

## **Integrating multidisciplinary approaches to reconstruct human-environment relationships in the Pleistocene past**

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### **Abstract:**

The interaction between human societies and the natural environment in Prehistory was shaped by a combination of climatic, ecological and cultural factors. This is especially the case during periods of marked climatic instability, such as the Pleistocene, when these combined effects deeply impacted both human societies and plant/animal communities, triggering diverse ecological responses and adaptive trajectories. Therefore, capturing these processes requires interdisciplinary approaches to obtain a broader understanding of human socio-economic dynamics, as well as the evolution of other animal behaviour and natural landscapes, and how these are interconnected.

In the last two decades, studies exploring the relationship between humans and other animals have incorporated different methodologies into the traditional zooarchaeological analyses. Some of these approaches include analytical techniques such as palaeoproteomics, aDNA, stable isotopes, dental micro and mesowear, geometric morphometrics and computational modelling, used to reconstruct different aspects like subsistence behaviour, seasonality, mobility patterns, and past ecosystems.

This session aims to bring together contributions from researchers using different archaeological, biomolecular and environmental approaches to reconstruct faunal exploitation patterns and human and prey palaeoecologies during the Pleistocene. Through discussion of the potential for integrating multiple methodologies to better understand past human-environment relationships, this session also seeks to create a dialogue around the interplay between the preservation of the archaeological record and destructive sampling for advancing archaeological knowledge from a sustainable and ethical perspective.