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Eco-Mortar 2.0: a new generation of eco-friendly and durable high thermal performance rendering solution for EU building retrofitting

One of the priorities of the 2030 Agenda is to achieve a sustainable development path to balance environmental, social and economic needs for present and future generations. The United Nations Sustainable Development Goals (SDGs) are the blueprint to achieve a better and more sustainable future. The Green Deal is the roadmap for implementing the 2030 Agenda and the SDGs in all European policies. In this context, the European construction industry faces great challenges that need real solutions. It is clearly a sector with an unsustainable environmental profile that will need to overcome the traditional linear path of production and consumption to adopt a **Circular Economy** model and **Energy Efficient** solutions.

In this context, the **Eco-Mortar 2.0** project aims to develop an eco-friendly, durable and high-performance thermal insulating rendering mortar and wall panels by applying a combination of various wastes from other industries (ornamental rocks, textile and cork industries) and nano-structured material.

IST leads the **Eco-Mortar 2.0** project, which has been approved by the European Commission and funded by the Action ”HORIZON TMA MSCA Postdoctoral Fellowships”, supporting María Concepción Pacheco Menor’s research during her stay at CERIS, Department of Civil Engineering, Architecture and Environment, Instituto Superior Tecnico, Universidade de Lisboa, Portugal. Supervisors Jorge de Brito and Inês Flores-Colen.

The first results of the research suggest that the diabase sludge can be used as a replacement for cement in mortars or panels, mainly due to its size and pozzolanic characteristics. This finding provides a glimpse of a new supplementary cement material (SCM) from waste as a novel alternative for the mortar industry.

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