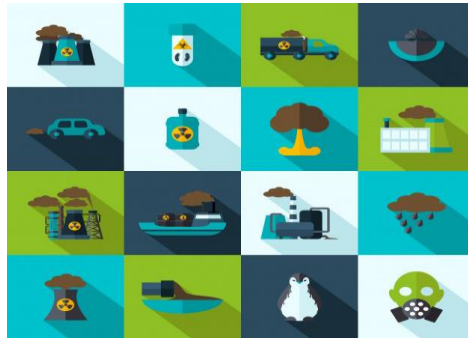


EU WASTE LEGISLATION AND POLICY



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EU Waste Law and Policy - Outline

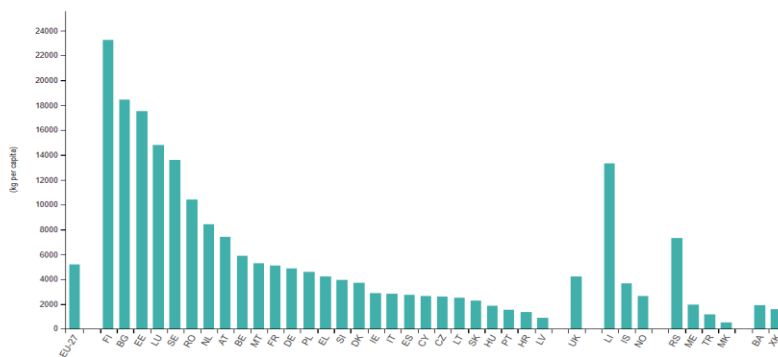
- Introduction
- EU Waste Framework Policy / Circular Economy
- Waste Framework Directive (WFD)
 - Genesis, Objectives, Principles
 - Waste Hierarchy
 - Definition of waste, by-products, end-of-waste product
 - Waste management obligations
 - Financial Responsibility / Extended Producer Responsibility
 - Hazardous Waste
- Waste management operations
- Implementation of WFD at national level

Introduction / 1

 **Twitter** 5.2 tonnes of waste were generated per EU-27 inhabitant in 2018.

 **Twitter** 38.7 % of waste were landfilled and 38.1 % were recycled in the EU-27 in 2018.

Waste generation, 2018



Στο ερώτημα γιατί μας απασχολεί το δίκαιο αποβλήτων?

Η απάντηση είναι απλή και αποτυπώνεται ενδεικτικά στη διαφάνεια αυτή.

Η διαρκώς αυξανόμενη παραγωγή αποβλήτων, η οποία αποτελεί ένα από τα σημαντικότερα σύγχρονα προβλήματα του δικαίου περιβάλλοντος.

Πιο συγκεκριμένα, η τεράστια ποσότητα απορριμμάτων που παράγεται κάθε χρόνο ως υπόλειμμα από τις διαδικασίες παραγωγής προϊόντων, της προσφοράς υπηρεσιών και της κατανάλωσης, αποτελεί ένα από τα σημαντικότερα και πλέον φλέγονται περιβαλλοντικά προβλήματα. Το οποίο πρόβλημα συνδέεται άρρηκτα και με μια σειρά άλλων περιβαλλοντικών ζητημάτων, όπως η κλιματική κρίση, η απώλεια της βιοποικιλότητας, η ρύπανση στο έδαφος, τα ύδατα και τον αέρα.

Το πρόβλημα έγκειται κυρίως στο γεγονός πως τα απόβλητα δεν επιτελούν καμία χρησιμότητα για τον κάτοχό τους, ο οποίος τα θεωρεί ένα «βάρος» και θέλει να απαλλαγεί από αυτά με όσο το δυνατόν μικρότερο κόστος.

Συνεπώς, εκτός από τον απαιτούμενο πολύτιμο χώρος γης, η εν γένει διαχείριση των αποβλήτων απελευθερώνει πολυάριθμους ρύπους στον αέρα, τα ύδατα και το έδαφος, συμπεριλαμβανομένων και των εκπομπών αερίου του θερμοκηπίου από χωματερές και μεταφορά αποβλήτων.

Συχνά επίσης τα απόβλητα αντιπροσωπεύουν απώλεια πολύτιμων πόρων, πολλοί

από τους οποίους είναι σπάνιοι και θα μπορούσαν να ανακτηθούν και να ανακυκλωθούν, ώστε να εξοικονωμηθούν οι παρθένες πρώτες ύλες.

2.5 billion tons total waste generation (EU, 2013)

1.6 billion tons were not reused or recycled

an additional 600 million tons could be recycled or reused

43% of municipal waste was recycled, the rest was landfilled (31%) or incinerated (26%)

a shift up in the period 2001–2010 in the EU-27:

landfilling decreased by 41 million tons

incineration increased by nearly 15 million tons

recycling and composting increased by 28 million tons

Introduction / 2



**“THE WORLD OF PRODUCTS
AND SERVICES”**



“THE WORLD OF WASTE”

The linear pattern of consumption (produce-use-discard) produces large amount of waste.

In this context waste is a costly burden.

There are two separated worlds, the world of product and the world of waste.

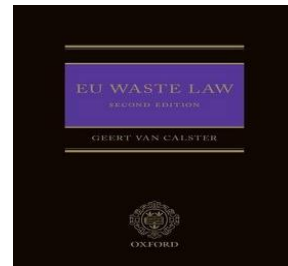
A variety of economic and social actors produce or use products that at some points become waste (industries, hospitals, agriculture, handcraft, household, offices, shops)

The equally complex reality of all the operators which deal with waste management and waste disposal.

Introduction / 3



«THE WORLD OF WASTE»



Γιατί ο κόσμος των αποβλήτων είναι σκοτεινός, μαύρος και τρομακτικός? Και δε θέλουμε να βρισκόμαστε εκεί?

Άπαξ και έχουμε απόβλητα ισχύουν 2 πράγματα: 1. Το απόβλητο, το οποίο όπως αναφέραμε, είναι βάρος, κάτι πρέπει να το κάνουμε. Άρα, κάποιος πρέπει να αναλάβει τη διαχείρισή τους. Και αυτή η διαχείριση συνεπάγεται κόστος/οικονομική επιβάρυνση.

2. Αυτή η διαχείριση γίνεται με συγκεκριμένο τρόπο, σε συγκεκριμένο χρόνο και απο συγκεκριμένους υπόχρεους φορείς.

Στον κόσμο των αποβλήτων βρίσκει εφαρμογή το δίκαιο των αποβλήτων. Αρχές/Ρυθμίσεις/περιορισμοί/υποχρεώσεις σχετικά με τη διαχείριση των ουσιών/προϊόντων που έχουν καταστεί απόβλητα

These complex worlds require extensive regulations.

On the one side, the product regulation, the technical standards, the labelling, the protection of origin etc.

On the other side, as waste is always potentially dangerous for the environment and the human health, rules are needed to discipline the collection, transport, disposal of waste.

Introduction / 4



<https://www.youtube.com/watch?v=ufL3yDs1ZQ8>

Food waste, municipal waste, electric and electronic equipment waste....



EU WASTE POLICY AND LEGAL FRAMEWORK

The heart of EU waste law and policy

General remarks - Development of EU Waste policy

FOCUS ON FINDING WAYS FOR DISPOSING AS MUCH WASTE AS POSSIBLE



FOCUS ON WASTE PREVENTION



FOCUS ON PROMOTING SUSTAINABLE PRODUCTS

For a long time the question has been how to dispose of the large amount of waste produced in our societies.

In the last years, more and more awareness on the necessity to **prevent the creation of waste**.

Focus has shifted on the **relation product-waste**.

The definition of waste based on the act of discarding and not on the value of the material is in itself problematic.

EU Policy framework & the political context

- Thematic strategy on the prevention and recycling of waste, COM(2005) 666 final
- Europe 2020 Strategy → Roadmap to a Resource Efficient Europe, COM(2011)571
- 7th Environmental Action Programme, 2013 - 2020
- Action Plan towards Circular Economy, COM(2015)614
- Review of the EU waste legislation
- New Circular Economy Action Plan - EU Green Deal
- 8th Environmental Action Programme, 2020-2030

The key policy framework instruments are:

→ Thematic strategy on the prevention and recycling of waste, COM(2005) 666 final - sets as long-term goal for the EU to become a recycling society that seeks to avoid waste and uses waste as a resource: -It set 7 actions how to reach these objectives, for example, step up enforcement, modernise waste legislation, develop recycling standards and improve prevention.

