

# Market analysis of recycled sands and aggregates in North-West Europe: drivers and barriers

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Project Interreg NWE SeRaMCo

The study is performed in the framework of the project SeRaMCo



## Secondary Raw Materials for Concrete Precast Products

(in progress: 2017 → 2020)

### Objective

Increase the use of CDW as secondary raw materials for **cement** and **concrete precast products**



Total budget received from Interreg North-West Europe (2014-2020):

**€4.37 million of ERDF**

Total project budget:  
**€7.28 million**

[www.nweurope.eu](http://www.nweurope.eu)

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Recycling construction and demolition waste accounts for 8% of the total generated aggregates in the EU

**2.7 billion tonnes of aggregates** generated in the EU28+EFTA in 2016 (UEPG, 2018)

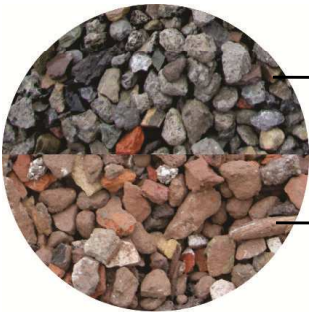
**Natural origin**

47.4% crushed rock    40.3% sand & gravel



**Recycled origin**


8% recycled (220 million tonnes)



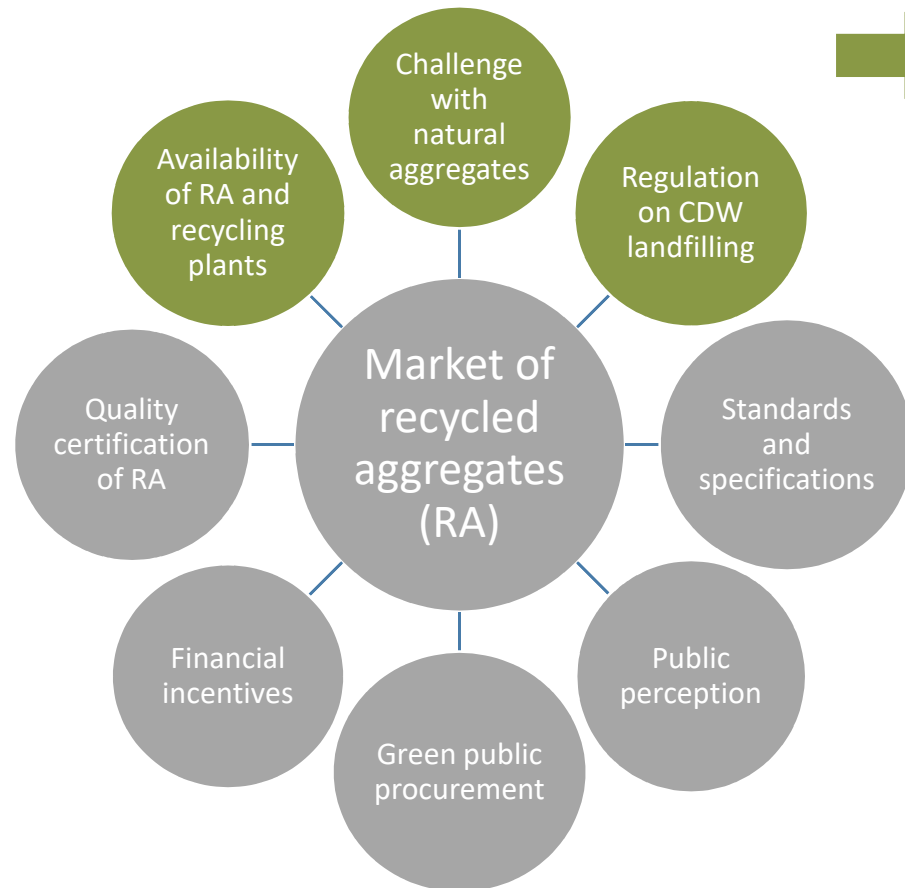
Concrete

Mixed

Construction & demolition wastes (CDW)



The market of recycled aggregates may be influenced by many parameters



## Focused parameters in NWE



### Difficulties:

- some national statistics are not available or not directly comparable
- market of RA is influenced by local and regional contexts



# Recycling and re-use of CDW is developed in NWE



## European Waste Framework Directive (2008/98/EC):

*“A minimum of 70% of the generated non-hazardous CDW (excl. excavated soils and stones) must be re-used or recycled by 2020”.*

