



Flood Resilient Technological Products

J.J. Diez Gonzalez (1), J.V. Monnot (1), P. Marquez Paniagua (1), P. Pámpanas (2), S. Paz Abuín (3), P. Prendes (3), O. Videra (2), and U.P.M. SMARTeST team ()

(1) Universidad Politécnica de Madrid - Spain, (2) SIKA, (3) Gairesa

As a consequence of the paradigm shift of the EU water policy (Directive 2007/60/EC, EC 2003) from defense to living with flood, floods shall be faced in the future through resilient solutions, seeking to improve the permanence of flood protection, and getting thus beyond traditional temporary and human-relying solutions.

But the fact is that nowadays “Flood Resilient (FRe) Building Technological Products” is an undefined concept, and concerned FRe solutions cannot be even easily identified.

“FRe Building Technological materials” is a wide term involving a wide and heterogeneous range of solutions. There is an interest in offering an identification and classification of the referred products, since it will be useful for stakeholders and populations at flood risk for adopting the most adequate protections when facing floods. Thus, a previous schematic classification would enable us at least to identify most of them and to figure out autonomous FRe Technological Products categories subject all of them to intense industrial innovative processes.

The flood resilience enhancement of a given element requires providing it enough water-repelling capacity, and different flood resilient solutions can be sorted out: barriers, waterproofing and anticorrosive. Barriers are palliative solutions that can be obtained either from traditional materials, or from technological ones, offering their very low weight and high maneuverability. Belonging barriers and waterproofing systems to industrial branches clearly different, from a conceptual point of view, waterproofing material may complement barriers, and even be considered as autonomous barriers in some cases. Actually, they do not only complement barriers by their application to barriers' singular weak points, like anchors, joints, but on the other hand, waterproofing systems can be applied to enhance the flood resilience of new building, as preventive measure. Anticorrosive systems do belong to a clearly different category because their function do not consist in repelling water, but in preventing damages caused by the watery contact. Finally, others preventive flood resilient technologies could also be considered, since forecasting, near-casting and warning alert are solutions getting more and more involved in flood resilience strategies.