



European
Commission

Separate collection of bio-waste: key obligations in EU Waste Legislation and policy

Mattia Pellegrini

Head of Unit B3

**Waste Management and Secondary materials
Unit B3**

DG ENV, European Commission

22 September 2020

European Green Deal



A new vision for Europe

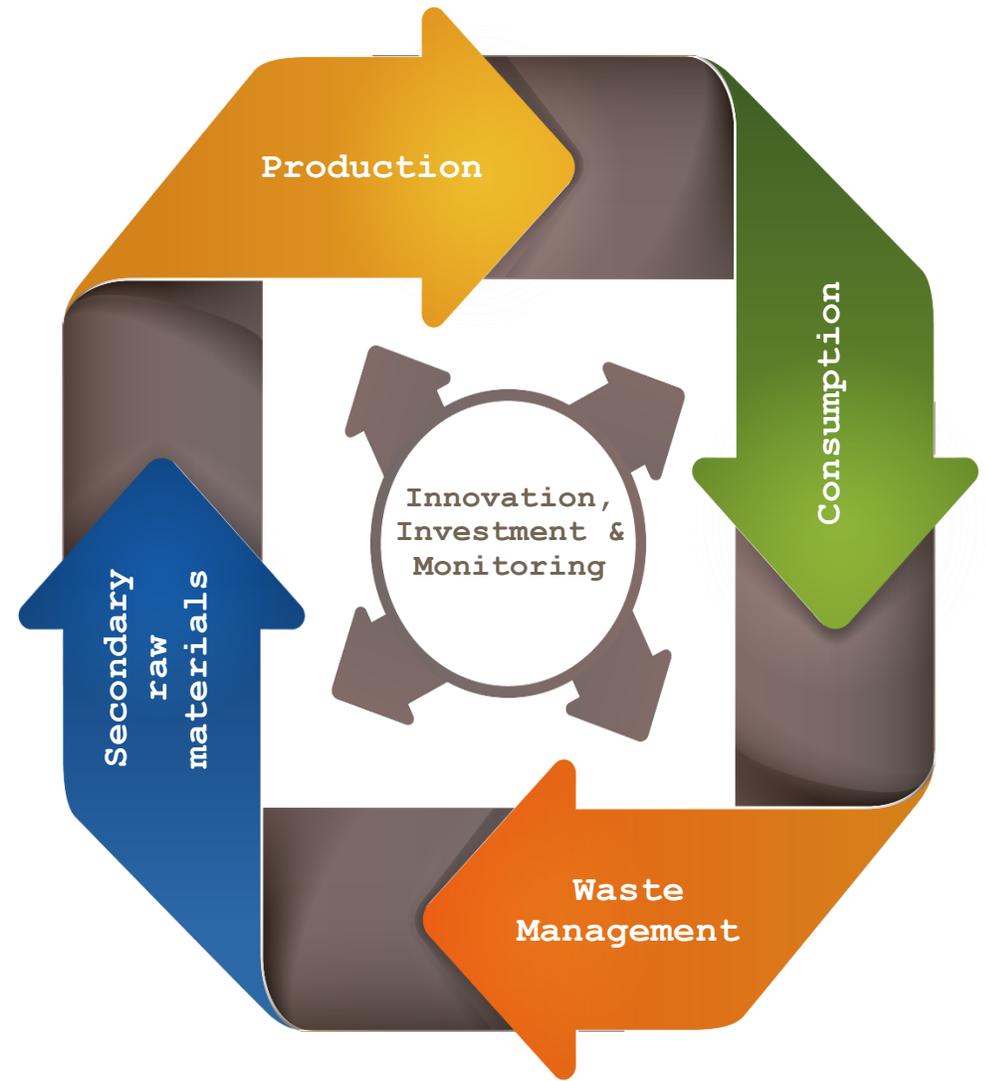


35 actions along the entire life cycle of products, to:

- Make **sustainable products** the norm in the EU
- **Empower** consumers and public buyers
- **Focus also on key product value chains:** 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

CEAP 2.0 : waste policy

- ✓ Sound waste prevention and management are essential building blocks of the circular economy
- ✓ *Preventing waste from being created in the first place is key*
- ✓ *Once waste has been created, it needs to be transformed into high-quality resources*
 - **Specific waste reduction targets** for more complex streams
 - Enhance the implementation of the requirements for **EPR schemes**
 - Continue **modernising EU waste laws** (e.g. batteries, packaging, end-of-life vehicles, hazardous substances in electronic equipment)
 - Propose to harmonise separate **waste collection systems**
 - Review rules on **waste shipments** facilitating recycling or re-use within the EU; with also the aim to restrict exports of waste that cause negative environmental & health impacts
 - Assess the scope to develop further EU-wide end-of-waste criteria for certain waste streams



Farm to Fork Strategy

Tackling food loss and waste is key to achieving sustainability

Further actions to reduce food waste or transform them into valuable products, in synergy with the new CEAP.



