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INTERSECTORIAL REUSE OF WASTE AND SCRAPS FOR THE PRODUCTION OF BUILDING PRODUCTS: STRATEGIES AND VALORIZATION OF WASTE

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Abstract

The European Commission has introduced a whole range of policies and initiatives to promote the product eco-innovation and the environmental impacts reductions. One of the key topic for the reduction of the environmental impacts is the waste recycling and reuse (turning waste into useful resources). A teamwork of Politecnico di Milano has developed a research work, still ongoing and continuously updated, called “*The usefulness of the useless. Cross-sectorial evaluation of waste in construction*” which regards the possible reuse of pre-consumer scrapes/waste, deriving from various sectors, as secondary raw materials for the supply chains of the building sector. The goals of research work are the identification of the chains with high production of pre-consumer waste and scraps, the classification of these wastes by typology, the definition of scenarios for the reuse/valorization of the identified waste and the improvement of the environmental profile of products through an integration of recycled content. The research starts from the study of the most significant supply chains inside various sectors, analyzing the input/output and defining typologies and characteristics of waste/scrapes. To simplify the identification of recycling scenarios, the supply chains and related typologies of scraps have been classified according to a typical Italian filing system code. Then the data have been collected in a matrix used to identify feasible strategies and scenarios for the valorization of waste (this represent the first result of the work). The same matrix is also useful for public and private stakeholders for pursuing strategies aiming to the generation of positive externalities, at local and at global level. The next step is the proposal of new products deriving from the waste/scrapes collected during the first phase.

Key words: eco-innovative supply chain scenarios, intersectorial analysis, pre-consumer recycling, product eco-innovation, waste valorization

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