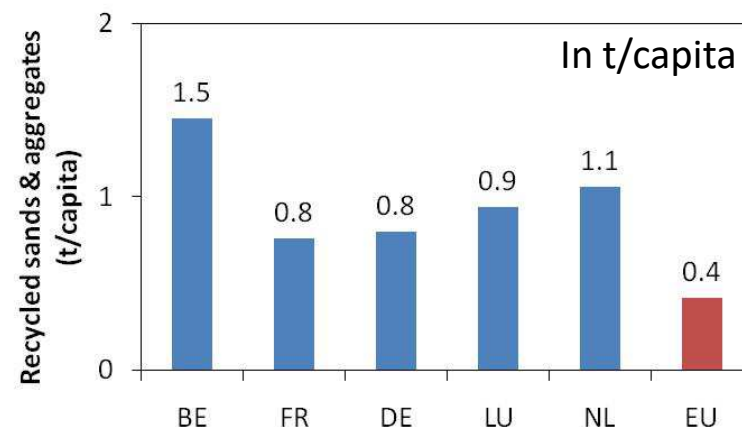
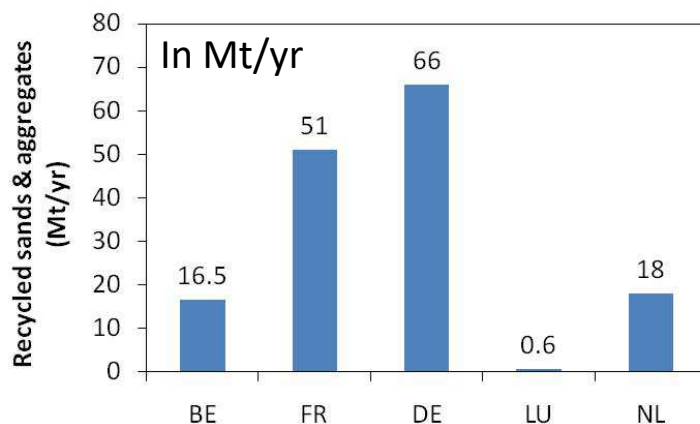


The objective is already reached by the investigated NWE countries



In 2016, NWE countries generated almost **60%** of the recycled aggregates produced by the EU-28 (UEPG, 2018)

In terms of production:



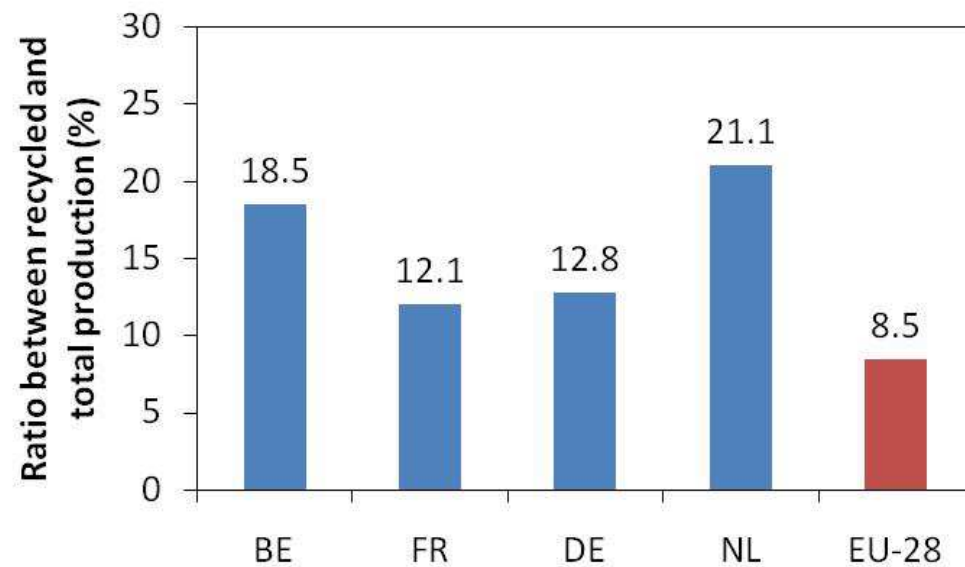
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# Challenge with primary raw materials

In 2016, NWE countries generated almost **40%** of the natural sands & aggregates produced by the EU-28 (UEPG, 2018)



