# PRESERVATION BASED ON A RISK MANAGEMENT APPROACH: AN APPLICATION FOR THE CONTROL OF POLLUTANTS IN MUSEUMS.

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ABSTRACT - Over the last few decades, many observations on the impact of airborne pollutants on materials in museums and laboratories have provided a better understanding of potential interactions and their kinetics. At the same time, the risk management field has developed new approaches in evaluating risks. The combination of these two sciences has provided valuable tools for collections preservation assessment and for the development of strategies and policies to counter pollution in the context of heritage institutions. These tools, such as the concepts of No Observed Adverse Effect Level (NOAEL) and Lowest Observed Adverse Effect Dose (LOAED), can be used by decision makers to help them choosing the optimal degree of preservation of their collections according to preservation policy, value of the collection and their resources. This allows an alternative to previous rigid environmental standards. The new approach can be applied to only one agent of deterioration in isolation, or in context with other agents. The degree of preservation targeted for the collection against these agents is expressed as the rate, or the magnitude of risk, of deterioration. Based on the LOAED concept, a set of preservation indicators is proposed to quantify the overall preservation of the collection.