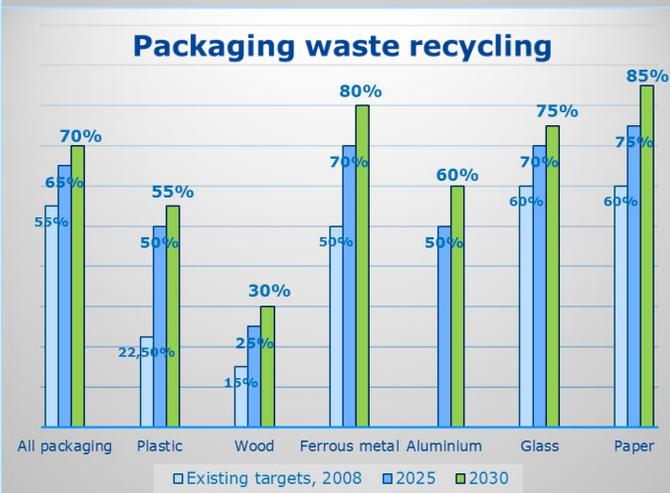
Across the 28 EU Member States:

- Approximately 88 million tonnes (173 kg per person) of food is wasted every year along the entire food value chain. This corresponds to about 20 % of all food produced
- Food waste (all steps of the lifecycle) accounts for at least 227 million tonnes CO₂ eq. a year, i.e. about 6% of total EU emissions in 2012.

(EU FUSIONS, 2016).

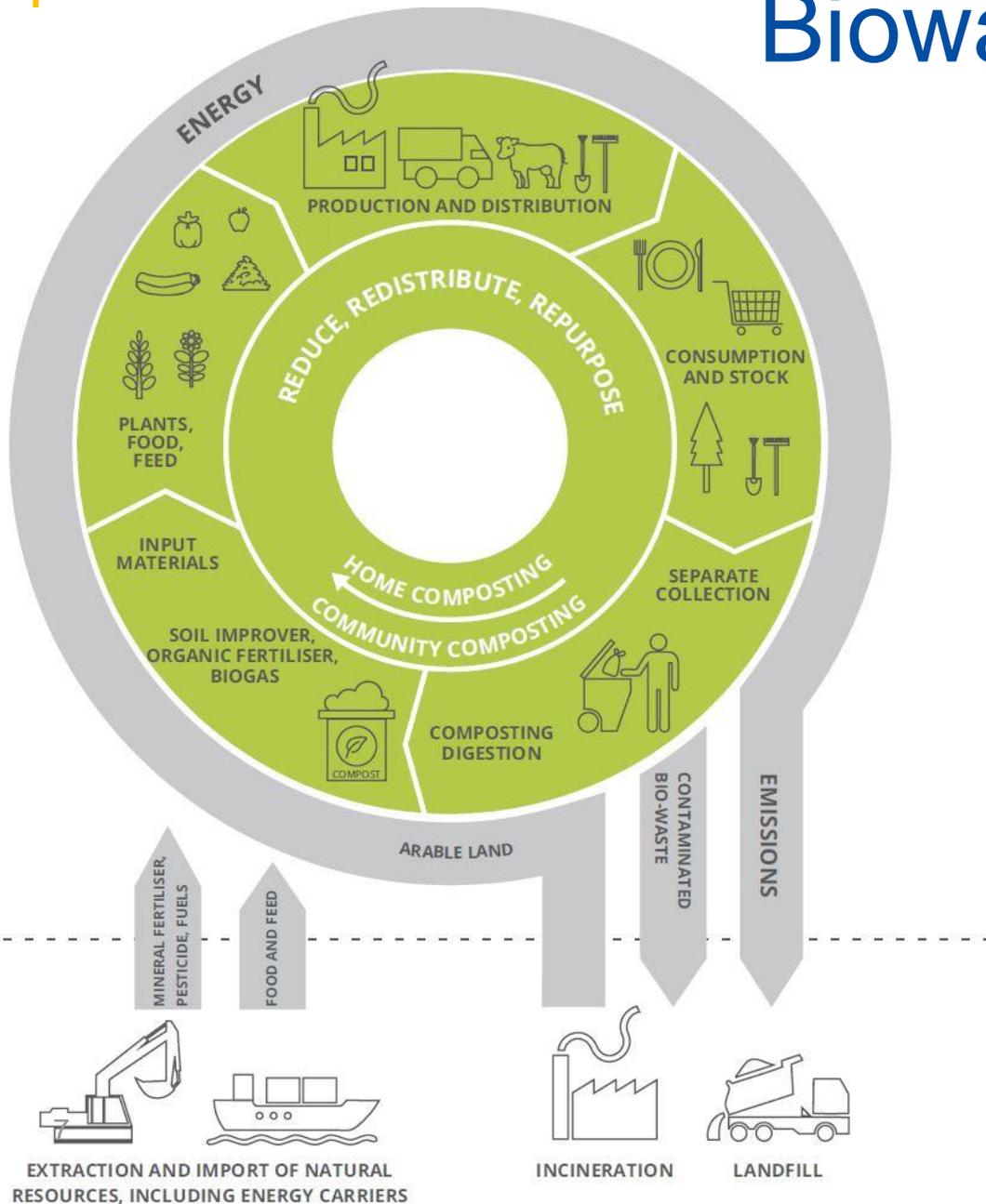
“2018 waste package”