Percentage of recycled sands and aggregates compared to the total production



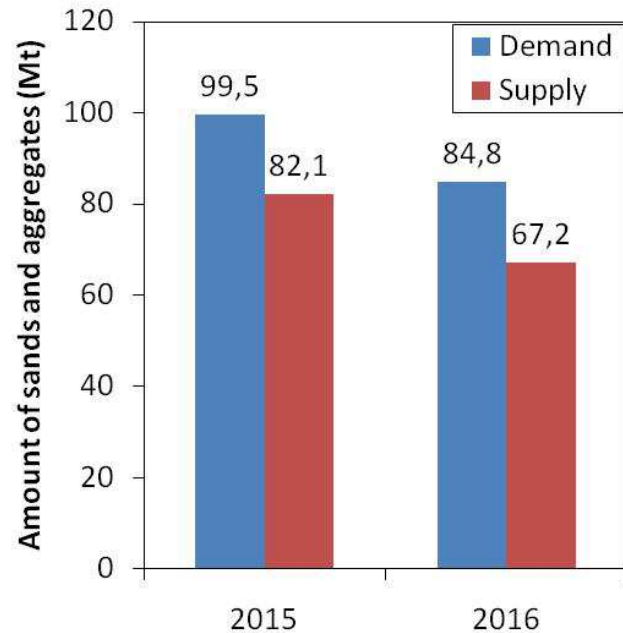
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# Favourable market context for recycled aggregates in the Netherlands

Demand vs supply for sands and aggregates:

