

# SRF Developments in Europe

**Geert Cuperus**  
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LET'S  
TALK  
ABOUT  
SRF



# About ERFO

- European Recovered Fuel Organisation
- Purpose:
  - Represent European producers of fuels from non-hazardous waste
  - Promote the production and use of such recovered fuels
  - Help establish high quality standards
  - Provide a platform for exchange
- Members from BE, NL, DE, ES, FR, IT, FI, SW, GR, SI

# ERFO's involvement

- Participation in debates, works and lobbying activities related to SRF
- Involvement in EU dossiers
- Main contribution to the SRF chapter of the BREF Waste Treatment
- SRF standardisation work within CEN/TC343 and ISO/TC300
- Participation in research projects

# ERFO's platform



# About SRF

- Solid Recovered Fuel (SRF) is, a “solid fuel prepared from non-hazardous waste to be utilised for energy recovery in incineration or co-incineration plants, and meeting the requirements laid down in ISO 21640
- To be distinguished from “RDF”



# Benefits

- Flexible production and use
- Production is combined with sorting of waste
- High energy efficiency
- Co-processing: energy use + recycling of inert materials
- Reduction of CO2 emissions
- Reliable fuel

- *Various studies show: 1 ton CO2 eq saving per ton SRF*
- *Case study German powerplant: improvement of all LCA categories*

# Benefits

- Circular Economy Package
  - SRF production: part of the sorting process
  - No competition with recycling
  - Mineral recycling in co-processing
- EU Energy Strategy
  - Flexible EfW solution
  - Use in processes designed to generate heat and power
  - Use of existing infrastructure
- EU taxonomy
  - Enabler for decarbonisation of cement industry
  - Request to include SRF production



