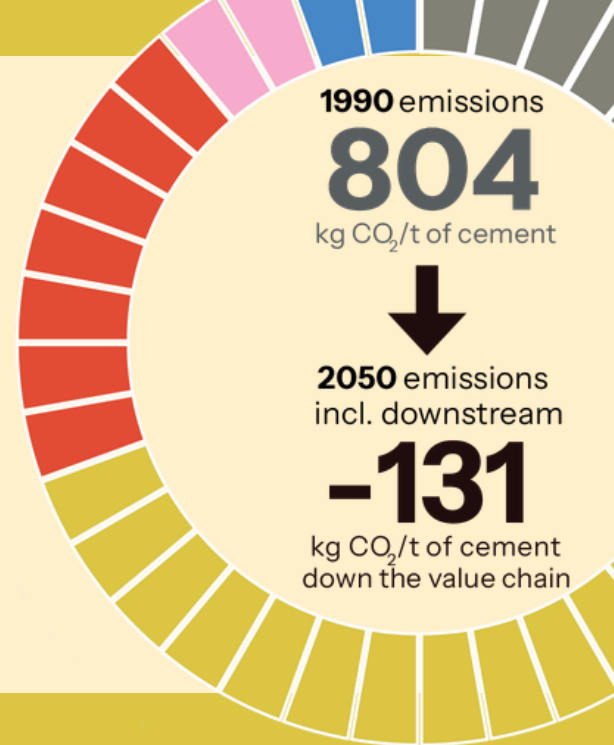




Cement Europe

2050 AMBITIONS & THE ROLE OF BIOMASS WASTE

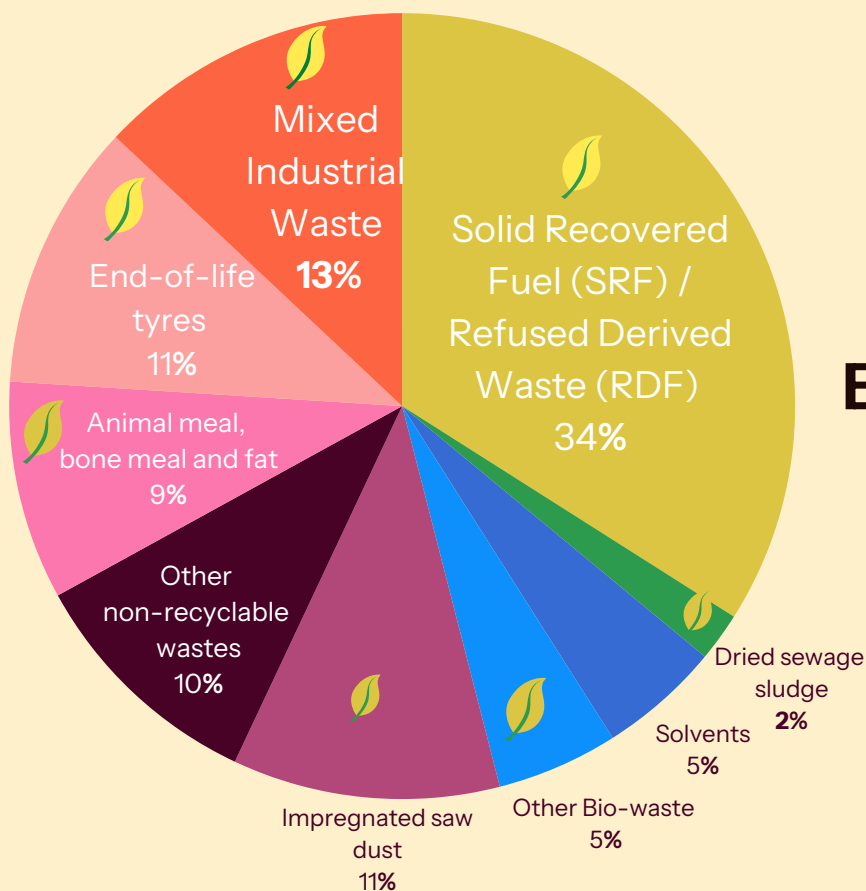


The use of **biomass waste** is highly important to the cement industry in Europe and a key part for **Cement Europe's 2050 Net Zero Roadmap**.

