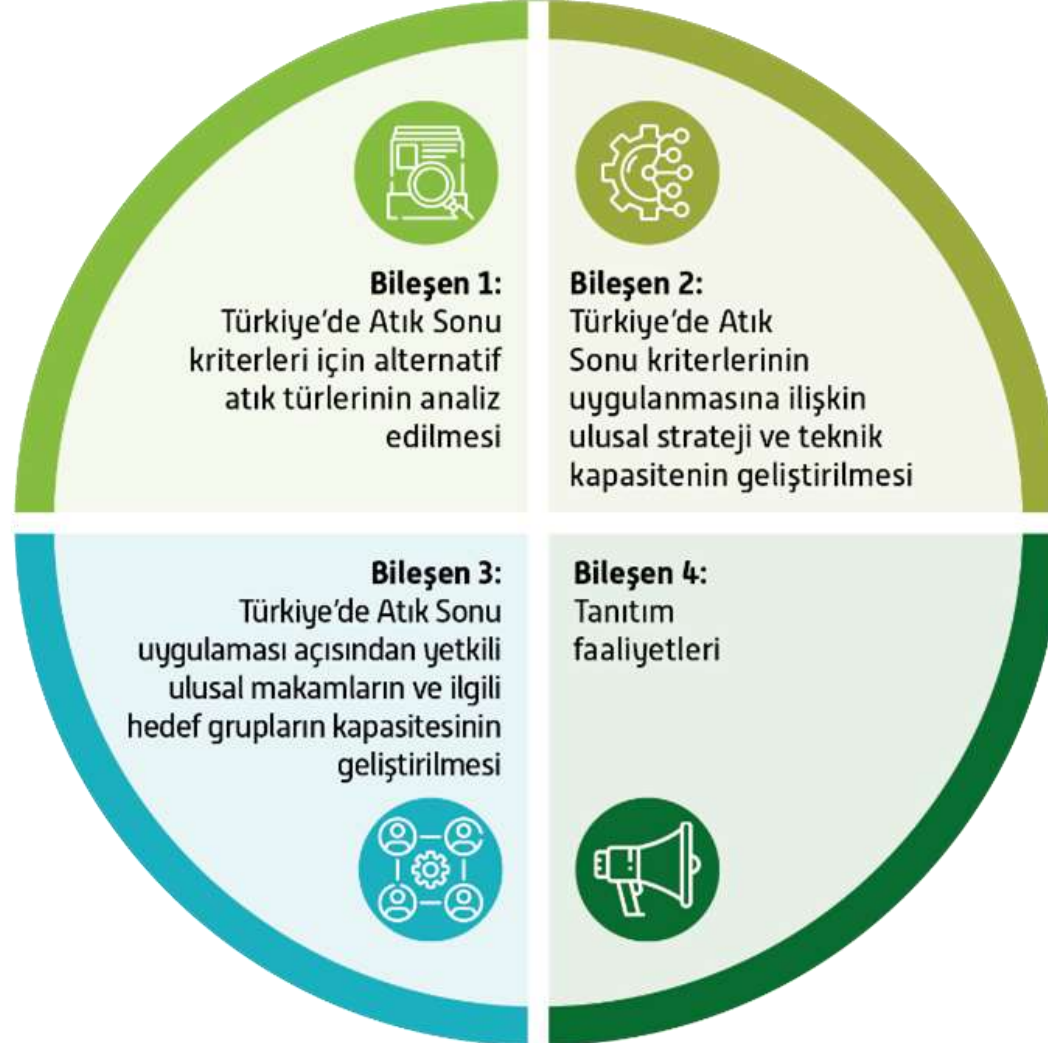


With the support of the European Environmental Bureau, Europe's largest network of environmental NGOs.



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WASTE TYPES WITHIN THE SCOPE OF COMPONENT 1

Metal
(Iron, Steel and
Aluminum) Scrap

Copper Scraps

Glass Shards

Waste Paper

Waste Plastic

Biodegradable
Waste

Waste Textile

Construction
Aggregates

Waste Tires

Waste-Derived Fuel
(WDF)



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Component 1: Analysis of candidate waste types for end-of-waste criteria in Türkiye

Activity 1.1.

Analysis of waste types in Türkiye

Activity 1.1.1

Guidance on clarifying and harmonising definitions of waste

Activity 1.1.2

Collecting data on waste types through questionnaires

Activity 1.1.3

Technical facility visits

Activity 1.1.4

Report on the analysis of waste types in Türkiye

Activity 1.2.

Comparative analysis between Türkiye and the EU on relevant end-of-waste legislation and practices



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WASTE TYPES WITHIN THE SCOPE OF COMPONENT 2

Iron and Steel Scraps

Aluminum Scraps

Copper Scraps

Glass Shards

Biodegradable
Waste (Compost)

Waste Textile

Aggregates



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Component 2: Developing national strategy and technical capacity to implement end-of-waste criteria for different waste types in Türkiye

Activity 2.1.

Preparation of Draft Technical Regulations

Activity 2.1.1

Impact assessment studies of the End of Waste Criteria for iron, steel and aluminium scrap, glass shards and copper scrap in the Turkish context

Activity 2.1.2

Workshops on Impact Assessment Studies

Activity. 2.1.3

Draft Technical Regulations

Activity 2.2 Workshops for the evaluation of the regulations and guidelines prepared under the project

Activity 2.3 Revision of National Regulations and Preparation of a Roadmap for the Implementation of End-of-Waste Criteria for Different Waste Types

Activity 2.4 Guideline on End of Waste Implementation in Türkiye



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Impact Assessment Studies Workshops

**Aluminum Scraps
&
Copper Scraps**

March 18-21, 2024

Glass Shards

May 14-17, 2024

Iron & Steel Scraps

September 16-19,
2024

Textile

October 21-24, 2024



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Component 3: Capacity building of competent authorities and relevant target groups for end-of-waste implementation in Türkiye

Activity 3.1. Training Programmes

1st Training

MoEUCC Central and Provincial Organisation

EU legislation and practices in the context of end-of-waste framework and end-of-waste assessment, audit and monitoring

2nd Training

Stakeholders and Target Groups

Detailed explanation of the guidelines prepared for Metal (Iron, Steel and Aluminium Scrap), Copper Scrap

3rd Training

Stakeholders and Target Groups

Detailed description of the guidelines prepared for the Glass Sector

Activity 3.2. Study Visit



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Project website and social media accounts



Project Website: <https://atiksonu.csb.gov.tr>



@atiksonu_eow



@atiksonu_endofwaste



@atiksonu_endofwaste



<http://www.linkedin.com/company/atiksonu-endofwaste>



<https://www.facebook.com/atiksonu.endofwaste>



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Thank You!





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Thanks for your attention.



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