→ The Strategy played an important role in guiding policy development and has contributed to significant improvement in waste management. The Roadmap to a Resource Efficient Europe (COM(2011) 571)

• outlines how to transform Europe's economy into a sustainable one by 2050, how to increase resource productivity and decouple economic growth from resource use and its environmental impact. It illustrates how policies interrelate and build on each other.

• It sets various actions (2012-2014) to be taken by the Commission to treat waste as a resource, including the review of the waste targets

→ 7th Environmental Action Programme, 2013 – 2020 - Puts focus to turning waste into a resource including by phasing out landfilling.

→ Action Plan towards Circular economy

• Waste management plays a central role in the transition to a circular economy. The plan requires the Commission to take measures:

• Revise waste targets (proposal adopted in December 2015); step up enforcement;

communication on waste to energy (adopted in January 2017); disseminate good practices on 4 separate collection (specific study available on DG Environment website).

→ **The New Circular Economy action plan (March 2020)**

The new Circular Economy Action presents measures to:

Make sustainable products the norm in the EU;

Empower consumers and public buyers;

Focus on the sectors that use most resources and where the potential for circularity is high such as: electronics and ICT; batteries and vehicles; packaging; plastics; textiles; construction and buildings; food; water and nutrients;

Ensure less waste;

Make circularity work for people, regions and cities,

Lead global efforts on circular economy.

++++

- the European Commission published a proposal on 14 October 2020

*the long-term priority objective for 2050 that citizens live well, within the planetary boundaries in a regenerative economy **where nothing is wasted**, no net emissions of greenhouse gases are produced and economic growth is decoupled from resource use and environmental degradation*

promoting environmental sustainability and reducing key environmental and

climate pressures related to production and consumption, in particular in the

areas of energy, industrial development, buildings and infrastructure, mobility

and the food system.

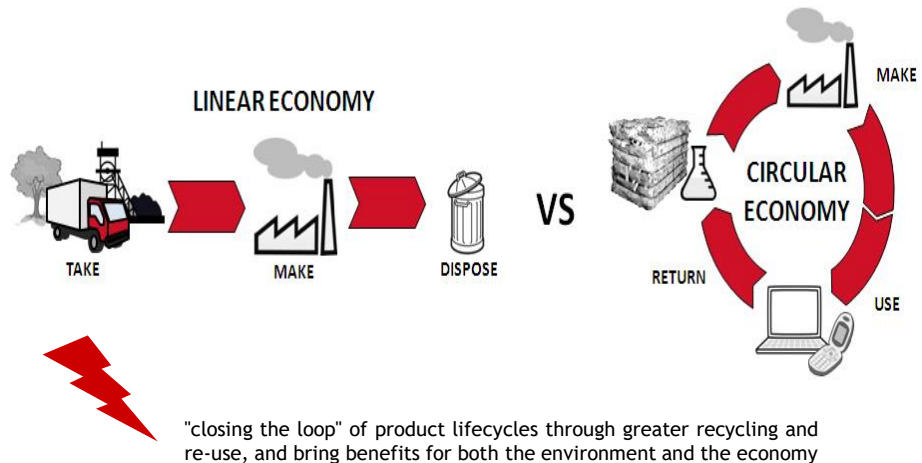
‘Waste management’ means the collection, transport, recovery (including sorting), and disposal of waste, including the supervision of such

operations and the after-care of disposal sites, and including actions taken as a dealer or broker (Article 3 WFD)

Waste policy is not an isolated topic, but is part of the general environmental policy.
It contributes to fight:

- climate changes
- resource depletion
- loss of biodiversity
- soil, water, air contamination

Linear and Circular Economy



https://www.youtube.com/watch?v=_9mHi93n2AI

To achieve sustainability and increase Europe's competitiveness globally, we need an urgent shift from a linear to a circular economic model. The objective of a Circular economy is to maintain the value of resources in the economy for as long as possible. The move towards a circular economy will bring benefits: This should alleviate some of the risks related to the supply of raw materials. It should boost the European economy by up to 7% of GDP. It should increase the competitiveness of European businesses and create new business opportunities (re-use sector) and bring about innovative products, technologies and services, which can create new jobs in the EU. This would also bring valuable benefits to the environment – less waste, less GHG emissions and other benefits, like better air and water and soil quality.

Benefits of Circular Economy

- maintaining the **value** of products, materials and resources in the economy for as long as possible
- alleviating security of **supply** risks
- boosting the **economy** by up to +7% GDP
- Increasing **competitiveness**, creating new business **opportunities**, and introducing **innovative** products and services
- creating **jobs** in the EU
- reducing **waste** generation, **GHG emissions** and other environmental impacts

Circular Economy Package

Adopted by the Commission 2 December 2015



Action Plan
Communication



List of Follow-up
Initiatives (Annex)



4 Legislative
proposals on waste

The Circular Economy Package was adopted on 2 December 2015 and consisted of an Action Plan in the form of a Communication, an Annex with a list of over 50 measures that the Commission intends to adopt in the coming years and four legislative proposals on waste. The measures identified in the Action plan focuses of measures at EU level that high added value to bring about a circular economic model. Making the circular economy a reality will however require long-term involvement at all levels – the EU, a Member State, local, and from all stakeholders.

Action Plan



Identifies 54 actions in 4 key areas:

Production: emphasis on **product design** for recycling, durability and on **extended producer responsibility**. Mandatory EPR scheme to be introduced for all packaging by 2025.

Consumption

Waste management: as part of the first Circular Economy Action Plan, in 2018 the waste legislation was revised (increasing recycling targets for municipal waste and for packaging waste; separate collection obligation are strengthened and extended to hazardous household waste (by end 2024), bio-waste (by end 2023), textile (by end 2025)).

Secondary raw material

The image illustrates that the Circular Economy Action Plan addresses the whole life cycle of products. In order to ensure a harmonious movement of each stage of the cycle, action is necessary at all stages of the product life cycle taking into account the needs and limitations of the other steps because they are all linked.

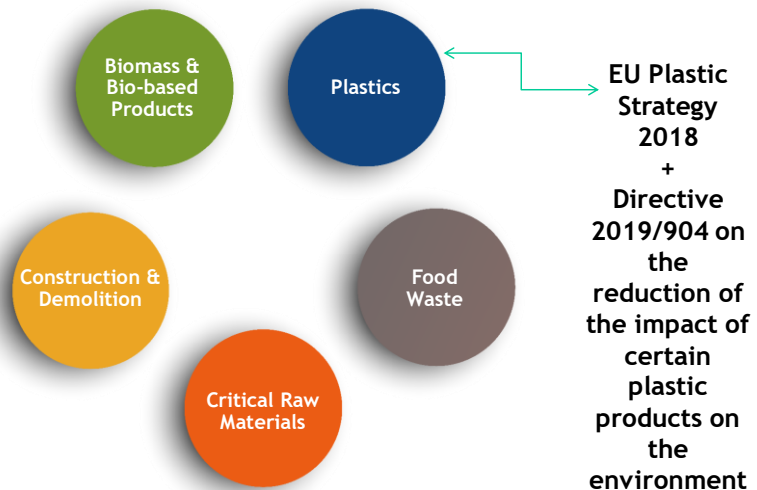
The objectives are to:

- Extract and use resources sustainably;

- Design and produce better products that use less resources, have a long life-span and can be re-usable, recyclable;
- Have a leaner production using less resources and creating less/no residual waste;
- Have smarter consumption by buying products that are recyclable and re-usable, use products for longer, repair them;
- Use waste as a resource rather than dispose. Improvements in terms of resource and energy efficiency can be made at all stages. To achieve these objectives will require a new wave of innovation.

