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COLACEM  
forte • sostenibile

  
**SYMBI**  
Interreg Europe



European Union  
European Regional  
Development Fund

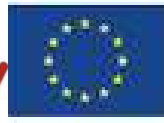
***“How to stimulate secondary raw material  
markets in the cement production”***

**ING. MASSIMO GIACCARI**  
**Sesto Campano's Plant Director - Colacem S.p.A.**

20/21 March 2018/ 3<sup>rd</sup> Interregional Workshop



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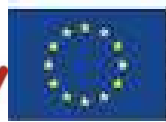


## Colacem: who we are





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## Colacem worldwide



1 CANADA

2 HAITI

3 DOMINICAN REPUBLIC

4 JAMAICA

5 SPAIN

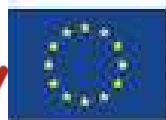
6 TUNISIA

7 ITALY

8 ALBANIA



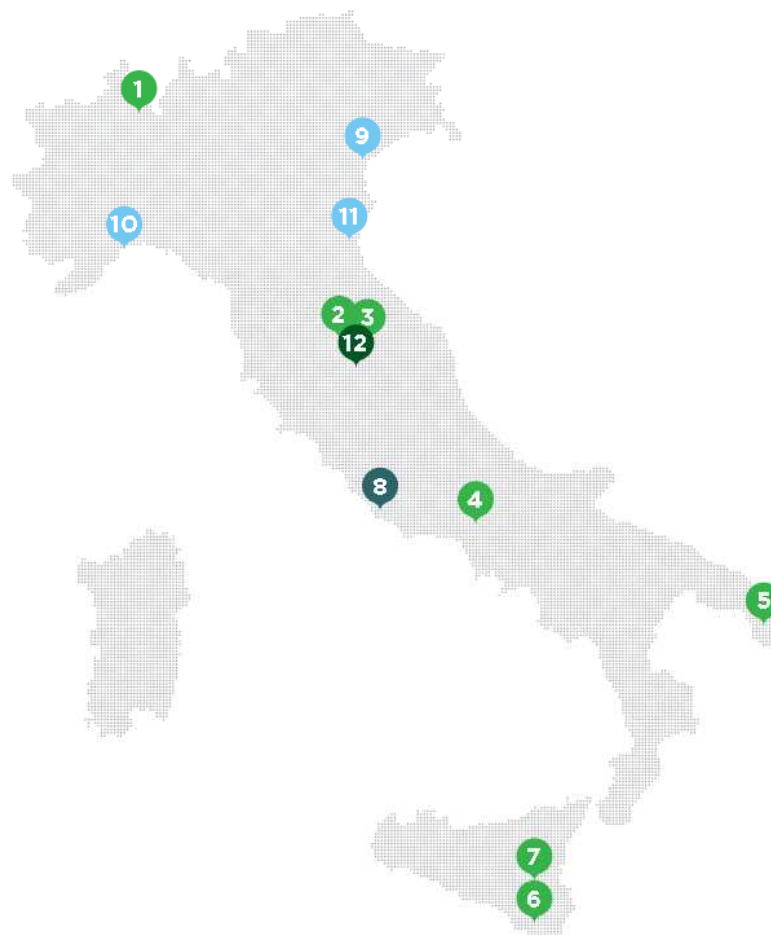
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## Colacem in Italy



### Stabilimenti Italiani a ciclo completo per la produzione di cemento

- 1 Caravate VA
- 2 Rassina AR
- 3 Ghigiano di Gubbio PG
- 4 Sesto Campano IS
- 5 Galatina LE
- 6 Ragusa
- 7 Modica RG

### Altri stabilimenti produttivi

- 8 Salone di Roma, per la produzione di predosati

### Terminal portuali

- 9 Mestre VE
- 10 Savona
- 11 Ravenna

### Direzione Generale

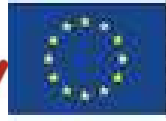
- 12 Gubbio PG

## What is cement?





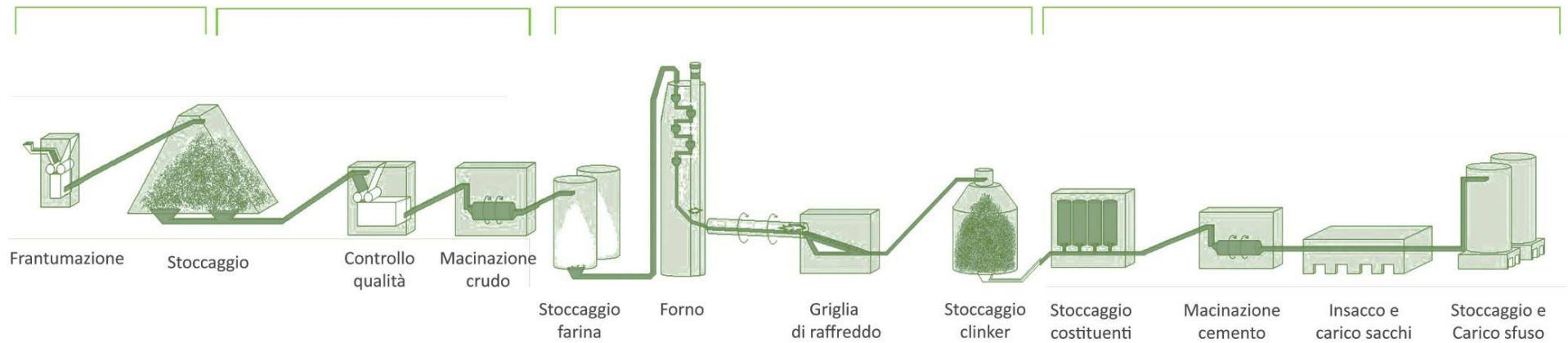
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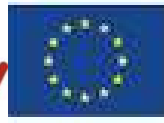


