

ANNALS OF GEOPHYSICS

FOREWORD

Since the origin of humanity volcanism and human life have been strictly linked to each other. Despite the hazards posed by volcanoes, humans have always found good reasons for settlement and development around them, at least in temperate zones, because of high soil fertility or for the presence of ore deposits and the abundance of volcanic rocks that are good building materials.

Evidence from archaeological excavations demonstrates that volcanic and related phenomena often have strongly conditioned human life, causing environmental changes, forcing people to abandon their settlements, and preparing the conditions for later recolonization and soil exploitation during phases of quiescence.

The Mediterranean region is one of the most impressive examples of this interaction, where the development of civilization has been repeatedly boosted and hindered, throughout prehistory and history.

Nowadays, as demonstrated by the 2010 Eyjafjallajökull eruption (Iceland), the impact of even moderate scale eruptions is amplified by the increasing vulnerability of modern society related to growing population, rising standard of living, settlement and industrialization of very exposed regions, and complex interdependencies in commerce, including transport and trade systems at a global scale.

This special volume of Annals of Geophysics originates from the workshop *Explosive eruptions and the Mediterranean civilization through prehistory and history*, held in the island of Ustica from 12 to 16 September 2017¹. Its main goal was to promote cultural exchange and interaction among diverse disciplines, so to enhance our knowledge of the relationships between volcanism, environment and human communities, and exhibit and spreading the best practice of scientific culture dissemination about explosive volcanism.

Consistently with these intentions, the contents of the contributions presented at the workshop, most of which are included in this volume, address the following main topics:

- Characteristics of explosive volcanic activity in the Mediterranean basin;
- Petrochemical and geochronological studies on the products of the eruptions;
- Paleo-environmental reconstructions of ancient eruptions with evaluation of their impact on nature and human settlements;
- Search for indicators of vulnerability and risks associated with volcanic activity, with particular attention to densely populated or touristic areas;
- Characterization of volcanic rocks used as lithic tools and building materials in prehistoric and historical times, with archaeometric methods.

We hope that the fruitful interdisciplinary debate developed during the workshop, with the participation of geologists, geophysicists, engineers, archaeologists and experts in scientific communication, can continue and extend thanks to the publication of these contributions.

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¹THE ABSTRACTS OF ALL THE CONTRIBUTIONS PRESENTED AT THE WORKSHOP HAVE BEEN PUBLISHED IN MISCELLANEA INGV, NO. 37, 2017, PP. 90. AVAILABLE ONLINE AT: [HTTP://ISTITUTO.INGV.IT/IT/LE-COLLANE-EDITORIALI-INGV/MISCELLANEA-INGV.HTML](http://istituto.ingv.it/it/le-collane-editoriali-ingv/miscellanea-ingv.html).