Secondary materials & fuels use allows for the **phase out of fossil fuels and avoids methane & CO₂** from landfilling or incineration of non-recyclable waste streams.

It provides a **service to society**, playing a key role in the management of waste and in the **circular economy**.

And it is in-line with the **EU Biodiversity Strategy**, because only biomass waste is used and not biomass as such.



BREAKDOWN OF ALTERNATIVE FUELS 2024



= pure biomass waste



= partial biomass waste

Source: Getting the Numbers Right, GCCA



Sewage sludge is the residual, semi-solid material that is produced as a waste during sewage treatment of industrial or municipal wastewater.



SAWDUST

Sawdust is a form of waste as a result of operations such as cutting, molding by milling, planing and finishing of wooden and MDF structures.



Wood waste includes:

- Wood from construction and demolition (C&D) waste, including plywood, treated wood and manufactured wood, such as composite panels.
- Crushed wood from industrial installations, crushed to a final dimension by waste managers.
- Wooden railway sleepers which are being phased out in Europe and replaced with concrete sleepers.



WOOD
WASTE



AGRICULTURAL
WASTE

Agricultural waste and seeds, which for some reasons do not comply with the regulation specifications due to human and animal health security.

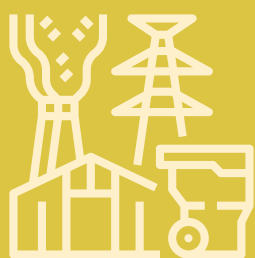




Animal meal is a biomass waste fuel resulted of animal carcasses processing in slaughterhouses, which for health reasons has to be used for energy production. The process and use are carefully regulated by national authorities.



ANIMAL MEAL



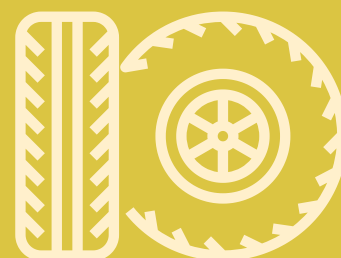
SRF/RDF

Solid recovered fuel (SRF) refers to a standardized waste-based fuel in accordance with EN15359. The term **refuse derived fuel (RDF)**, in general refers to a fuel produced by treating municipal solid waste (MSW), commercial and industrial waste (C&IW) or construction and demolition waste (C&DW) by sorting, shredding and drying. Both SRF & RDF contain a highly significant, though variable, share of biomass.



End-of-life tyres have a high calorific value, which makes them an ideal fuel for the cement industry. At the same time, they have a high iron and silica content which makes them perfect for material recycling, allowing the cement industry to reduce its consumption of primary raw materials.

It should be noted that tyres contain a significant amount of biogenic carbon (about 27% due to the content of natural rubber), thus leading to a direct reduction of fossil fuel-related CO₂ emissions.



END-OF-LIFE TYRES

BENEFITS OF BIOMASS WASTE



Thanks to the method known as **co-processing**, **energy is recovered** and minerals are recycled from a variety of waste streams, including biomass waste.

In 2024, the sector **substituted on average 58% of its fossil fuel** consumption with non-recyclable waste derived fuels, **24% of which were biomass waste derived fuels**, which corresponded to 2 million tonnes.



Thanks to the use of pre-treated waste...

more than 21 million tonnes of CO2 were saved in 2024

...by the EU cement industry!

Equivalent to the **CO2 emissions** produced by **15 million cars!**



2030



2050

Cement Europe aims to reach **60% alternative fuels by 2030**, half of which (30%) will be biomass waste, and **95% by 2050**, with more than half (50%) biomass waste.

ROLE OF POLICIES

To help us reach 60% alternative fuels by 2030 and 90% by 2050, we need **the right EU policies**, including:



Recognising the key contribution **biomass waste** can make to **reducing emissions from energy-intensive industries**.

Ensure and facilitate **access to biomass waste** to the cement facilities in the upcoming revision of the **Waste Shipment Regulation (WSR)**.



Clarity on the users of biomass waste and facilitating that use, in the upcoming review of the Renewable Energy Directive (RED-II).

Protect biodiversity and avoid using pure biomass for energy production; **focus on biomass waste for cement production**.



Encourage a **circular approach** in all policies.