Therefore, the EU provides financial support to the MS and the businesses to bring about projects that would prove the case for a circular economy. The financing is available through European Structural and Investment Funds, Funds for Research and Development (e.g. Horizon2020), EIB. 8 As a priority, the measures identified in the Action Plan proposes to tackle barriers caused by the EU legislation.

Priority Sectors



Only around 30 % of plastic waste is collected for recycling in the EU.

The Circular Economy Action plan identifies plastic as one of the priority sectors. In 2018 the EU adopted a **Plastic Strategy**.

Aim: To define a vision for a more circular plastic economy, to reduce plastic litter.

Instruments: Member States have to take **preventive measures and waste management measures**

Concrete Actions - Examples

- **Promote eco-design** to include reparability, durability, recyclability
- Spread best practices on **waste management/resource efficiency in industry**
- Independent **test program** on **planned obsolescence**
- Review of EU **waste legislation**
- Review of EU **fertilisers legislation** incl. to promote organic fertilisers
- Minimum requirements for the **reuse of wastewater**
- Further promote **Green Public Procurement**
- Develop quality standards for **secondary raw materials**
- Strategy on **plastics** incl. marine litter
- Strategy on links between **chemicals, products and waste legislation**
- Make use of available **EU funding**

New Circular Economy Action Plan / EU Green Deal (March 2020)



1. foresees a Circular Economy Action Plan 2.0, including a **sustainable product initiative**
2. strategic is **preventing waste**
3. higher-quality recycling
4. reviews of waste legislation (batteries, shipments of waste)
5. «The Commission is of the view that the EU should stop exporting its waste outside of the EU and will therefore revisit

the rules on waste shipments and illegal exports».

→ **The New Circular Economy action plan (March 2020) / Actions**

The new Circular Economy Action presents measures to:

Make sustainable products the norm in the EU;

Empower consumers and public buyers;

Focus on the sectors that use most resources and where the potential for circularity is high such as: electronics and ICT; batteries and vehicles; packaging; plastics; textiles; construction and buildings; food; water and nutrients;

Ensure less waste;

Make circularity work for people, regions and cities,

Lead global efforts on circular economy.

Circular Economy Action Plan 2.0

- **Sustainable Product Initiative** - A legal instrument is necessary.
- **Strengthening the extended producer responsibility**
- Particular focus on resource intense sectors such as textiles, construction, electronic and **plastics**
- All packaging in the EU market is reusable or recyclable in an economically viable manner by 2030
- Regulatory framework for **biodegradable and bio-based plastics**
- Implementation of measures on single use plastics

→ The New Circular Economy action plan (March 2020) / Actions

The new Circular Economy Action presents measures to:

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EU Waste Legislation - Historical Stages

- Council Directive 75/442/EEC on waste
- Substantially amended by Council Directive 91/156/EEC
- Consolidated by Directive 2006/12/EC

- Council Directive 78/319/EEC on toxic and dangerous waste
- Replaced by Council Directive 91/689/EEC on hazardous waste

- Both were replaced by Directive 2008/98/EC (Transposition by 12/12/2010)

- Currently, under revision in the light of the Circular Economy requirement

EU Waste Legislation - System

General framework

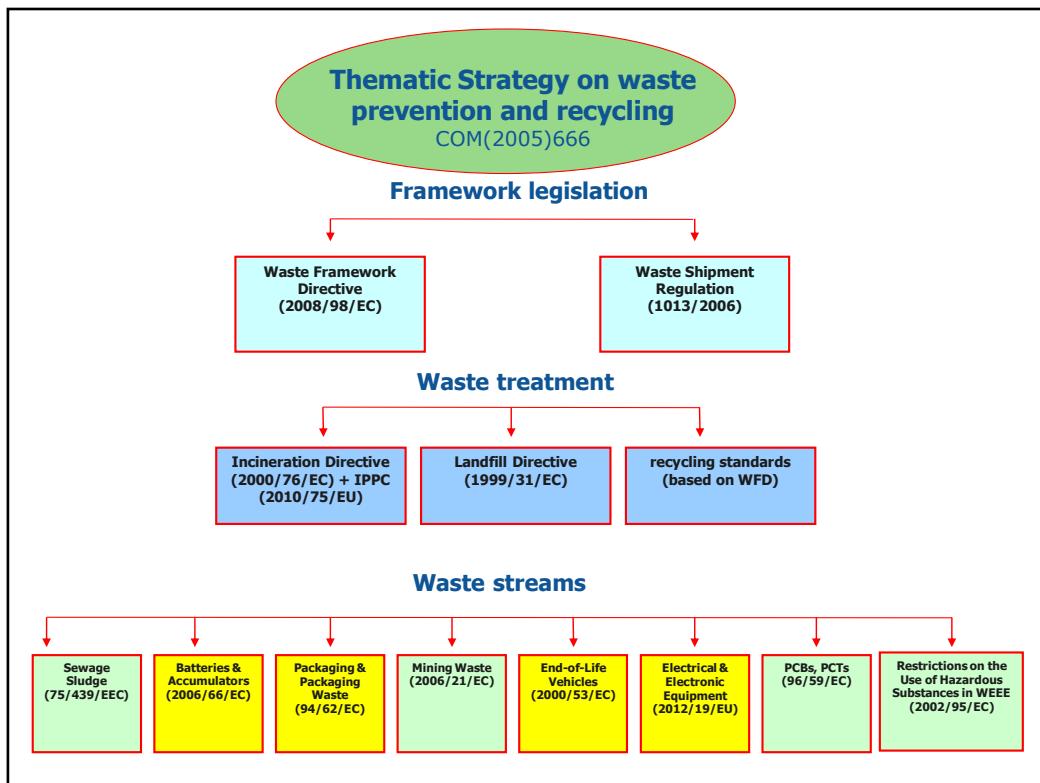
- Framework Directive 2008/98/EC on **waste** (WFD)
- Regulation (EC) 1013/2006 **on shipments of waste** (WSR)

Waste management operations

- Directive 99/31/EC on the **landfill** of waste
- Directive 2010/75/EU on industrial emissions: for **waste incineration**

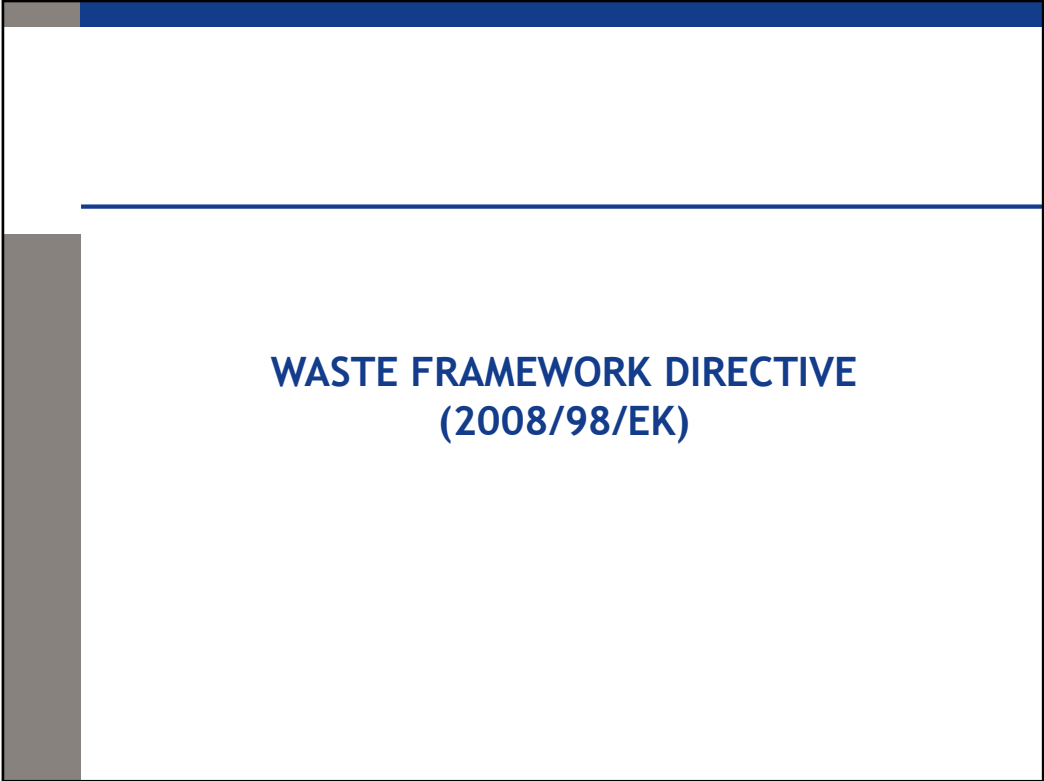
Specific waste streams

- Directive 94/62/EC on **packaging and packaging waste**
- Directive 2000/53/EC on **end-of-life vehicles (ELV)**
- Directive 2006/66/EC on **batteries and accumulators**
- Directive 2012/19/EU on **waste electrical and electronic equipment (WEEE)**



