

Preface

The international heritage building is of great importance, justifying the need to safeguard it from extreme climatic phenomena such as floods and moisture degradation. For historical reasons, the most prestigious buildings were built near the natural water lines and are possibly threatened by the flood phenomenon.

Climate changes due to global warming have revealed an increasing vulnerability of urban and rural territories to the risk of flooding. It is therefore necessary to adopt preventive measures to control, minimise and mitigate these adverse effects, avoiding catastrophic consequences.

The subject of this book is to present a critical review of a criterion of risk, created to assess the flood risk of the international heritage building. In order to evaluate this criterion, it was applied to a sample of Portuguese building heritage. In a first approach, only a reduced number of parameters were adopted and grouped in two different groups of parameters: the monument location in relation to a waterway, and the behaviour of its construction material when in contact with water.

The main benefit of the book is that it discusses the importance of architectural heritage and justifies the need to safeguard it from extreme climatic phenomena such as floods. The book alerts, one more time, the scientific community that the intensification of the global warming, climate change will worsen throughout the twenty-first century. It is therefore necessary to adopt preventive measures to minimise, mitigate and control these adverse effects, avoiding catastrophic consequences.

At the same time, this book will be going to the encounter of a variety of scientific and engineering disciplines, such as civil and architecture. The book is divided into several chapters that intend to be a synthesis of the current state of knowledge for benefit of professional colleagues.

The authors would acknowledge with gratitude the support received from the University of Porto-Faculty of Engineering, Portugal, namely the Laboratory of Building Physics (LFC). Finally, the authors would welcome reader comments, corrections and suggestions with the aim of improving any future editions.

João M.P.Q. Delgado
Ana Sofia Guimarães
Vasco Peixoto de Freitas

Hygrothermal Risk on Building Heritage

A Methodology for a Risk Map

Delgado, J.M.P.Q.; Guimarães, A.S.; de Freitas, V.P.

2015, XII, 60 p. 35 illus., 1 illus. in color., Softcover

ISBN: 978-3-319-19113-3