The EU as a leading region in the world in turning waste into resources



- Gradual progress to 65% recycling and 10% landfilling of municipal waste by 2035
- 70% recycling of packaging waste by 2030
- Phasing out landfilling of all recoverable waste
- Waste Prevention measures
- Reinforced rules on separate collection of waste
- Extended Producer Responsibility
- Economic/planning instruments
- Future-oriented agenda

Biowaste and circular economy



European circular economy and waste policies increasingly address bio-waste as one of several key waste streams.

Bio-waste — mainly food and garden waste – can play an important role in the transition to a circular economy, by both

- preventing its generation and
- capturing its potential as a source of valuable secondary resources e.g. valuable soil-improving material and fertiliser as well as biogas, a source of renewable energy.

Bio-waste accounts for more than 34 % of the municipal solid waste generated, amounting to 86 million tonnes in 2017 in the EU-28 (28 EU Member States for the period 2013-2020).

Bio-waste provisions in the new WFD

- **Recycling targets for preparation and reuse of municipal waste** (50% (2020), 55% (2025), 60% (2030), **65% (2035)**)
- An obligation for all EU Member States to collect bio-waste separately or ensure recycling at source **by the end of 2023** and to ensure it is not incinerated

With a share of 34 %, bio-waste is the largest single component of municipal waste in the EU

- to reduce food waste generation in line with SDG12.3 to **halve food waste by 2030**, and to adopt specific food waste prevention programmes.
- Encourage food donation and other redistribution for human consumption
- Measurement and reporting on food waste generation annually, starting in 2020.
- A mandate for the Commission to propose a binding food waste reduction target by the end of 2023:

Bio-waste provisions in the new WFD

- As of 1 January 2027 Member States may only count municipal bio-waste entering aerobic or anaerobic treatment as recycled if it has been **separately collected or separated at source** (Art 11a)
- Strict **recycling calculation rules** based on input into recycling (art 4 Decision 2019/1004)
- By 31 December 2024 Commission to **consider setting separate recycling targets for municipal bio-waste**
- Member States may allow **waste with similar biodegradability and compostability properties** to be collected together with bio-waste (Art 22.1)
- Obligation to set measures to
 - encourage the **recycling, including composting and digestion**, of bio-waste in a way that fulfils a high level of environment protection and results in output which meets relevant high-quality standards;
 - encourage **home composting**; and
 - promote the **use of materials produced from bio-waste**.

Bio-waste related provisions in the Landfill Directive (LFD)

- **Ban on the landfilling of separately collected waste** for recycling and preparation for reuse (Art 5)
 - by 16 July 2016 **biodegradable municipal waste going to landfill** was to be reduced to 35% of 1995 levels (Art 5)
- **Landfill reduction target** for municipal waste (max 10% by 2035) (Art 5)
 - adequate pre-treatment of waste** before landfilling (clarification in ECJ ruling in the *Malagrotta* case) - but without compromising the waste hierarchy and recycling targets (art 6)

Separate collection of bio-waste

- Separate collection is a prerequisite for using bio-waste as a resource in a circular way.
- Collecting bio-waste separately from other municipal waste:
 - enables high quality recycling of bio-waste for use as valuable secondary resources such as soil improvers, organic fertilisers and biogas
 - keeps the levels of impurities and contamination down as far as possible
- Implementing good bio-waste management systems is crucial
- Quality assurance systems covering all compost and digestates would improve trust in and awareness of the value of bio-waste

MS have the obligation to ensure that recycling of bio-waste results in an output which meets relevant high quality standards....