## The production process





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## How to reduce environmental impact

**Natural raw  
materials**



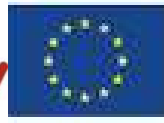
**Industrial  
Symbiosis**







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## Environmental Restoration Monte Castellone Quarry – Ciorlano (CE)

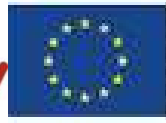


**The use of some natural resources is still necessary**





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## Replacement of natural raw materials



- **Natural resources protection**
- **NO landfills**

## Chemical Gypsum



- **Origin:** thermo-electric power stations fume desulphurization process
- **Replaces:** natural gypsum



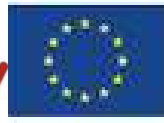
## Bottom ash



- **Origin:** biomass combustion process and waste incineration
- **Replaces:** clay, for its silica, aluminum and iron content



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## Flying ash

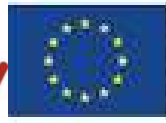


- **Origin:** power plants hard coal combustion process
- **Replaces:** natural pozzolana





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## Mill scales



- **Origin:** iron rolling process
- **Replace:** clay, for the iron oxides content

## Spent foundry sands



**Origin:** foundries melting process

**Replace:** natural sand



## Sludge and dust deriving from stone, marble and slate processing



**Origin:** marble extraction and cutting process

**Replace:** limestone

## Excavated soil and rock



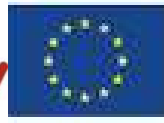
**Origin:** earth moving works or excavations

**Replace:** limestone and clay





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## CSS: waste used as fuel

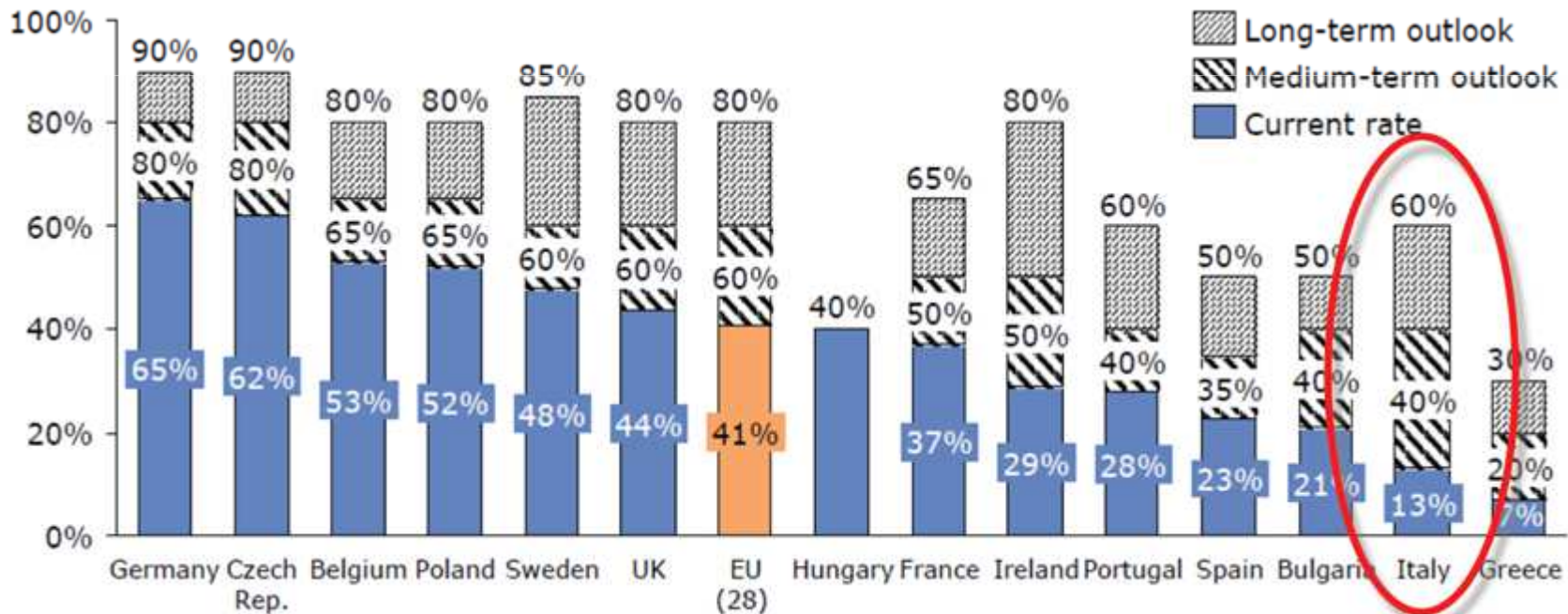


**Origin:** downstream portion of SUW separate collection

**Replaces:** fossil fuels

## CSS: we are ranked amongst the worst performers in Europe

### TSR in Europe – ECOFYS STUDY 2017 (baseline 2014)



## Material recovery in Sesto Campano

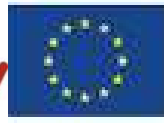


### 2016 data

- **4 %** replacement of natural raw materials
- **25 %** replacement of fossil fuels



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More should need to be done

Goals are clear, technologies are very advanced,  
laws have been enforced, but...

**NIMBY**

Not In My Back Yard

**NIMTO**

Not In My Terms of Office









***Thanks for the attention ...***

***ING. MASSIMO GIACCARI***  
***Sesto Campano's Plant Director - Colacem S.p.A.***

