

Life on the margin of an inland delta: Investigating Local Socio-Ecological Development in the 'Oasis' Regions of Central Asia

[Seminario](#)

Data: Mercoledì, 2 Aprile, 2014 - 16:30 - 17:30

Aula: [Aula 2M](#)

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Abstract:

The concept of margins, socially and environmentally nebulous regions that straddle the boundary between habitable, sustainable environments and infertile, often inhospitable zones, have been the study of significant research (e.g Wilkinson 2003; Barton 2010)

Among the least understood of such marginal environments are the major terminal fans, often referred to as 'oases', that occur throughout much of Central Asia. However, the fragile balance of such regions has fostered unique developmental trajectories with specific implications for settlement dynamics, land use, irrigation and other socio-economic factors. Despite the advances in research in such areas, the local dynamics of these human/environmental relationships remain unclear. Socio-economic factors such as subsistence practices, resource acquisition and management, and local approaches to irrigation are not well understood, particularly in more remote regions away from urban centres.

Understanding these local factors can provide insight into important processes of adaptation, sustainable habitation and environmental modification/niche construction. This talk will focus on one such environment the Murghab alluvial fan in southeastern Turkmenistan, during the environmentally and socially transitional period from the 3rd to the 2nd millennium BC. Geomorphological, hydrological and environmental changes profoundly affected societies, creating tensions which continue to be relevant. In this talk, I will focus on human/environmental relationships during the Bronze Age, in the context of my research for the Marie Curie fellowship at the Spanish National Research Council (CSIC). I will discuss the aims and methodologies I plan to use in order to identify micro-environments and ecological 'niches' and to assess their possible role in social development. This research will require an understanding of processes such as sedimentation, alluvial deposition and desert encroachment, all of which will help to better understand the actions and reactions of humans in relation to a changing and perhaps adverse natural environment.

Drawing on field data from the Murghab alluvial fan in Turkmenistan, the research will employ an integrated methodology that combines remote sensing, geoarchaeology and palaeogeography in order to develop socio-ecological models applicable for examining

broader questions of marginality. Specific methodologies will include micromorphological sampling, loss on ignition, magnetic susceptibility, soil chemistry and OSL dating?as well as AMS dating of organic remains?all of which will help to understand the dynamic natural environment in which the societies of the Murghab developed and changed.

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