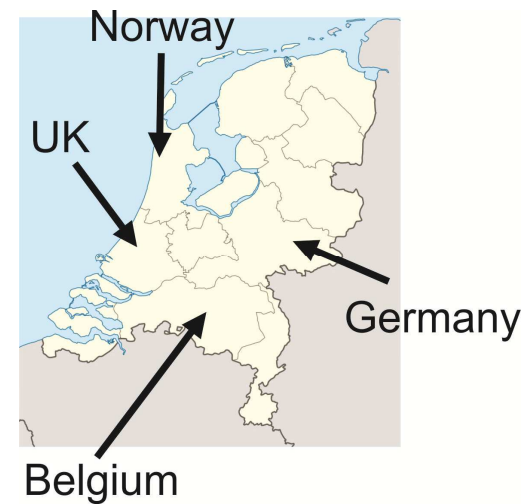


## Demand higher than supply

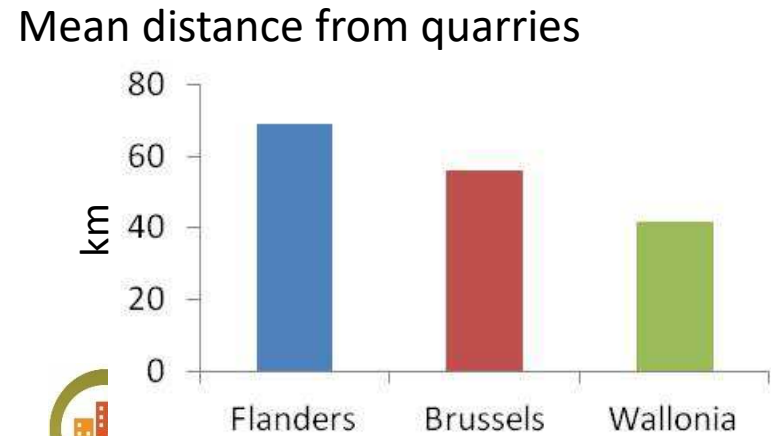
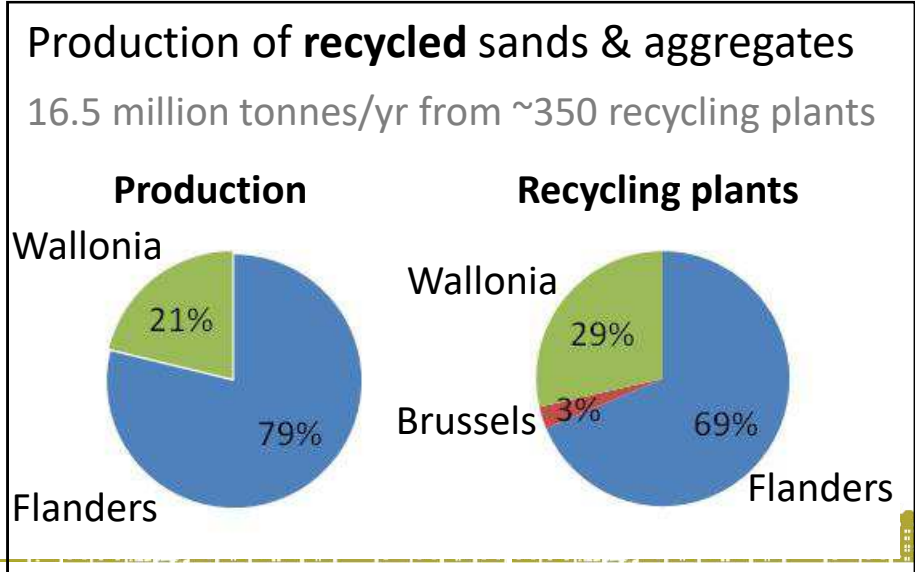
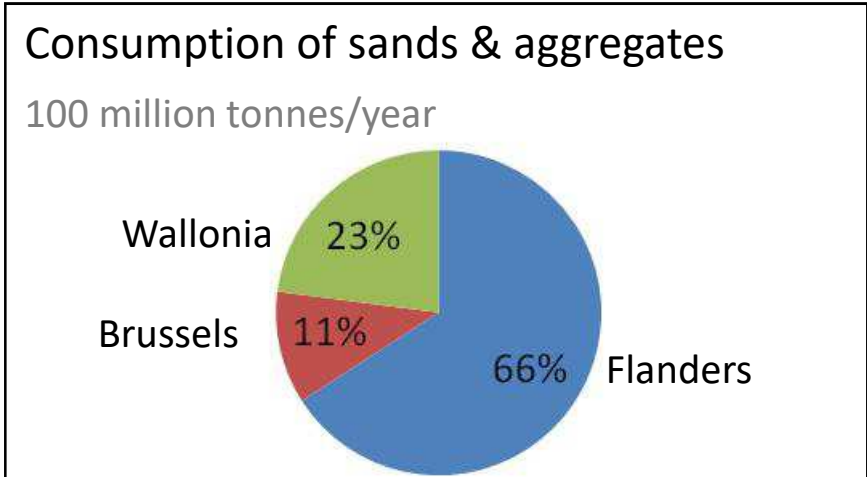
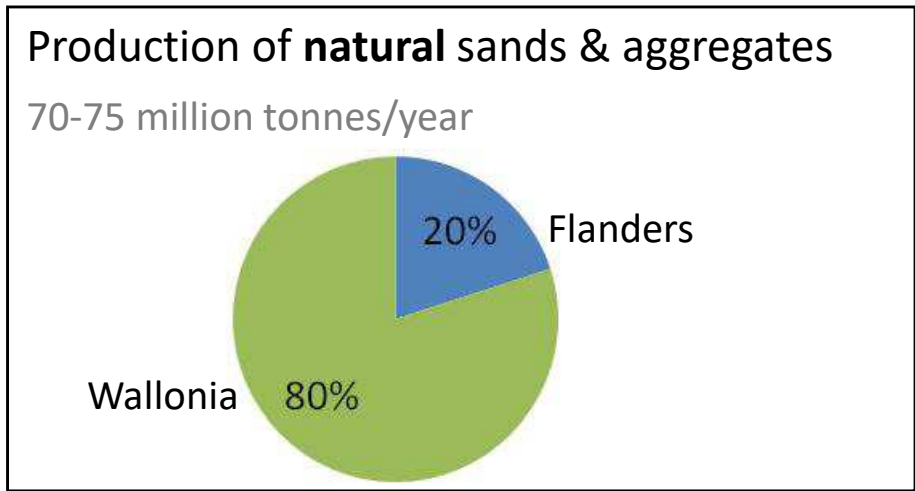
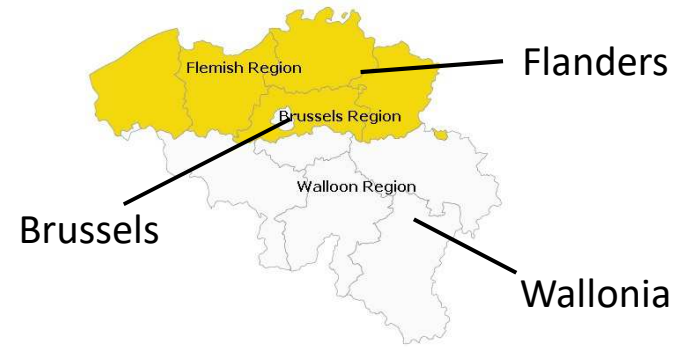
Imports represent 20% of the demand in sands and aggregates

