

# REPORT(H)A

PORTUGUESE NETWORK  
OF ENVIRONMENTAL HISTORY

**IV MEETING OF REPORT(H)A**

***SAPIENS, HEALTH AND ENVIRONMENT***

***Natural and Artificial Frontiers***

***October 14th to 16th 2021***

# BOOKLET

**Program & Abstracts**



## Introduction

O **Centro de História da Sociedade e da Cultura (CHSC)**, em parceria com o **Instituto de Investigação Interdisciplinar da Universidade de Coimbra (iii- UC)** e o **Centro de Ecologia Funcional (CFE)** têm a honra de acolher e convidá-lo para IV Encontro da REPORT(H)A - Rede Portuguesa de História Ambiental, entre 14 e 16 de outubro de 2021.

O encontro adota, numa perspetiva interdisciplinar, o título **Sapiens, Saúde e Meio Ambiente - Fronteiras Naturais e Artificiais**

The Centre for History of Society and Culture (**CHSC**), in partnership with the Institute of Interdisciplinary Research of the University of Coimbra (**iii-UC**) and the Centre for Functional Ecology (**CFE**) are honored to host and invite you to the **IV Meeting of REPORT(H)A – the Portuguese Network of Environmental History**, between **14th and 16th October 2021**.

This year the meeting adopts, in an interdisciplinary perspective, the title **Sapiens, Health and the Environment - Natural and Artificial Frontiers**.



## Organising Committee

**Margarida Sobral Neto** – CHSC, Centre for History of Society and Culture – University of Coimbra

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**Pedro Mendonça** – CFE, Centre for Functional Ecology - Science for People & the Planet – University of Coimbra

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## Scientific Committee

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**Ana Luísa Santos** – CIAS, Research Centre for Anthropology and Health, Faculty of Sciences and Technology, University of Coimbra

**Carmen Soares** – CECH, Centre for Classical and Humanistic Studies – University of Coimbra

**Lúcio Cunha** – CEGOT, Centre of Studies in Geography and Spatial Planning – University of Coimbra

**Irina Velicu** – Just Food project, CES, Centre for Social Studies of the University of Coimbra

**Dulce Freire** – ReSEED – Rescuing Seed’s Heritage [ERC funded project] | CEIS20, Centre of 20th Century Interdisciplinary Studies – University of Coimbra

## Climate changes in the Middle Ages of Western Europe: an attempt at synthesis

Oscilações climáticas na Idade Média da Europa Ocidental: uma tentativa de síntese

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### Abstract

Addressing climate changes during the Middle Ages involves a twofold artificialization of reality, because: (a) climate change is not static and therefore does not fall into time barriers; (b) the division of history by epochs is an artificialism. In fact, these historical and climatic periods vary depending on the region of the globe considered and usually focus on a paradigm largely confined by the Western view. Nevertheless, we used conventional periodization, only for ease of exposure of the points addressed. Let's assume the conventional periodization of the Middle Ages: 5th-15th centuries. Let us move on to the basic question: what are the main weather periods of this chronology?

Beginning with the distinction between climate and atmospheric weather we must consider this is the weather at a given time and place while climate is measured from a series of indicators (temperature, pressure, humidity, rainfall, radiation, etc.) whose sequential records allow to trace the "climatological standards". Naturally, in the Middle Ages, it is not possible to determine climate standards, so we are limited to the interpretation of proxies, preferably using multi-proxies.

For the Medieval times, we have to highlight the Medieval Warm Period (MWP). The chronological demarcation of this period is highly controversial. One thing seems certain: from the peak of Roman global warming, we enter a phase of softening and then cooling that will have extended until the beginning of the High Middle Ages. Around the 7th and 8th centuries there was a slight reversal of the global cooling trend. However, the MWP really started around the 900/1000s. In the Late Middle Ages there is a climatic inversion to which referred as "Dante's anomaly". They felt the first manifestations of the Little Ice Age.

The scarce studies on medieval climate oscillations are even rarer that refer to the impact they had on the lives of the populations who lived then. This approach is what we propose! Not wanting to be deterministic about the role of climate in human history, since many were (and are) the factors that condition it, it is impossible to fail to underline its importance as a major element in the evolution of human communities over time. Is there a correlation (if so, indirectly) between the MWP and Viking expeditions to Iceland (9th century), Greenland (in the late 10th century) and North America (mid-11th century)? Or demographic growth and concomitant intensification of agriculture with the conquest of new fields of cultivation? Or the crusades to the Holy Land (11th-13th centuries)? Or, yet the construction of the great Gothic monuments that marked an epoch that G. Duby called "the time of cathedrals"? And, oppositely, to what extent was the time of contraction (or trend B) of the Early Middle Ages influenced by the worsening climate of the 14th and 15th centuries that impelled Europe beyond itself, with the Iberian kingdoms starting an overseas expansion, for instance? It all requires better and more in-depth studies, for now, we propose only a possible synthesis!

**Keywords**

Climate change; medieval warm period; correlations between climate and historical facts