This slide lists the key EU waste legislation. Waste is one of the first topics that EU environmental legislation tackled in the 1970s. The Waste Framework Directive was adopted in 1975 (then 2006/12/EC and now 2008/98/EC) and provides the overall framework for waste management in the EU, seeking to ensure that it does not present a risk to water, air, soil, wildlife and human health. All Waste Directives have an Environmental legal basis (Article 192 TFEU) with two exceptions: Batteries directive has double legal basis with an internal market basis covering specific articles that provide for full harmonisation on metal content for batteries, labelling accepted on the market; and Packaging Directive that has a full Internal Market legal basis (Article 114 TFEU). In addition to the Waste Framework Directive and the Landfill Directive also the Directives marked in yellow provide for specific collection, recycling and recovery targets.

1. GENERAL FRAMEWORK (waste and hazardous waste)
2. RULES SPECIFIC TO CERTAIN OPERATIONS (Treatment: incineration + landfill / movements (transborder) / ship recycling)
3. RULES SPECIFIC TO END-OF-LIFE PRODUCTS



WASTE FRAMEWORK DIRECTIVE (2008/98/EK)

The heart of EU waste law and policy

General Objective of waste law: Protection of Human Health and the Environment
(Articles 1, 13)

Definition of Waste (Article 3 (1) + Articles 2, 5)

Recovery / Disposal (Article 3 (15) and (19)) + **End of Waste Status** (Article 6 - complete recovery)

Responsibility (Articles 8, 14, 15 – polluter pays)

Some rules on specific Waste Streams:

Hazardous Waste (Articles 7, 17 – 20, 35)

Waste Oils (Article 21)

Bio-Waste (Article 22)

Regulation of the Waste Treatment Industry (Articles 23 – 27)

Waste Hierarchy (Articles 4 + 9 – 12)

Administrative Waste Planning (Articles 28 – 33)

Practical implementation (Articles 34 - 36)

Commission Powers [Articles 5 (2), 6 (2), 7 (1), 11 (3), 27 (1) and (4), 29 (4), 33 (2), 38]

EU waste legislation objectives

(Article 1 WFD)

- Preventing and reducing the adverse impacts of the generation and management of waste
- Resource conservation
- Resource efficiency

EU waste legislation objectives are defined in Article 1 of the Waste Framework Directive 2008/98/EC:

- Waste prevention – has been and continues to be the first and most important objective of the EU waste management policy.
- Reduce environmental impact of resource use and improve resource efficiency of such use. This objective is also called developing a “recycling society” - one that not only avoids producing waste but also uses it as a resource

EU waste legislation principles

- Precautionary principle
- Polluter pays principle
- Proximity principle
- Waste hierarchy

Συνοπτικά εδώ – αναλυτικά αμέσως κατωτέρω!

The main obligation of the WFD

Article 13 WFD

Member States shall take the necessary measures to ensure that waste management is carried out without endangering human health, without harming the environment and, in particular:

- (a) without risk to water, air, soil, plants or animals;
- (b) without causing a nuisance through noise or odours;
- and
- (c) without adversely affecting the countryside or places of special interest.

THE CONCEPT OF «WASTE»

Definition of waste - Article 3 WFD

«WASTE» Any substance or object which the holder discards or intends or is required to discard



- ❑ Discards
- ❑ Intends to discard → subjective element
- ❑ Is required to discard → objective element (e.g. asbestos-contaminated hull of aircraft carrier Clemenceau)



«Discard» → teleological interpretation: broadly, „high level of protection“, principles of precaution and preventive action and effectiveness, case-by-case approach

This and the next two slides aim to look at the concept of “waste” which is a key concept of the WFD and determines the scope of the EU waste legislation. It centers around the notion of discard which is not defined. The holder's intention is to be inferred from the holder's actions in the light of the aims of the Directive on the basis of all factual circumstances. CJEU has emphasized the need for a broad interpretation of the concept of waste and for flexibility in adopting a case-by-case approach and taking into account the factual circumstances of each case.

Definition of waste - Article 3 WFD

- **Deliberate v accidental**
 - ✓ C-252/05 Thames Water Utilities
 - ✓ C-188/07 Erika Oil spill
- **The concept of waste does not exclude substances or objects which are capable of economic reutilization**
 - ✓ C-359/88 Zanetti and Others
 - ✓ C-241/12 and C-242/12 Shell
- **Substances forming part of an industrial process may constitute waste**
 - ✓ C-129/96 Inter-Environnement Wallonie

CJEU has concluded that in view of the objectives of the WFD (and the precautionary principle), the concept of waste cannot be interpreted restrictively. This slide brings up a couple of situations which illustrate the different circumstances that may or may not be relevant when applying the definition:

*Does it matter if discard is deliberate or accidental? •It is irrelevant whether materials, substances are deliberately or accidentally discarded. With regard to waste water, they are within the scope of the WFD if they are not covered by other legislation, like Directive 91/271/EEC on urban waste water. •Oil mixed with water, soil, sediments is waste where not possible to be exploited/marketed without further processing.

*Does it have any bearing on the waste/ non-waste status if the material has an economic value? •The concept of waste does not exclude substances that can be further exploited and has an economic value. •The concept of waste does not in principle exclude any kind of residue, industrial by-product or other substance arising from production processes.

Examples:

-waste oils → regenerated

-slaughterhouse waste/carcasses → in animal feed

Extraction waste → in embankment

Limits to the definition of waste - By-products (non-waste) - Article 5 WFD / 1

PRODUCTION PROCESS

PRODUCT: all material that is deliberately created in a production process

PRODUCTION RESIDUE: a material that is not deliberately produced in a production process but may or may not be waste

BY-PRODUCT: production residue that does not constitute waste-->
Article: 5 WFD

WASTE

Limits to the definition of waste - By-products (non-waste) - Article 5 WFD / 2

CONDITIONS

- Integral part of the production process
- Further use is certain
- Further use without further treatment/processing
- Further use is legal