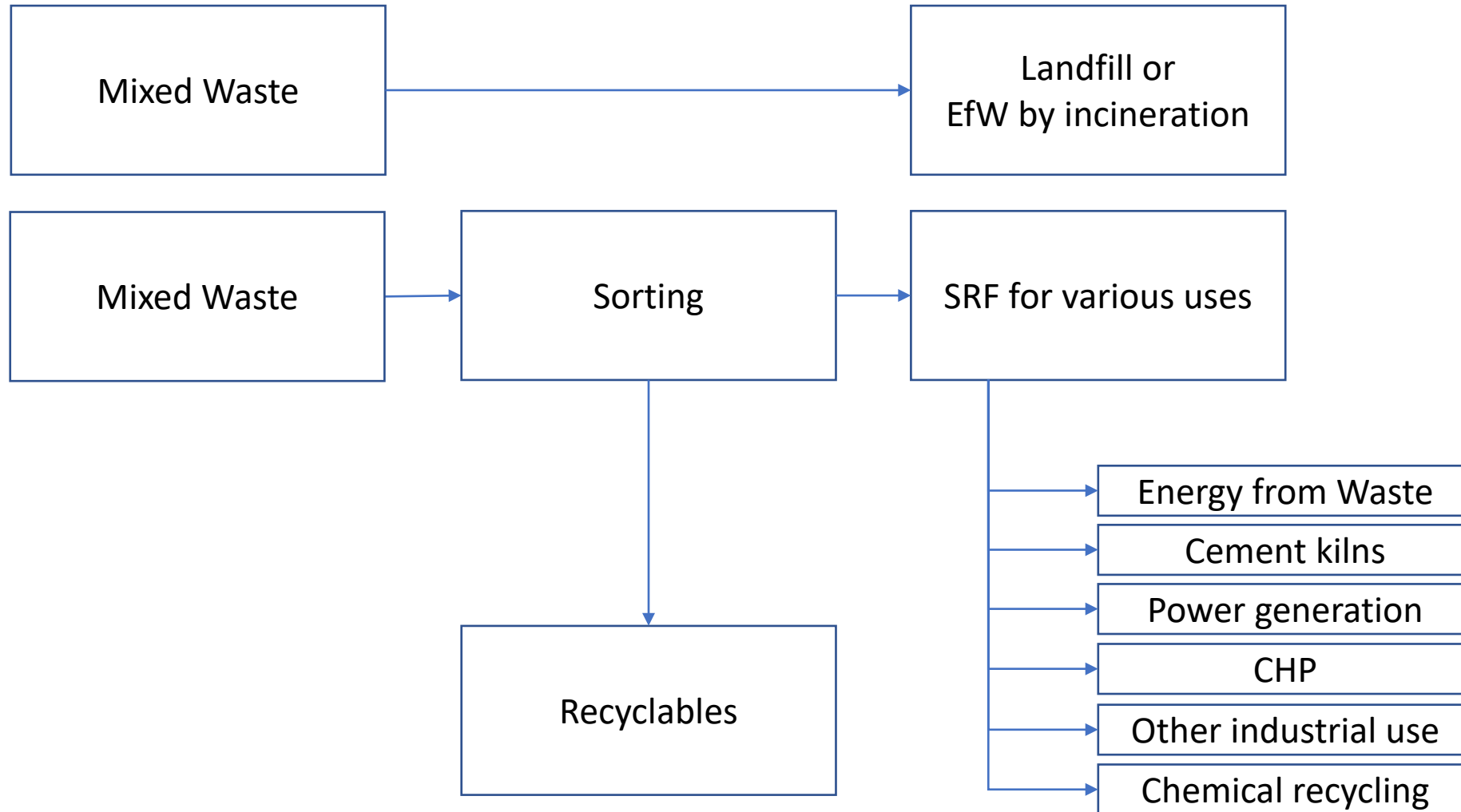
ISO/TC 300/WG 5 N 127

ISO/TC 300/WG 5 "Chemical tests and determination of biomass content"  
Convenorship: UNI  
Convenor: Ciceri Giovanni Mr



ISO 4349 - Solid Recovered Fuels — Determination of the Recycling-Index for co-processing

# The missing link





# Production and use

- Current production EU +/- 13 Mton
- More than 50% in member States where ERFO has representation
- Main use for co-processing in cement factories
- Power generation, lime and paper industry
- Industrial CHP



# Potential SRF production and use

Waste	Arising EU (Mt/year)	Assumption	Potential volume SRF (Mt/year)
MSW	213	<ul style="list-style-type: none"> <li>• 50 Mt additionally available for SRF</li> <li>• Output MBT 35% SRF</li> </ul>	17.5 (in addition to current production)
C&IW	270	<ul style="list-style-type: none"> <li>• 50% available for SRF</li> <li>• Output 15% SRF</li> </ul>	20
C&DW	630	<ul style="list-style-type: none"> <li>• 20% available for sorting</li> <li>• Output 15% SRF</li> </ul>	19

→ Appr. 60 Mton



→ Appr. 50 Mton

→ Current production +/- 13 Mton

Market	Volume	Source	Potential SRF volume(Mt/year)
Industry	3497 PJ <sup>1)</sup>	[Pardo, 2012]	12
Cement industry	522 PJ/year	[CEMBUREAU, 2013, 2015]	12
Power generation	3,13 million GWh	[Eurostat]	16
Biomass power generation	100 Mtoe	[Eurelectric, 2011]	6
District heating	815088 TJ	[Pardo, 2012]	2

# EU regulatory framework

- Communication on the role of waste-to-energy in the circular economy:
  - Four options to improve energy efficiency, two involve production of SRF
- EU-ETS
- Waste shipment regulation shipment
  - Barrier for SRF, should be on the green list
- EU taxonomy
- Landfill Directive
  - landfill targets for MSW
- Renewable Energy Directive
  - Use of SRF to produce recycled carbon fuels
- Waste Framework Directive
  - Fuel production as recycling?

# An outlook for SRF

- IEA confirms:
  - SRF is well characterised for its properties
  - Really complementary to recycling
- EIB study 2024 confirms:
  - Current uptake of RDF is lower than amount of RDF generated
  - Potential end-users are concerned about inconsistent quality of RDF compared to standardised fuel (= SRF)
  - This results in continued use of fossil fuels

# An outlook for SRF

- SRF as part of the solution is overlooked in many Member States, some positive signs though
- Landfilling is preferred option in large parts of the EU
- In some Member States direct incineration competes
- Difference between SRF and RDF not always appreciated
- Thermal substitution rate co-processing in the EU is 52%, potential for increase
- In some Member States: increasing appreciation of SRF concept
- End-of-waste status in some Member States
- Chemical recycling as future option

# An outlook for SRF

**AN IMPORTANT PIECE OF THE  
WASTE MANAGEMENT PUZZLE!**





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