

DEPARTMENT OF ARCHAEOLOGY - MEDITERRANEAN ARCHAEOLOGY RESEARCH UNIT

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# BACK TO THE ROOTS AGROFORESTRY AND THE REDISCOVERY OF ROMAN VITICULTURE (200 BC – AD 200)

Traditional vine agroforestry as a sustainable  
agricultural strategy?

The case of the arbustum and the alberata in Italy

Global climate change and population dynamics have a growing impact on the development of agricultural strategies. The core of the issue lies in how to adequately feed a growing population without outstripping the earth's natural resources against the background of continuously evolving environments. In other words, how can the world continue to be fed without falling into the so-called 'Malthusian trap'? As farmland expansion possibilities are finite, answers exigently have to come from innovative land management strategies and original yield action plans.

Within this context, there is a growing body of scientific literature on the qualities of agroforestry - a collective name for traditional land-use systems that purposively integrate trees with agricultural crops (silvo-arable) and/or animals (silvopastoral) - as a sustainable agricultural strategy.

This project aims to contribute to this debate by a comparative study of vine agroforestry - that is, the combination of vines trained on rows of host trees with the cultivation of cereals and/or vegetables in between - in Roman and (Early) Modern Italy, respectively called arbustum and alberata. To this end, I focus in particular on why this type of plantation developed as a long-standing tradition Italy, and how to frame its use in market viticulture up until the mid-20<sup>th</sup> century.

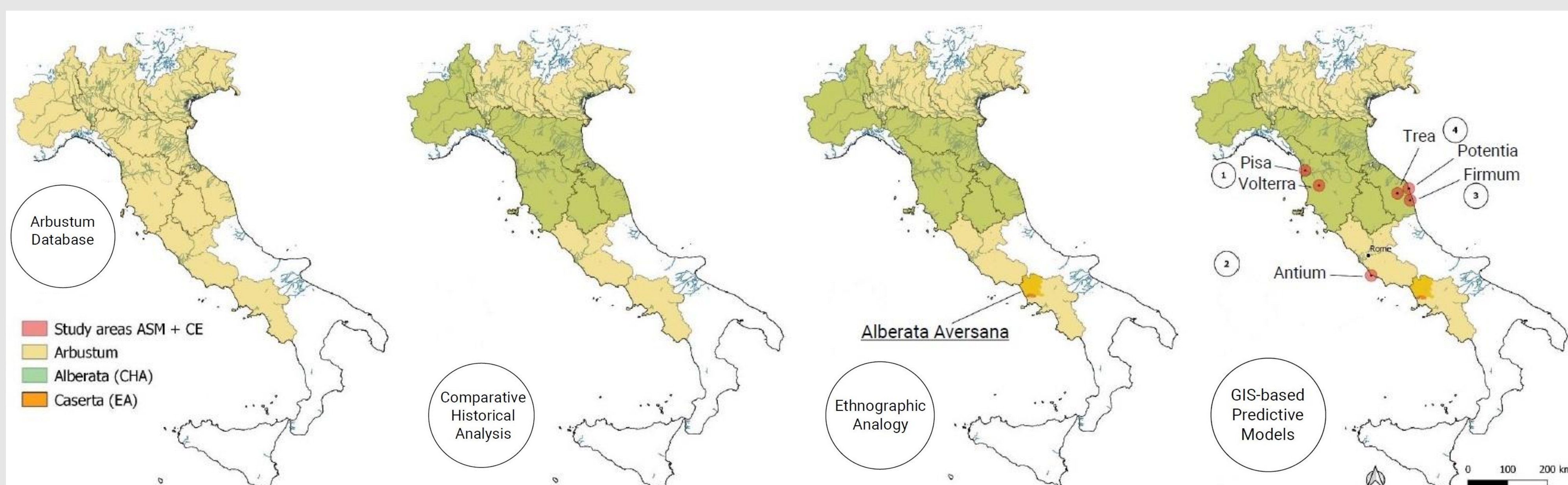
I adopt a holistic and multimethod approach that combines the ancient source material on the arbustum (archaeology, literature, iconography) with a comparative historical analysis of the alberata in Tuscany, Emilia Romagna, Marche and Umbria, and the aleno in Piedmont. I will also conduct an ethnographic survey of contemporary vine agroforestry landscapes in northern Campania (alberata aversana). Finally, based on my findings, I will develop a GIS-based predictive model for potential vine agroforestry through archaeological land suitability modelling and crop estimation in 4 smaller case studies in central and northern Italy.

The results of this project are expected to 1) fundamentally change our views of viticultural practices in Roman Italy; 2) significantly improve our current understanding of vine land use and vineyard productivity in pre-industrial Italy; and 3) inform us on how to develop sustainable vine agroforestry systems in (Southern) Europe. In this way, my work can demonstrate how to translate this kind of archaeo-historical research into tangible results that can help us to adapt present land use to the demographic and climatic challenges of the future.

