EPD of ceramic tiles
Andrea Contri
Confindustria Ceramica
82% of the production in the Sassuolo Ceramic District

92% of the production in the Emilia Romagna Region
## THE ITALIAN CERAMIC INDUSTRY - 2017

<table>
<thead>
<tr>
<th>Product</th>
<th>Companies (unit)</th>
<th>Employees (unit)</th>
<th>Turnover (million €)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceramic Tile</td>
<td>145</td>
<td>19.515</td>
<td>5.546</td>
</tr>
<tr>
<td>Sanitaryware</td>
<td>33</td>
<td>3.118</td>
<td>353</td>
</tr>
<tr>
<td>Tableware</td>
<td>10</td>
<td>705</td>
<td>51</td>
</tr>
<tr>
<td>Refractory</td>
<td>34</td>
<td>1.808</td>
<td>-0.4%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>222</strong></td>
<td><strong>25.146</strong></td>
<td><strong>-</strong></td>
</tr>
</tbody>
</table>
Form More than 40 years the ceramic tiles district have face sustainability.

Which results and levels of performances did we reach?

How sustainability have change our product and production?
A sustainable production

The investments done by Italian ceramic tiles industries have been recognised and taken as a reference from the European Commission to define the European Best Available Techniques (BAT).
Italian ceramic tiles has anticipate and understand the needs of the green building community having sustainability as a milestone of product and production's innovation processes.
A SUSTAINABLE PRODUCTION

99.3% of production and purification waste is reused in the production cycle

Average recycle rate > 129%

Recycling of materials from other industries
Pre-consumer + post-consumer
- piastrelle super sottili (3-5 mm)
- lastre giganti (3x1 m)
Unlike other industrial sectors, the ceramic tile industry is capable of reabsorbing the majority of its production and purification waste.
A SUSTAINABLE PRODUCTION

Between the 1980s and the year 2000, Italian tile production almost doubled while CO2 emissions more than halved.
Industrie produttrici di piastrelle di ceramica
Fattori di impatto e prestazioni ambientali
Aggiornamento dati 2015

Presentazione del Rapporto Integrato 2010-2015
a cura di Rossano Resca – Centro Ceramico
Sassuolo, 13 Novembre 2017
INVESTMENTS: innovation and efficiency for a global competition

In 2017 investments equal to 515 M€ (9.3% of total turnover)
In the last years we italian ceramic tiles have reached new characteristics and functionality. Quality, beauty, design and sustainability deem Italian ceramic tiles.
Mubadala Building, Abu Dhabi (EAU)
Ventilated facades
Energy efficiency
LCA Total flooring
(Overall environmental impact)

- porcelain stoneware tiles made in Italy: 10.4
- parquet: 15.3
- moquette: 23.7
- marble: 53.4
- resin: 66.5
- linoleum: 92.2
The LCA data were collected in 2014 within the members companies of the association.

This study has involved, as primary data 76 companies and 84 plants, that represent 82,6% of the Italian ceramic tiles production.

The final results are rappresentative of Confindustria Ceramica's member companies.
TRANSPARENCY COMMUNICATION

INDUSTRY WIDE EPD
RESULTS

A1-A3 are the modules with the majority of the impacts. Overall, most of the impact categories are dominated by energy processes and raw materials consumption for ceramic mixtures.

Global warming potential (GWP), into A1-A3 modules, is generated by energy process for 70% and by raw materials for 18%.

Energetic consumption impact also on abiotic fossil depletion (ADPEf) for about 61%.

The ozone layer depletion (ODP) is driven by the raw materials extraction for 37%, 33% by energy (mainly electricity) and 16% by the glazes.
MUTUAL AGREEMENTS

ENVIRONMENTAL PRODUCT DECLARATION
ITALIAN CERAMIC TILES

For more than 30 years the Italian ceramic tiles industry has been pursuing a policy of sustainable development, from selection of raw materials through to the production of products certified in accordance with the strictest international standards. It uses increasingly high-performance and efficient manufacturing systems capable of completely recycling waste, significantly reducing water consumption and emissions, using energy more efficiently and maintaining a commitment to social responsibility towards people and the planet.

This means that the Italian ceramic tiles sold to consumers and architects all over the world incorporate values of environmental sustainability, values that the Italian ceramic tiles producers have the same importance as the safety, functionality, aesthetics and resilience of Italian products.

Confindustria Ceramica, the association of Italian ceramics, developed this industry-wide EPD representative of the production of its member companies.

This EPD is representative of average Italian ceramic tiles and panels manufactured by Confindustria Ceramica’s member companies.
WE ALWAYS GO FURTHER...
ISO TC189 WG7: sustainability issues for ceramic tiling systems

Scope:
- Sustainability indicators (LCA based)
- Measurement and calculation methods
- Requirements and reference assessment values
- Assessment schemes

Objective:
- quantitatively identify, assess and compare sustainable materials

Main criteria for sustainable products:
- Environmental criteria
- Economic and functional criteria
- Social criteria
THANK YOU!

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