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Sommario/riassunto With its wide spectrum of data, case studies, monitoring, and

experimental and numerical simulation techniques, the

multidisciplinary approach of material, environmental, and computer science applied to the conservation of cultural heritage offers several opportunities for the heritage science and conservation community to map and monitor state-of-the-art knowledge on natural and human-induced climate change impacts on cultural heritage-mainly

constituted by the built environment-in Europe and Latin America. Geosciences' Special Issue titled "Preservation of Cultural Heritage and Resources Threatened by Climate Change" was launched to take stock of the existing but still fragmentary knowledge on this challenge, and to enable the community to respond to the implementation of the Paris agreement. These 10 papers exploit a broad range of data derived from preventive conservation monitoring conducted indoors in museums, churches, historical buildings, or outdoors in archeological sites and city centers. Case studies presented in the papers focus on a well-assorted sample of decay phenomena occurring on heritage materials (e.g., surface recession and biomass accumulation on limestone, depositions of pollutant on marble, salt weathering on inorganic

building materials, and weathering processes on mortars in many

local- to regional-scale study areas in the Scandinavian Peninsula, the United Kingdom, Belgium, France, Italy, Greece, and Panama). Besides monitoring, the methodological approaches showcased include, but are not limited to, original material characterization, decay product characterization, and climate and numerical modelling on material components for assessing environmental impact and climate change effects.