For more information on this project, please visit:

<https://research.flw.ugent.be/en/projects/back-roots-agroforestry-and-rediscovery-roman-viticulture>

The main phases of data collection and analysis,  
with indication of their respective target areas

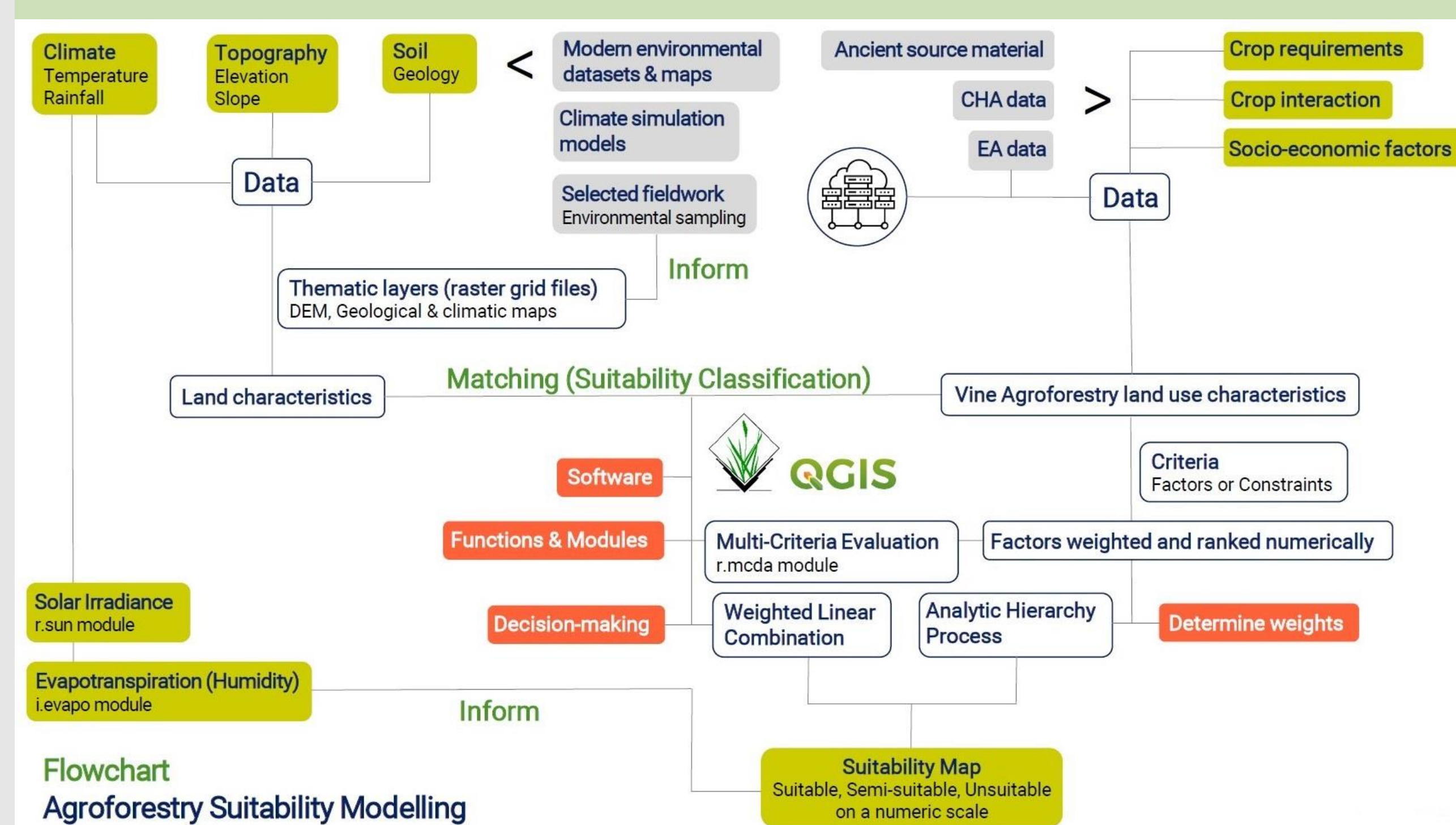


Sarcophagus representing a Dionysiac Vintage Festival, A.D. 290–300 (Marble)  
(© The J. Paul Getty Museum, Villa Collection, Malibu, California)  
Digital image courtesy of the Getty's Open Content Program



Plain of Gubbio (Italy), alberata field, 1966  
(© Stefanetti M. and A. Melelli 1999. *Le campagne umbre nelle immagini di Henri Desplanques*. Regione dell'Umbria. Perugia)

Historical vineyard of Bayer, Veneto (Italy)  
(© Associazione Culturale Borgo Bayer 2017. *La Piantata Veneta*. Godega di Sant'Urbano: 132)



The various steps in archaeological land suitability for vine agroforestry (© D. Van Limbergen)

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