

Formulation of Aggregates Based on Dredged Sand and Sediments

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Abstract : Nord Pas de Calais is one of the French regions that records a large volume of dredged sediment in harbors and waterways. To ensure navigation within ports and waterways, harbor and river managers are forced to find solutions to remove sediment that contamination levels exceed levels established by regulations. Therefore, this non- submersible sediment must be managed on land and will be subject to the waste regulation. In this paper, some examples of concrete achievements and experiments of reusing dredged sediment in civil engineering and sector will be illustrated. These achievements are alternative solutions to sediment landfilling and guarantee the reuse of this material in a logic of circular economy and ecological transition. It permits to preserve the natural resources increasingly scarce and resolve issues related to the accumulation of sediments in the harbor basins, rivers, dams, and lakes, etc. Examples of beneficial use of dredged material illustrated in this paper are the result of different projects reusing harbor and waterways sediments in several applications. These projects were funded under the national SEDIMATERIAUX approach. Thus the technical and environmental feasibility of the reuse of dredged sediment is demonstrated and verified; the dredged sediment reusing would meet multiple challenges of sustainable development in relation to environmental, economic, social and societal.

Keywords : circular economy, sediment, SEDIMATERIAUX, waterways

Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020