

GrAins

Greening Agrifood
in Social Economy



Co-funded by
the European Union

Unpackaging and Zero Waste Strategies: regulatory framework for eco packaging for agrifood sector

Barbara Pancino, Università degli Studi della Tuscia

November 27th, 2024



Co-funded by
the European Union

Packaging waste is growing

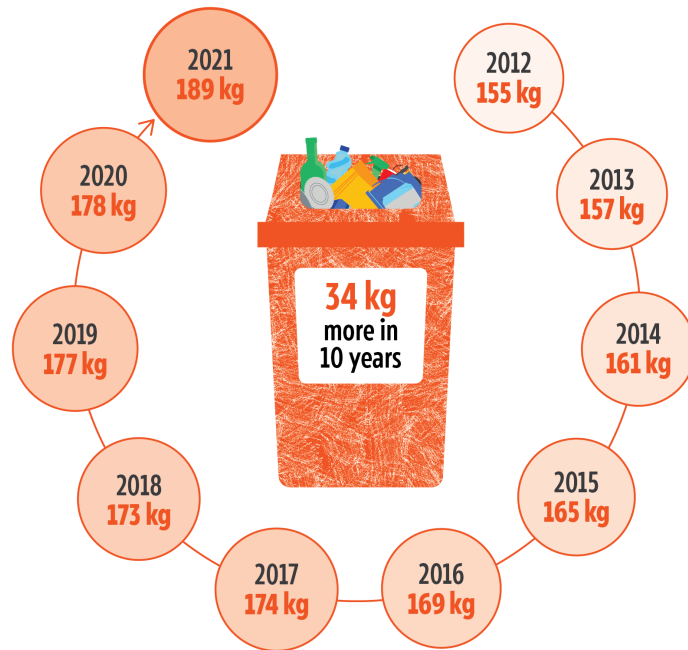
- Packaging comes in different formats (bottles, containers, cans, boxes, bags), is made of different materials (paper, cardboard, plastics, glass, wood, metal) and **used in all stages of production**, from raw materials to processed goods.
- Manufacturers, transporters, supermarkets, restaurants, households - they all need and use packaging to protect and transport goods.
- All this packaging has its **environmental cost**.



How much packaging waste do we generate?

Packaging waste in the EU

Kilograms per person



Source: Eurostat [env_waspac] - most recent data available (2021)



- On average, each EU resident generated 189 kilos of packaging waste in 2021.
- Over ten years, the amount has increased by over 20%.
- Numbers vary between countries, from as low as 74 kilos per person in Croatia, to 246 kilos per person in Ireland.



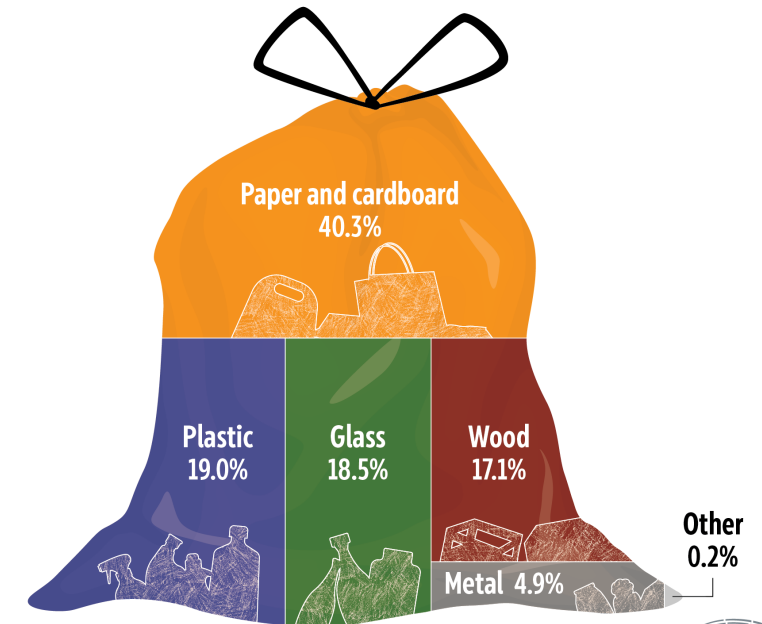
Co-funded by
the European Union

Packaging waste by material

- In 2021, the EU generated a total of 84.3 million tonnes of packaging waste, 4.8 million tonnes more than a year before.
- Most of it was paper and cardboard (40.3%), followed by plastic (19%), glass (18.5%), wood (17.1%) and metal (4.9%).

