Preventive Conservation in Historic Houses and Palace Museums: Assessment Methodologies and Applications

SilvanaEditoriale

## Preventive Conservation in Historic Houses and Palace Museums: Assessment Methodologies and Applications

Conference of the National Museum of the Palace of Versailles (EPV), the Association of European Royal Residences (ARRE), and the Research Centre of the Palace of Versailles (CRCV)

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## International Environmental Guidelines and Collections in Historic Houses and Palace Museums

### Abstract

This paper will examine the reasons why international environmental guidelines for museums are not appropriate for collections on display in historic buildings and if implemented will lead to atmospheric conditions that are likely to cause damage to the structure of the building. Since the mid-20th century, recommended conditions for temperature and relative humidity for museum collections have become closely defined and have been determined more by the need for human comfort and what can be achieved by HVAC (heating, ventilating and air-conditioning systems) than what will reduce the rate at which collections deteriorate.

In 2014 IIC and ICOM-CC published environmental guidelines with a number of statements including the need to better understand the complexities of the relationship between the museum environment and the deterioration of collections, and the need to reduce the carbon footprint of museums. The following year the international Bizot Group of museum directors published the Bizot Green Protocol which broadened the environmental specification recommended for international museum exhibitions to 16-25 °C and 40-60% RH with fluctuations of no more than plus/minus 10% RH in 24 hours.

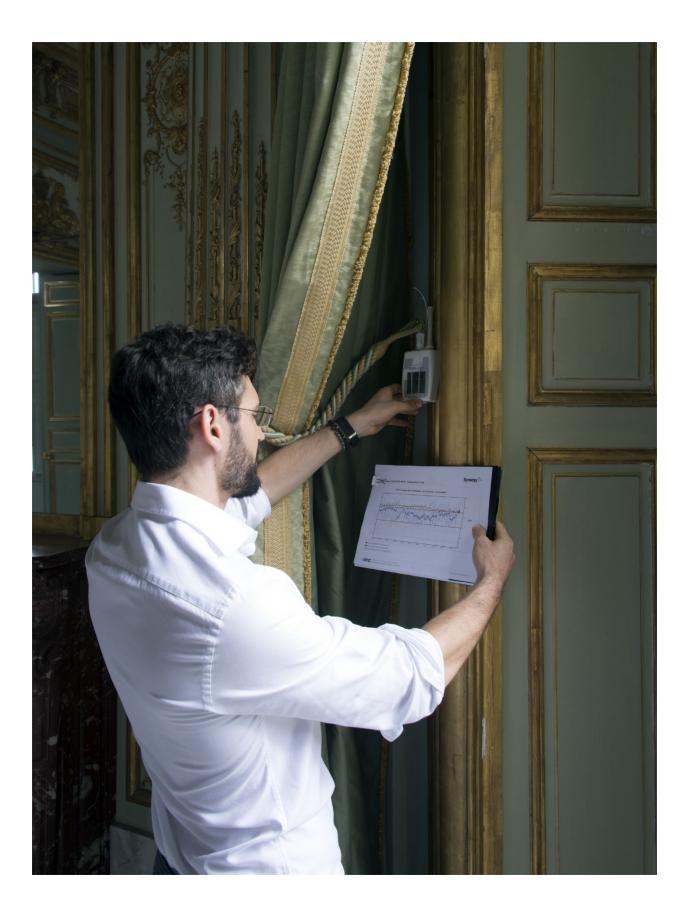
The IIC/ICOM-CC guidelines state that care of collections should be achieved in a way that does not assume the need for air-conditioning. This is particularly relevant for collections housed in historic buildings since the introduction of the plant and ductwork needed for air conditioning systems may damage the fabric of the building. There are also risks associated with changing vapour pressure inside the building compared with the outside by humidification and dehumidification which can result in moisture movement drawing salts through the structure or water condensing in cold spots.

This paper will propose that by broadening temperature specifications, environmental conditions can be achieved that minimise deterioration of collections by limiting fluctuations in relative humidity using passive and low energy methods of climate control (fig. 1).

#### Sarah Staniforth

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*Fig. 1* Climate monitoring of the French Pavilion, Trianon estate, Palace of Versailles. (© EPV/ Didier Saulnier)



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