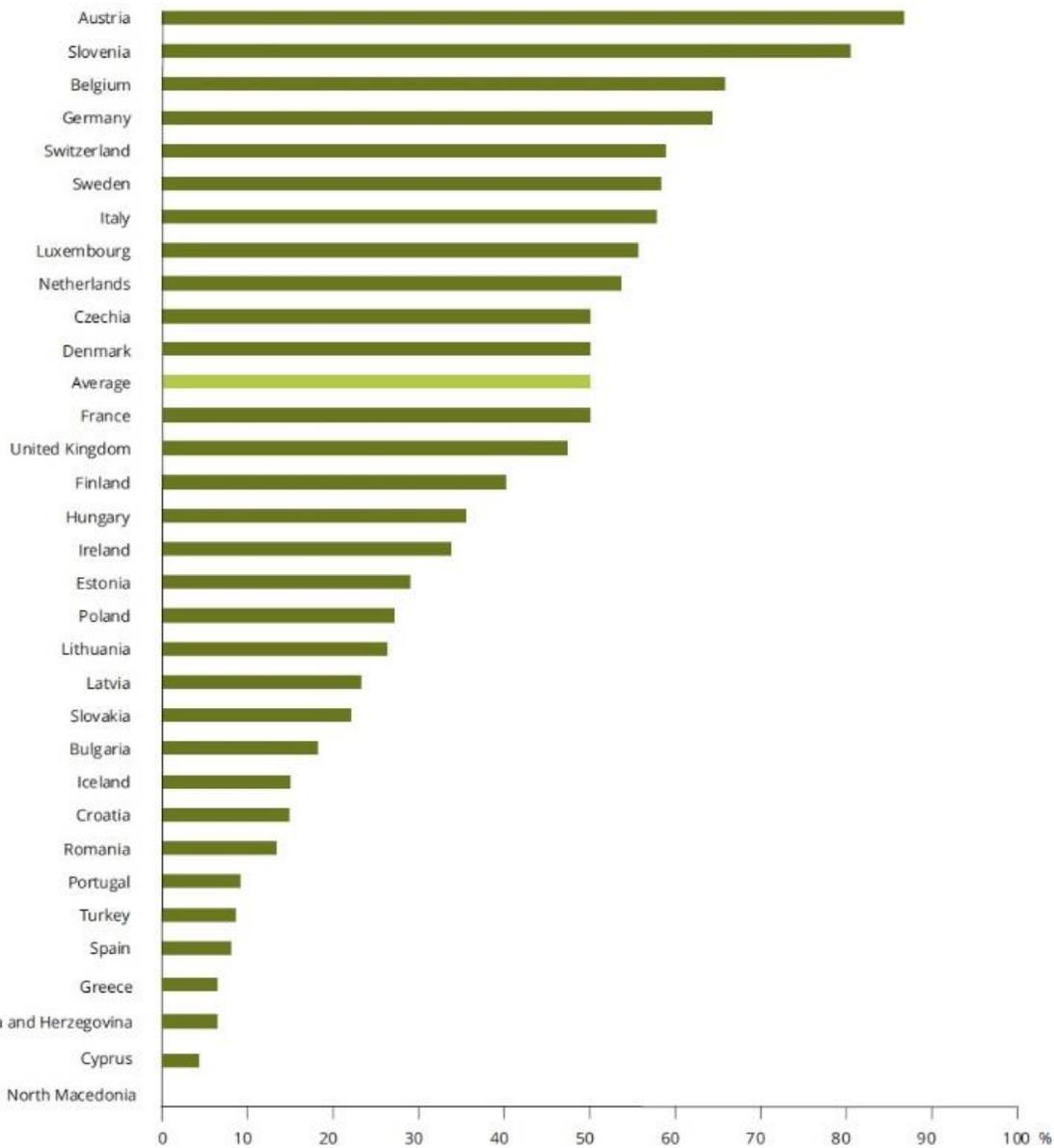


Separate collection of bio-waste for a high level of environment protection

...and also fulfils a high level of environment protection

- In line with the Zero Pollution ambition set in the European Green Deal, when closing the circle of organic matter we need to ensure that we do not in the process, contaminate the environment - soil, air and water.
- E.g. Plastics need to be prevented from entering bio-waste.
 - A high proportion of bio-waste still ends up in the mixed waste that is landfilled or incinerated, even in many countries with well-established separate collection systems.
 - plastic consumer products labelled as 'compostable' or 'biodegradable risk contamination of bio-waste and increase cost of treatment

Bio-waste collected separately as a share of bio-waste generated (bio-waste capture rate), by country for 32 EEA member and cooperating countries, 2017



Bio-waste collection rates in 32 European countries

About 50 % of the municipal bio-waste generated is collected separately in the countries that provided data (weighted average).