Packaging waste generated in the EU by packaging material

84 million tonnes in 2021



Source: Eurostat [env_waspac] - most recent data available (2021)

How waste is managed in the EU



Waste management practices vary between EU countries.

The EU wants to promote the **prevention** of waste and the **re-use** of products as much as possible. If this is not possible, it prefers **recycling** (including composting), followed by using waste to **generate energy**.

The most harmful option for the environment and people's health is simply disposing of waste, for example in a landfill, although it is also one of the cheapest possibilities.

Even though the waste generated per capita has increased, the way we manage waste has improved - with more recycling and composting and a decrease in landfill.



How waste is managed in the EU



WASTE HIERARCHY STEPS

Prevent – Top priority is placed on reducing or preventing waste. Can waste be avoided by not using the material in the first place?

Reduce – Can less materials be used in the design and manufacturing stage?

Reuse – Can materials be re-used in other areas of your production process, or by someone else?

Recycle – Can the materials be recycled, either in whole or in part to turn the waste into a new product

Recover – Where further recycling is not practical or possible, energy or materials could be recovered from waste through processes such as anaerobic digestion or incineration

Dispose – When all else fails, materials that cannot be reused, recycled or recovered for energy will be landfilled and incinerated (without energy recovery). This is an unsustainable method of waste management because waste that sits in landfills can continue to have a damaging environmental impact.



The waste management hierarchy replaces the traditional waste management approach of “the three Rs” (reduce, reuse and recycle), expanding it into a five-step process where the most preferred actions are at the top and the least preferred are at the bottom of the inverted pyramid.



Co-funded by
the European Union

How waste is managed in the EU



Some **64% of packaging waste was recycled in 2021**, which means that the waste has been treated in one way or another so that it can serve a useful purpose in the future.

The amount of waste and the way it is managed varies a lot across EU countries, but there has been a shift to **more recycling and less landfilling**.

To reduce waste and its impact on the environment, the EU has adopted **ambitious targets** on recycling and landfill and is working on packaging waste.

The goal is to promote the shift towards a more sustainable model known as the **circular economy**.



Co-funded by
the European Union

EU rules on packaging and packaging waste



The EU rules on packaging and packaging waste cover both **packaging design and packaging waste** management.

Their goal is to **harmonise national measures**, prevent the production of waste and increase reuse, recycling and recovery. They also **set minimum requirements** packaging on the EU market must meet.

These rules date from 1994 and were modified in 2018.

As part of the EU efforts to create a circular economy by 2050, the Commission proposed a new revision of the rules in November 2022.

Parliament and Council reached a deal on and European Parliament approved it in **April 2024**.



Co-funded by
the European Union

What will the new rules bring?



The goal is to reduce, reuse and recycle packaging and **increase its safety and sustainability**. There is a **special focus on plastic packaging** as it is particularly harmful for the environment.

More specifically, the new rules will:

- Set packaging **reduction targets** (5% by 2030, 10% by 2035 and 15% by 2040)
- **Ban different types of plastic packaging**: very light weight plastic carrier bags, plastic packaging for fresh fruit and vegetables, small individual portions for sauces, sugar and similar products, miniature packaging for toiletry products and plastic wrapping for suitcases in airports from January 2030
- **Ban from January 2030 persistent pollutants** (also known as forever chemicals) used to fireproof or waterproof food packaging that might affect our health
- **Encourage reuse and refill** options by setting specific targets for reusable packaging for alcoholic and non-alcoholic beverages (at least 10% by 2030) and providing the possibility for consumers to bring their own containers for take away food and drinks