## Lack for coarse aggregates

70% (10-11 Mt) are imported every year



# Regional disparities in Belgium



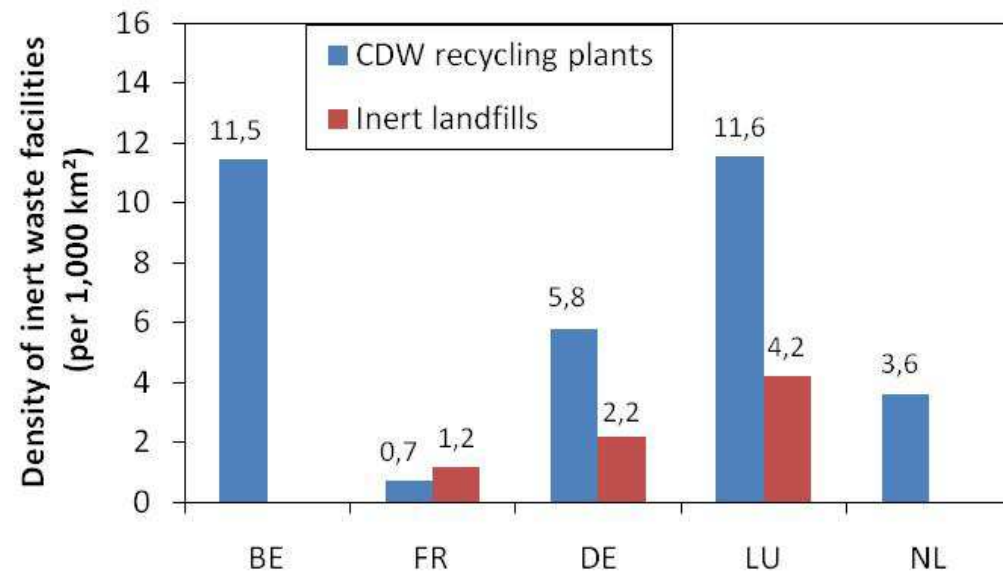


# Inert waste landfilling: availability and legislation

- **NL** and **BE**: ban for inert waste landfilling
- **DE** and **LU**: < 5% (high landfilling taxes, many recycling plants available)
- **FR**: ~15-20% (more inert landfills than fixed recycling facilities)



The cost for 1 tonne of aggregates may double every 30 km by road



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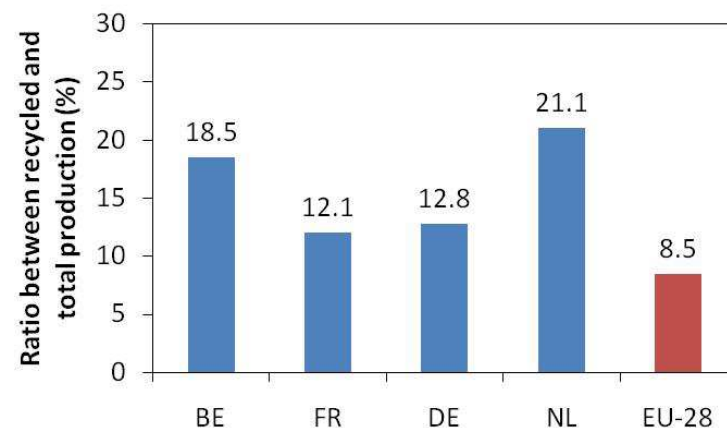
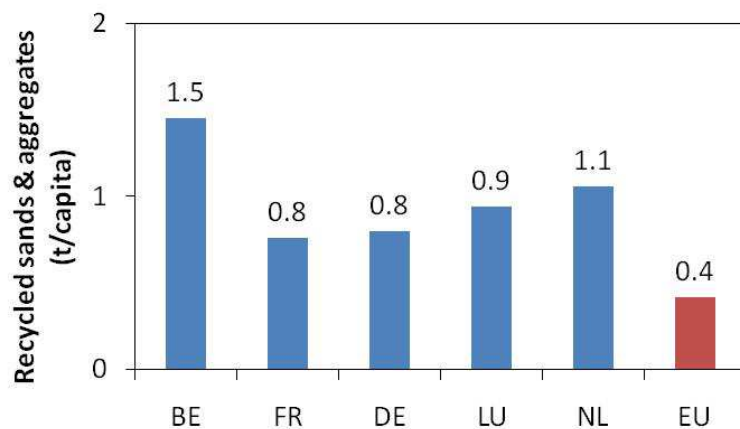
# Conclusions

Based on a **quantitative analysis**:

Investigated **NWE countries possess an extensive network of CDW treatment facilities** despite the abundance of primary raw materials

Countries where **the market of recycled sands and aggregates seems the most suitable are the Netherlands and Belgium** (mainly Flanders) characterized by:

- lack of available local natural rocky materials
- favourable legislation
- developed network of recycling facilities



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# Thank you for your attention

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