The remaining 50 % of municipal bio-waste is collected with residual (mixed) waste.

The separate collection rates vary from 80 % or more in Austria and Slovenia to less than 10 % in Bosnia-Herzegovina, Cyprus, North Macedonia, Portugal, Spain and Turkey, demonstrating that, at an individual country level there remains ample room for improvement.

Notes: Excluding Albania, Kosovo, Liechtenstein, Malta, Montenegro, Norway and Serbia due to a lack of data. Data exclude bio-waste composted at home. Austrian data include a considerable share of park and garden waste.

Source: ETC/WMGE compilation based on data provided by Elionet through an EEA and ETC/WMGE survey (ETC/WMGE, 2019a), Eurostat (2020), and the European Reference Model on Municipal Waste (ETC/WMGE, 2019b) for Belgium, Bulgaria, Croatia, Cyprus, Czechia, Estonia, Germany, Greece, Italy, Lithuania, Luxembourg, Poland, Spain and the United Kingdom. **Figure: EEA 2020**



Bio-waste, circular economy and energy union

- Waste prevention is environmentally most preferable.
- In line with the waste hierarchy, the bio-waste treatment technology which allows the highest exploitation of material and energy, is generally the preferable environmental option
 - The most common treatment methods for separately collected food/bio-waste, in line with circular economy principles, are **anaerobic digestion and composting**.

Bio-waste, circular economy and energy union

- As stated in the Commission communication on the role of waste to energy in the circular economy (2017), anaerobic digestion is an attractive and optimal option to treat biodegradable waste while keeping it away from landfill sites.
 - For instance, diverting one tonne of biodegradable waste from a landfill towards anaerobic digestion to produce biogas and fertilisers can prevent up to 2 tonnes of CO₂ equivalent emissions.

Bio-waste, circular economy and energy union

- Member States to implement according to the local situation
- Best available technology **that can extract more materials and/or energy from bio-waste with the minimum environmental and climate impact possible.**
 - This is confirmed by a life-cycle analysis carried out by the European Commission's Joint Research Centre (JRC, 2011) which identified a 'hierarchy' of options for bio-waste*.

*<https://publications.jrc.ec.europa.eu/repository/bitstream/JRC65851/d4a%20-%20guidance%20on%20lct&lca%20applied%20to%20bio-waste%20management%20-%20final%20-%20online.pdf>

Bio-waste, circular economy and energy union

- We have powerful examples in the EU.
 - Since 2014, the city of Milan has almost reached 100% collection of food and organic waste, providing an average of 120 000 tonnes of biodegradable waste per year. At full capacity, the city biogas plant should produce enough energy to supply electricity to 24 000 people in a year, and yield 14 400 tonnes of fertiliser.
- This is an example of circular economy and energy union working together since **this energy can replace fossil fuels, thus helping decarbonising our economy**
- Renewable energy from Anaerobic Digestion, which substitutes fossil fuels, is in line with the Energy Union and the Climate objectives.

Next steps - separate collection of waste

State of play

Recent studies carried out (EY*, EEA**)

Next steps by COM: (required by EGD and CEAP) Proposal for harmonizing separate waste collection systems in 2022:

- Identify good practices and develop minimum harmonized rules for efficient separate collection systems (incl. context-related aspects)
- Address effective combinations of separate collection models, the density and accessibility of separate collection points, taking account of regional and local conditions
- Aspects that facilitate consumer involvement

*https://ec.europa.eu/environment/waste/studies/pdf/15.1.%20EC_DGENV_Separate%20Collection_guidance_DEF.pdf

**<https://www.eea.europa.eu/publications/bio-waste-in-europe>



Thank you!

DG ENV website on waste
<https://ec.europa.eu/environment/waste/index.htm>

The waste package
http://ec.europa.eu/environment/waste/target_review.htm

European Green Deal and Circular economy
<https://ec.europa.eu/environment/circular-economy/>