ALL THE FOUR CONDITIONS SHOULD BE FULFILLED CUMULATIVELY

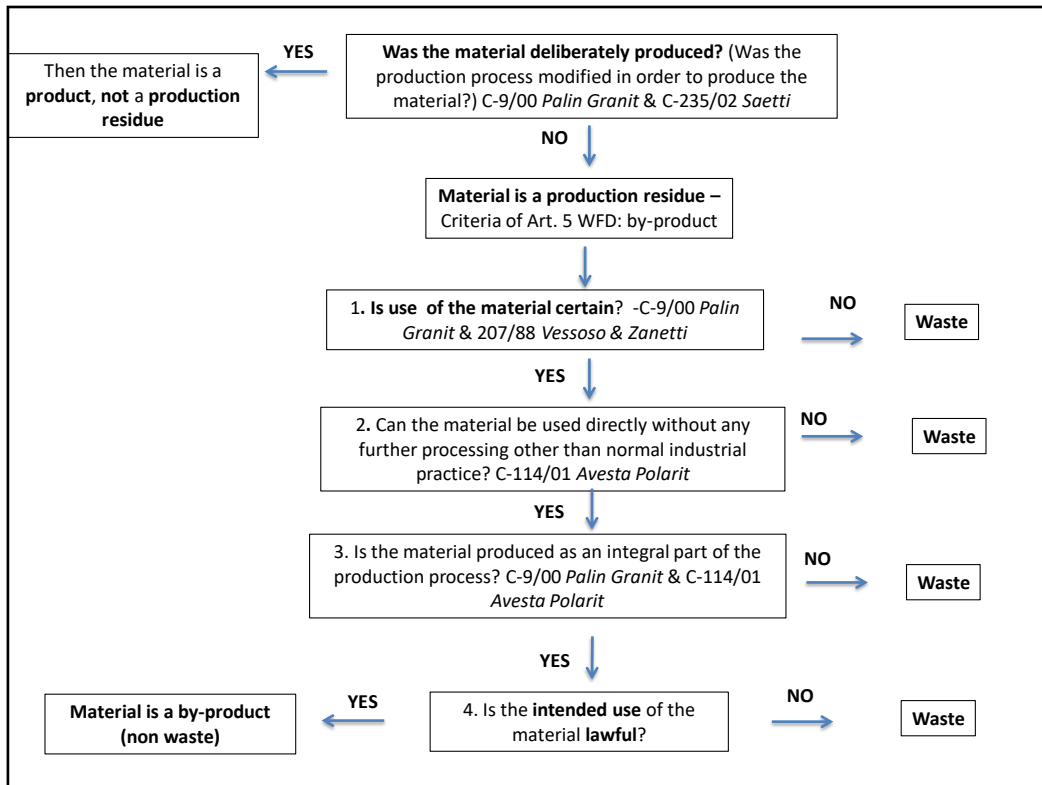


Examples:

- ✓ filling of mining galleries with leftover rock
- ✓ Manure as fertilizer (C-113/12, *Donal Brady*)

C-113/12 →

- receiving land must be identified from the outset
- holder must have user's commitment to use as fertilizer on that land
- storage must be adequate (sufficient and without leakage)
- reuse must bring along economic advantage compared to disposal



Decision tree for waste vs by-products decisions

Limits to the definition of waste - The 'End-of-waste' concept - Article 6 WFD

After undergoing a recovery operation, waste ceases to be waste, when:

- Is commonly used for a specific purpose
 - A market or demand exists
 - Technical requirements for specific purpose, are fulfilled
 - There is no overall adverse effect on the environment
- **Article 6 WFD codifies standing case-law**
 - **EU criteria (metal scrap, glass, (CE marked fertiliser)), national criteria to boost recycling.**
 - **BUT: Article 28 Waste Shipment Regulation**

Article 6(1) WFD sets conditions when a recovery operation may result in the waste ceasing to be waste. These conditions are based on case-law of the CJEU interpreting the concept of waste and the notion of discard. All conditions have to be met cumulatively.

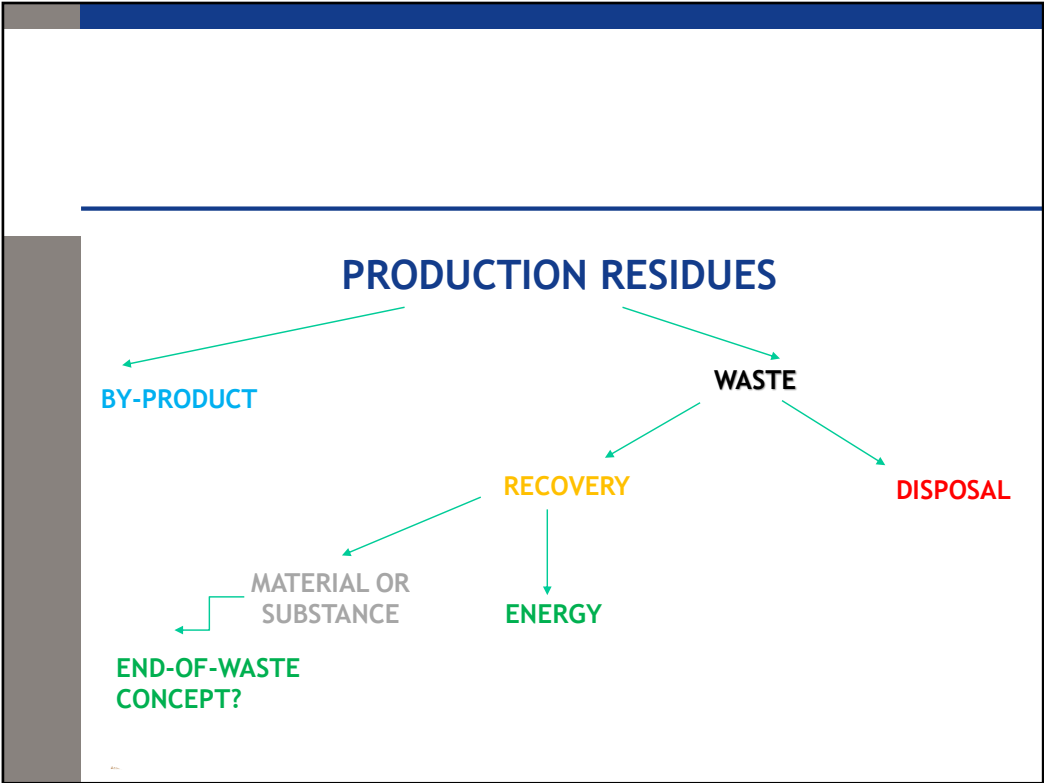
The Article provides for 3 avenues for decision making: (1) End of waste criteria can be set at EU level that have to be applied across the EU, (2) national level criteria that have validity only within a MS and (3) case-by-case decisions on end-of-waste status. EU level criteria have been set for metal scrap, glass, and are being proposed for compost and digest.

There is no mutual recognition of national criteria or case-by-case decision when the waste is shipped across the MS borders. Where the involved competent authorities disagree on the waste/non-waste status of a shipment, those materials should be treated as waste in accordance with the precautionary principle – this is according to Art 28 of the Waste Shipment Regulation.

Waste can achieve, after undergoing a recovery operation, a non-waste status. Criteria are set at community level.

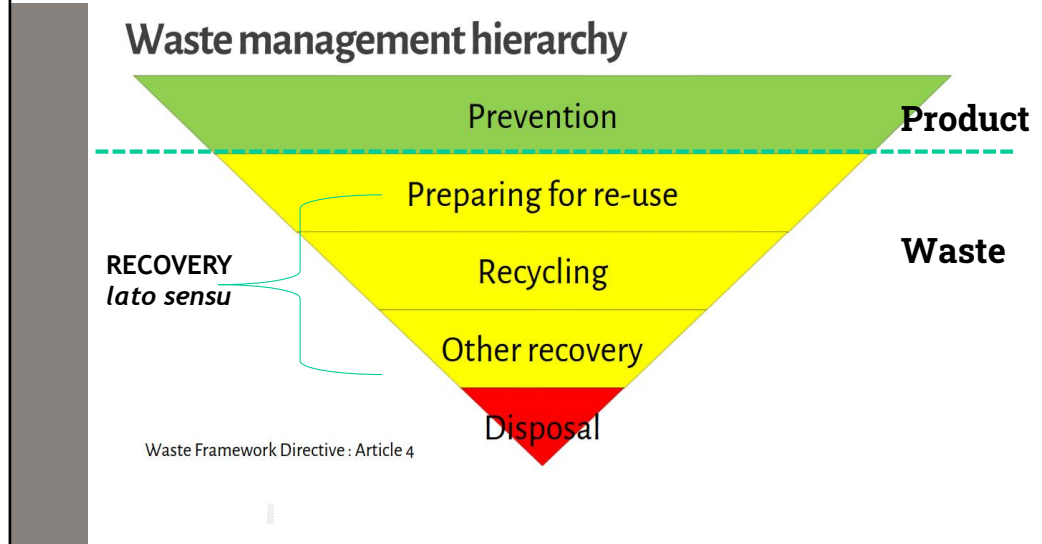
If there are not criteria at community level, MS may decide whether certain waste has ceased to be waste, taking into account applicable case law and when the following cumulative conditions are fulfilled:

- 1) The substance or object is commonly used for specific purposes;
- 2) A market or demand exists for such a substance or object;
- 3) The substance or object fulfils the technical requirements for the specific purpose and meets the existing legislation and standards applicable to products;
- 4) The use of the substance or object will not lead to overall adverse environmental or human-health impacts.