Co-funded by
the European Union

Key measures



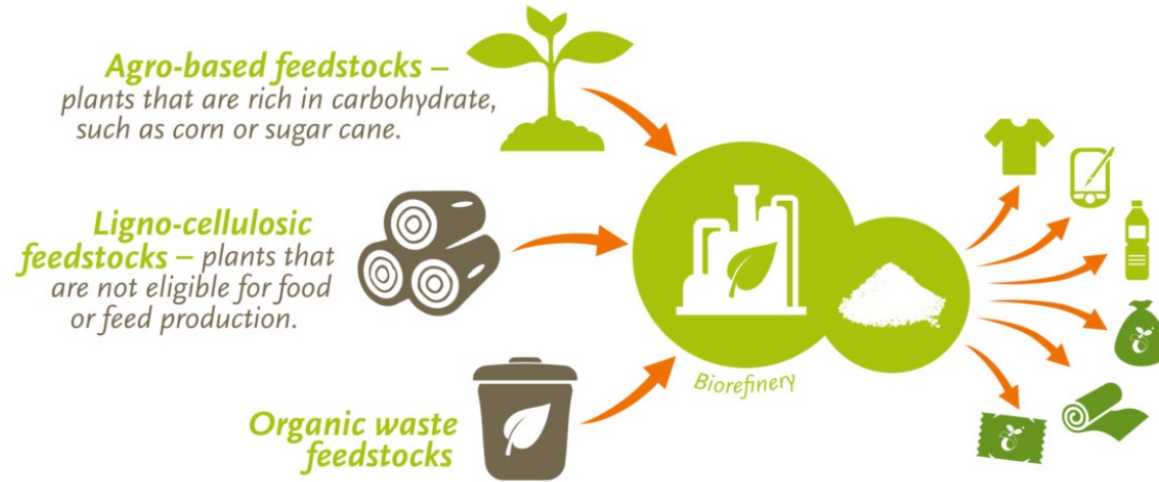
- Targets for packaging waste reduction in Member States and **mandatory reuse or refill targets in sectors such as retail and catering**
- EU-wide standards for **over-packaging**; maximum allowed empty space in e-commerce packaging; ban on certain forms of **unnecessary packaging**
- **Design criteria** for all packaging to increase recycling rates
- **Mandatory compostability** for some packaging types, where composting is environmentally beneficial
- **Mandatory deposit return** system for plastic bottles and aluminium cans
- **Labels on all packaging** to facilitate correct waste sorting by consumers and corresponding labels on recycling bins to make it clear where to put each package



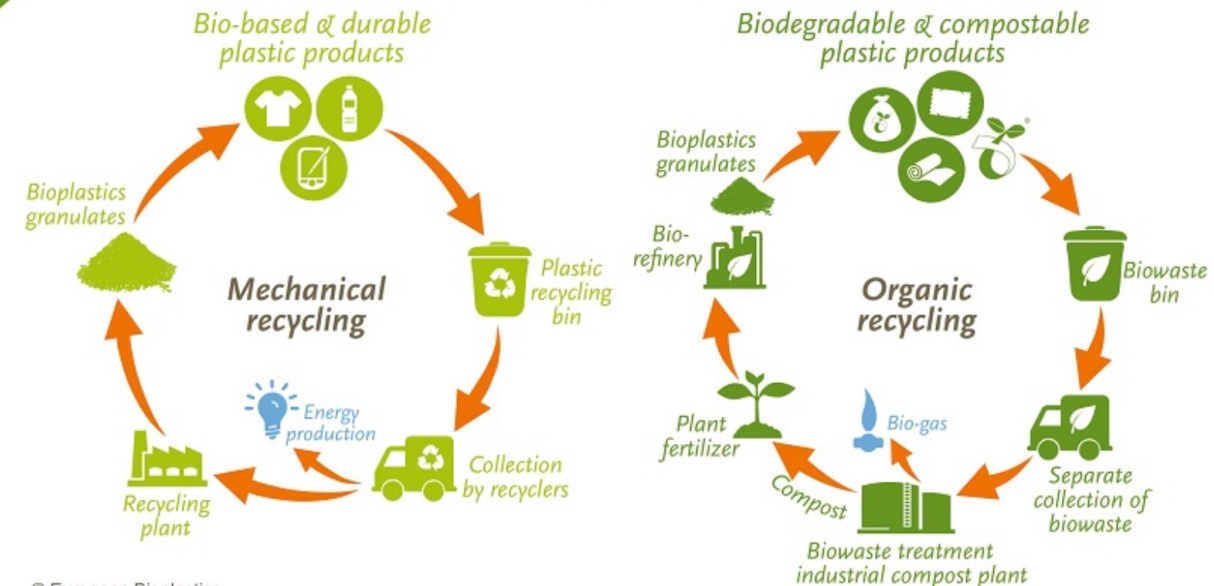
Sustainable food packaging



Bio-based plastics are made from a wide range of renewable **BIO-BASED** feedstocks.



End-of-life options for **BIOPLASTICS**
– Closing the loop –



© European Bioplastics



Co-funded by
the European Union

© European Bioplastics

Sustainable food packaging



Meet the Frugal Bottle

The Frugal Bottle, made from 94% recycled paperboard with a food grade pouch, is five times lighter than glass, has six times lower carbon footprint and offers 360 degree branding for exceptional shelf stand-out.

Five times lighter
than a normal glass
bottle

Up to 77% less plastic
than a plastic bottle

94% recyclable
paperboard outer

Carbon footprint up to
six times lower than a
glass bottle



Co-funded by
the European Union

Partners



Co-funded by
the European Union



Thank you !

For more information

bpancino@unitus.it



Co-funded by
the European Union