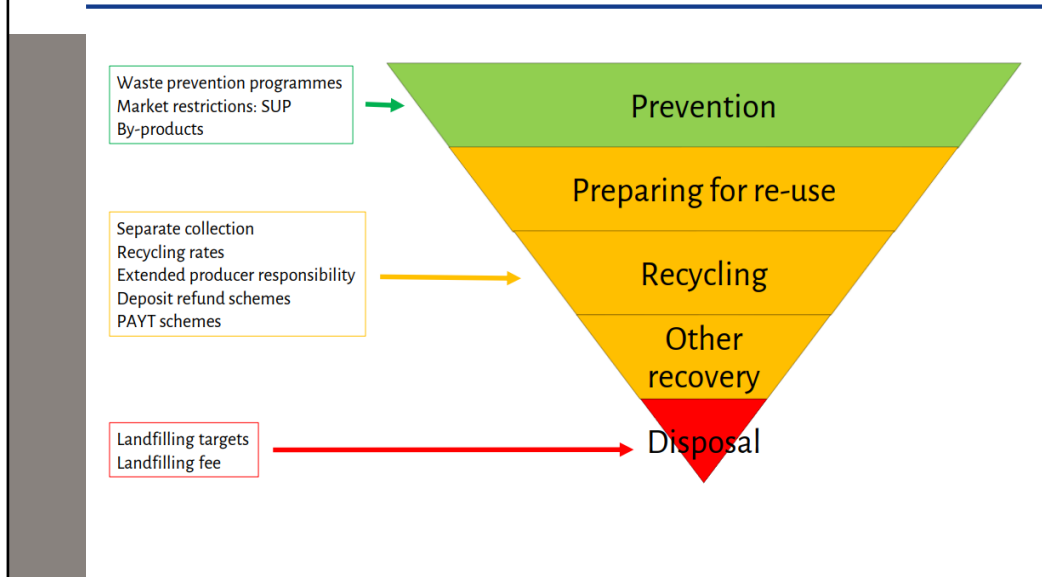
WASTE HIERARCHY

Waste Hierarchy - Article 4 WFD / 1



EU waste policy is based on a concept known as the waste hierarchy, which lists the different options for managing waste from 'best' to 'worst' from an environmental perspective. However, the waste hierarchy should not be seen as a rigid prescription, particularly since different waste treatment methods can have different environmental impacts. So, if a waste management option that is normally lower in the hierarchy causes fewer environmental impacts in a specific situation, then it should be implemented. The rules on derogations from the waste hierarchy are also provided in Article 4 WFD. Definitions of the waste hierarchy levels:

Waste Hierarchy - Definitions / 2



PREVENTION: measures taken for products, i.e. before a substance, material or product has become waste, that reduce:

- The quantity of waste, including through the re-use of products or the extension of the life span of products;
- The adverse impacts of the generated waste on the environment and human health; or
- The content of harmful substances in materials and products. Reduction in the generation of waste, usually at source is the most effective waste management option.

DISPOSAL – normally this is landfilling, but also incineration of waste (all D operations listed in Annex I WFD).

Waste Hierarchy - Definitions / 3

- ❑ PREVENTION - Article 3(12) --> The product is NOT waste yet
 - ✓ measures taken for products, i.e. before a substance, material or product has become waste
 - ✓ Reduce the quantity of waste, including the re-use of products or the extension of the life span of products
 - ✓ Limit the adverse impacts of the generated waste on the environment and human health
 - ✓ Reduce the content of harmful substances in materials and products.
- ❑ DISPOSAL - Article 3(19)
 - ✓ Any operation which is not recovered even where the operation has a secondary consequence the reclamation of substance or energy
 - ✓ Annex I: Disposal essentially includes deposit into landfill, release at the sea or in other water bodies, or co-incineration

PREVENTION: measures taken for products, i.e. before a substance, material or product has become waste, that reduce:

- The quantity of waste, including through the re-use of products or the extension of the life span of products;
- The adverse impacts of the generated waste on the environment and human health; or
- The content of harmful substances in materials and products. Reduction in the generation of waste, usually at source is the most effective waste management option.

DISPOSAL – normally this is landfilling, but also incineration of waste (all D operations listed in Annex I WFD).

Waste Hierarchy - Definitions / 4

□ RECOVERY - Article 3(15)

- ✓ Recovery is when waste is serving a useful purpose by replacing other materials which would otherwise have been used for a particular function.
- ✓ Recovery operations are: i. preparing for reuse, ii. recycling, iii. other recovery like incineration with energy recovery and backfilling.



i. PREPARING FOR RE-USE - Article 3(16)

- ✓ Checking, cleaning or repairing recovery operations, by which products or components of products that have become waste are prepared so that they can be re-used without any other pre-processing
- ✓ Examples: repairing furniture, WEEE, bicycles, washing bottles before re-use.

- **RECOVERY** – any operation treating waste can either be a recovery or a disposal operation. Recovery is when waste is serving a useful purpose by replacing other materials which would otherwise have been used for a particular function. Recovery operations are: preparing for reuse, recycling, other recovery like incineration with energy recovery and backfilling.

- **RE-USE** – is a means of waste prevention. A product is used for the same purpose. For example, closed loop system for wooden pallets or deposit-refund systems for re-use.

- **PREPARING FOR RE-USE** – is a type of recovery operation once a product has become waste. Examples of preparation for re-use are: repairing furniture, WEEE, bicycles, washing bottles before re-use.

Waste Hierarchy - Definitions / 5

ii. RECYCLING - Article 3(17)

- ✓ Any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes.
- ✓ Examples of recycling are reprocessing of organic material into compost, plastic waste into granulate plastic, crushed waste glass for blasting.

iii. OTHER TYPE OF RECOVERY

- ✓ Example: Energy Recovery --> high energy-efficient combustion



**The waste hierarchy is neither
rigid, nor strictly mandatory**

• RECYCLING – is reprocessing of waste into products, materials and substances. Does not include incineration and energy recovery. Examples of recycling are reprocessing of organic material into compost, plastic waste into granulate plastic, crushed waste glass for blasting.

• RECOVERY v DISPOSAL – with respect to incineration CJEU has developed in its case-law a test of “principally used” to avoid sham recovery. Incineration with energy recover is a recovery operation if waste is incinerated and is used as a fuel or other means of generating energy – greater part of waste must be consumed and the greater part of energy must be recovered and used. If waste is simply incinerated without any energy recovery it is a disposal operation

WASTE MANAGEMENT OBLIGATIONS

Member States' duties

Separate Collection - Article 11 WFR

Article 3(10) WFD: 'separate collection' means the collection where a waste stream is kept separately by type and nature so as to facilitate a specific treatment

- **At least of paper, metal, plastic and glass as for 2015**
→ higher yield, better quality
- **By 31 december 2023: mandatory for bio –waste**
- **By 1 January 2025 for textile and hazardous waste.**

There are two crucial elements addressed by the WFD to improve resource efficiency and recycling: one is separate collection and the other one is extended producer responsibility

Separate collection is the best way to provide a constant material flow and also high quality recyclables. Ideally, all recyclables would be collected separately in the cleanest way possible and then sorted.

Separate collection is essential to ensure meeting quality standards required by recyclers.

As of 2015, separate collection is obligatory for paper, metal, plastic and glass. It will also be mandatory for bio-waste when the WFD is amended. There is some uncertainty as to what "separate collection" exactly means. A number of Member States experiment with different ways of co-mingled collection. A final answer to what extent co-mingled collection may be legally acceptable will depend on the merits of the individual system and will have to be judged in the light of effectiveness ("effet utile").

For example, it is accepted to collect together metal and plastic because both streams do not undermine specific treatment afterwards. Separate collection is not an absolute and unconditional requirement as WFD provides for some flexibilities to the Member States – the separate collection is to be introduced where technically, economically and environmentally possible. This flexibility is to be interpreted restrictively

+

Aim: effective separate collection is a mean to achieve high quality recycling.

Instruments: legal obligations.

As for 2015 mandatory for paper, metal, plastic and glass.

By 31 december 2023 mandatory for bio –waste and by 1 January 2025 for textile and hazardous waste.

Waste Prevention - Article 29 WFD

- ❑ **Waste prevention programmes in place by the end of 2013 (Article 29 WFD)**
 - set waste prevention objectives
 - determine benchmarks or targets
 - describe prevention measures
 - + Mining waste provisions
- ❑ **Promotion of eco-design for products**
- ❑ **Campaigns to change consumer behaviour**
- ❑ **Supporting the reduction of industrial waste (EMAS, ISO 14001)**
- ❑ **Green public procurement**

As already said, waste prevention is the key tool for resource efficiency – key tool for preserving resources (and avoiding marine litter) Reducing the amount of waste generated at source and reducing the hazardous content of that waste is regarded as the highest priority according to the Waste Hierarchy established in the Waste Framework Directive (Article 4). By the end of 2013 MS had to put in place Waste Prevention Programmes. MS have to set objectives and describe concrete prevention measures. The legislator has outlined in Article 9 WFD that an eco-design policy with a view to promoting technologies focusing on durable, re-usable and recyclable products (Article 9 WFD) is key for waste prevention. Consumer habits and green public procurement are also important elements to be further taken account of

Waste Management Planning - Article 28 WFD

- Waste Management Plans
 - provide analysis to current situation for all waste streams covering the whole territory
 - contain measures for improvement
 - public participation
- Principle of self-sufficiency and proximity (Article: 16)
- An integrated and adequate network of waste disposal installations and of installations for the recovery of mixed municipal waste collected from private households
(C-278/09 COM v Italy)

Waste management planning is fundamental to a well organised system of waste management that complies with the waste hierarchy.

Therefore, Art 28, 30 WFD requires that MS put in place waste management plans and keep them regularly updated. WFD also prescribes the minimum content that the plans must address. These are listed in Article 28 WFD. Waste management plans are to be subject to strategic environmental impact assessment. Art 16 WFD is one of the most important measures – it requires that MS establish an integrated network of waste management infrastructure which must enable disposal of waste in one of the nearest appropriate installations. For municipal waste – the network should provide installations close to source of production (where proximity is complied this may include regional cooperation).

The principle of proximity implements Article 191 TFEU – principle that environmental damage must be remedied at source. On the basis of that it is for each region/municipality to take appropriate steps to manage waste close as possible to where it was produced. As illustrated in the case C-278/09 Commission v Italy, if one region lacks sufficient infrastructure to manage its waste – it is legitimate to conclude that this will compromise the national network of waste management and that the network is no longer integrated and adequate or complies with the principle of self-sufficiency. Internal Market Waste materials are products, though of a specific nature, to which articles on the free movement of goods of the TFEU apply. Restrictions to cross border shipment of wastes may be allowed only in some limited cases. The slide lists a number of cases that explain some of 20 those circumstances. This may be discussed if time allows.

Financial responsibility for waste management - Article 14 WFD

- ❑ «polluter pays principle» --> the polluter bears the management cost which corresponds to his waste production contribution
- ❑ **14(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
- ❑ **3(5):** waste producer --> anyone whose activities produce waste (original waste producer) or anyone who carries out pre-processing, mixing or other operations resulting in a change in the nature or composition of this waste
- ❑ **3(6):** waste holder --> the waste producer or the natural or legal person who is in possession of the waste
- ❑ **C-254/08 Futura Immobiliare** --> Use of rebuttable presumption in case the exact contribution can not be determined

Aim : making producers more conscious of their responsibility during the whole life-cycle of the product

Instruments: product design and EPR (= **Extended producer responsibility**, ensuring that the producers bear financial and/or organisational responsibility for the management of waste).

Mandatory for ELVs, batteries, WEEE.

Mandatory for packaging by 2025;

Financial responsibility for waste management - Extended Producer Responsibility (EPR)

- ❖ „Extended producer responsibility“ - „polluter“ is the economic agent who can play a decisive role in avoiding pollution, e.g. through product design efforts (Article 8, Article 14(2))
- ❖ Producer is one who manufactures, sells, treats, processes or imports products.
- ❖ Up to Member States to implement - Lack of Harmonisation
- ❖ Existing EU legislation (ELV, WEEE, Batteries), existing MS legislation (beverage packaging, deposit schemes)
- ❖ EPR measures: acceptance of returned products, take back points, financial responsibility for environmental compatible disposal and consumer information

Aim : making producers more conscious of their responsibility during the whole life-cycle of the product

Instruments: product design and EPR (= **Extended producer responsibility**, ensuring that the producers bear financial and/or organisational responsibility for the management of waste).

Mandatory for ELVs, batteries, WEEE.

Mandatory for packaging by 2025;

Extended producer responsibility – this is a “cradle-to-grave” approach – whereby the producers are made physically and financially responsible for the collection, recycling and disposal of their products.

Producer is one who manufactures, sells, treats, processes or imports products. Extended producer responsibility was designed as "soft law" that Member States "may" introduce. On the other hand, Art. 8 WFD is very explicit and detailed in "what" precisely Member States "may" do and "who" may be held responsible as producer.

Extended producer responsibility is considered as a major instrument in support of the implementation of the European Waste Hierarchy, and therefore for the increase of, by priority: prevention, reuse and recycling. Extended producer responsibility is also widely used in support of the implementation of the Packaging and Packaging

Waste Directive (94/62/EC), although the Directive itself does not impose the principle.

At EU level, Extended producer responsibility is established for ELV, WEEE and Batteries. This is essential in order to finance and organise the waste management and achieve the high collection and recovery targets provided in those Directives.

There is no harmonisation of how this responsibility is to be implemented and data shows that these systems have a wide range of efficacy: Batteries – collection rates vary from 5% (MT) to 72% (Switzerland), 50% BE ELV – recycling and re-use rates 64% MT – 96 % DE WEEE – collection 1.2kg/cap BG to 17.2 kg/cap BE – the average is 6.6. Packaging – recycling rated 29% MT to 84% DK At national level Member States have established Extended producer responsibility for a variety of other products. For more information an overview of EPR schemes was adopted by a study commissioned by the Commission

Below is a list of a variety of legislative and non-legislative measures concerning EPR:

- Acceptance of returned products
- - Financial responsibility for the following:

- ☐ consumer information

- ☐ take back points

- ☐ product and material design to ensure recyclability and re-usability

- ☐ multiple use, re-usability, durability, suitability for safe recovery and environmentally compatible disposal

Hazardous Waste - Article 17-21 WFD / 1

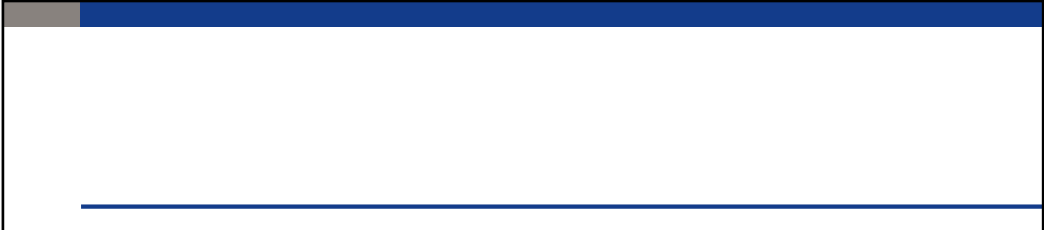
- Article 3 (2): “‘hazardous waste’ means waste which displays one or more of the hazardous properties listed in Annex III”
- Explosive, oxidizing, highly flammable or flammable, irritant, toxic, carcinogenic, infectious, ecotoxic, etc.....
- Article 7 (1) “... The list of waste shall include hazardous waste ... The list of waste shall be binding as regards determination of the waste which is to be considered as hazardous waste. ...”
- Hazardous Waste is marked by a * in Commission Decision 2000/532, eg: 05 01 05* - oil spills
 - Under Article 7 (2) and (3) MS may identify additional hazardous wastes or consider certain waste not hazardous if certain conditions are fulfilled.

Hazardous Waste - Article 17-21 WFD / 2

Additional Obligations

- Article 17 - ... traceability from production to final destination and control of hazardous waste ...
- Article 18 - the mixing ban
 - (1) "... hazardous waste is not mixed, either with other categories of hazardous waste or with other waste, substances or materials. Mixing shall include the dilution of hazardous substances."
 - (2) limited exceptions
 - (3) "Subject to technical and economic feasibility criteria, where hazardous waste has been mixed in a manner contrary to paragraph 1, separation shall be carried out where possible and necessary in order to comply with Art. 13."
- Article 19 - labelling of hazardous Waste
- Article 20 - special obligations do not apply to households
- Article 35 - record keeping with regard to hazardous waste

Besides the general definition in WFD, the list of waste established in the Decision is of utmost importance. The list is binding as far as the determination of hazardous waste is concerned (haz waste is marked with an asterisk in this list). The list is updated by the Commission.





WASTE MANAGEMENT OPERATIONS

Landfilling of waste / Directive 99/31/EC on the landfill of waste

- **Landfill classes** (hazardous - non-hazardous - inert waste)
- The following wastes may **not be accepted in a landfill**:
 - ✓ liquid, flammable, explosive or oxidising waste;
 - ✓ hospital and other clinical waste which is infectious;
 - ✓ used tyres, with certain exceptions;
 - ✓ any other type of waste which does not meet the acceptance criteria laid down in Annex II
- **Closing and after-care**
 - ✓ closed after the final on site inspection carried out by the competent authority
 - ✓ the operator remains responsible for maintenance and control of the site
- **Targets 2020/30 (Circular economy package directives 2018/849-852)**
 - ✓ increase of the preparing for re-use and recycling target for municipal waste to 55 % by 2025; 60 % by 2030; 65 % by 2035
 - ✓ gradual limitation of the landfilling of municipal waste to 10% by 2035
 - ✓ food waste should be reduced by 30% by 2025; 50% by 2030

Waste incineration / Directive 99/31/EC on the landfill of waste

- Directive 2000/76/ES - no longer in force
- Industrial Emissions Directive (IED) (2010/75/EU)
 - ✓ permitting procedure
 - ✓ Best Available Techniques (BAT)
 - ✓ Commission Implementing Decision (EU) 2019/2010 of 12 November 2019 establishing the best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council, for waste incineration
 - ✓ For certain activities, i.e. large combustion plants, waste incineration and co-incineration plants, solvent using activities and titanium dioxide production, the IED also sets EU wide emission limit values for selected pollutants
 - ✓ public participation

WASTE STREAMS DIRECTIVES

Waste streams directives / Overview

- Directive 94/62/EC on ***packaging and packaging waste***
- Directive 2000/53/EC on ***end-of-life vehicles (ELV)***
- Directive 2006/66/EC on ***batteries and accumulators***
- Directive 2012/19/EU on ***waste electrical and electronic equipment (WEEE)***

Waste streams directives / 1

- Directive 2006/66/EC on **batteries and accumulators**
 - ✓ With some exceptions, it applies to all batteries and accumulators, no matter their chemical nature, size or design.
 - ✓ prohibits the marketing of batteries containing some hazardous substances,
 - ✓ defines measures to establish collecting schemes
 - ✓ fixes targets for collection and recycling activities
 - ✓ sets out provisions on labelling
- Directive 2012/19/EU on **waste electrical and electronic equipment (WEEE)**
 - ✓ fastest growing waste stream, separate collection
 - ✓ obligation to minimise the disposal of WEEE in unsorted municipal waste;
 - ✓ private households and distributors can return WEEE free of charge;
 - ✓ bans the disposal of WEEE collected separately that has not been properly treated;
 - ✓ minimum annual WEEE collection rate – min. 45%

Waste streams directives / 2

- Directive 94/62/EC on **packaging and packaging waste**
 - ✓ Covers all packaging placed on the European market & all packaging waste, whether it is used or released at industrial, commercial, office, shop, service, household or any other level, regardless of the material used.
 - ✓ Requires EU countries to take measures to prevent the generation of packaging waste and to minimise the environmental impact of packaging
- Directive 2000/53/EC on **end-of-life vehicles (ELV)**
 - ✓ Owners of ELVs delivered for waste treatment must receive a certificate of destruction. This is necessary to deregister the vehicle
 - ✓ **Manufacturers, importers and distributors** must provide systems to collect ELVs and, where technically feasible, used parts from repaired passenger cars
 - ✓ pushes producers to manufacture new vehicles without hazardous substances
 - ✓ specific exemptions in Annex II (to regular reviews according to technical and scientific progress)
 - ✓ clear quantified targets for reuse, recycling & recovery of the ELVs

2+ such as national programmes, incentives through extended producer responsibility schemes and other economic instruments

5+ (in particular lead, mercury, cadmium and hexavalent chromium),

WASTE SHIPMENT

Waste Shipment Regulation 2013/2006

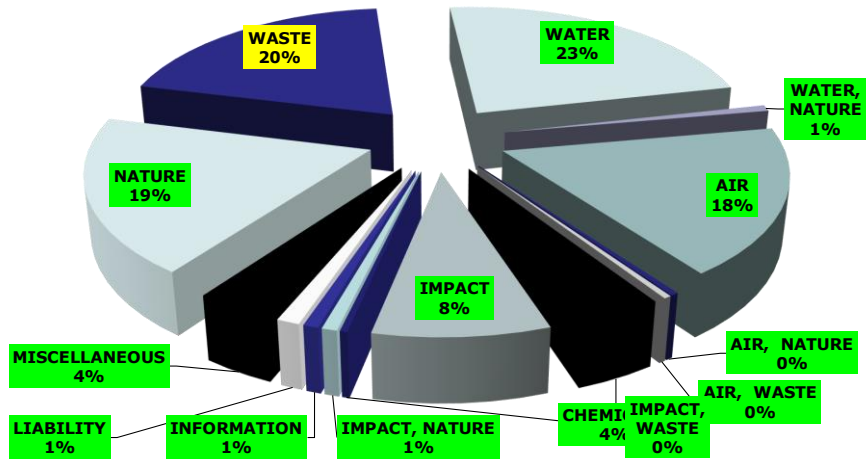
- Implements the **Basel Convention** on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (Basel Ban: no export of hazardous waste and waste for disposal to non-OECD countries)
- Specific rules, procedure depending on the **type of waste, waste treatment operation, country of destination**
- **information procedure**
 - ✓ waste has to be accompanied by documents signed by exporter and recovery facility
 - ✓ Contract
 - ✓ notification procedure

2+ such as national programmes, incentives through extended producer responsibility schemes and other economic instruments

5+ (in particular lead, mercury, cadmium and hexavalent chromium),

**IMPLEMENTATION OF WASTE FRAMEWORK
DIRECTIVE AT NATIONAL LEVEL**

Environmental infringements



Main Implementation Problems / 1

- ❖ Compliance with the waste hierarchy
- ❖ Compliance with the waste targets
- ❖ Waste management planning at national and regional levels
- ❖ Littering, illegal dumping
- ❖ Waste or non-waste
- ❖ Recovery or disposal (C-228/00, C-6/00, C-147/15)
- ❖ Extended Producer Responsibility (C-13/15)

Main Implementation Problems / 2

WASTE INFRASTRUCTURE

- ❖ Put in place waste infrastructure - landfills, recycling installations, sorting installations
 - C-196/13 *Commission v Italy* (40 mil € lump sum penalty + daily penalties until compliance starting at 42,8 mil € deducting 400 000 € for hazardous landfills and 200 000 € for other landfills)
 - C-378/13 *Commission v Greece* - illegal landfills, clean-up, create capacities (10 mil € lump sum penalty + daily penalties until compliance starting at 14.5 mil € deducting 40 000 € for closed or cleaned up and 80 000 € for closed and cleaned up)
- ❖ Establish a suitable and integrated network of disposal installations
 - C-297/08 *Commission v Italy* → C-653/13 *Commission v Italy* (20 mil € lump sum penalty + daily penalties until compliance of 120 000 €)



**Thank you very much
for your attention!**

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