

PHEs Research Project

Palaeoenvironmental Holocenic Evolution and Setting

The Research Project PHEs - Palaeoenvironmental Holocenic Evolution and Setting was born in 2012, at the Department for the Geological Survey of Italy (ISPRA), thanks to the enterprise of a group of researchers being experienced in studies concerning geoarchaeology (*), geomorphology and applied geology.

The Project's goal is to develop a contribution to the study of the present conditions of territorial instability and of land use restrictions, through the analysis of environmental change that occurred during the Holocene.

A special effort is therefore feeded in deepening the knowledge of the landscape evolution, both through field surveys and through studies of historical sources and also through the laboratory testing support. The knowledge of the territorial evolution is essential to an effective action of environmental protection and preservation and for a proper definition of hydrogeological risk conditions "Climate Change-related".

Objective of the Project is the study of the evolution and transformation of the territory during the Holocene, in particular from a geomorphological point of view, using Earth Sciences analyses' methods.

Focus of interest is the study of areas characterized by human frequentation in the past, as a whole because of the expertise acquired in the field of geoarchaeology by the working group members.

Working Group

Paolo M. Guarino – Lead scientist, geologist, researcher (paolomaria.guarino@isprambiente.it)

Mauro Lucarini - Geologist, technologist (mauro.lucarini@isprambiente.it)

Daniele Spizzichino – Engineer, researcher (daniele.spizzichino@isprambiente.it)

Giuseppe Delmonaco – Geologist, technologist (giuseppe.delmonaco@isprambiente.it)

Antonio Colapietro – Architect, technologist (antonio.colapietro@isprambiente.it)

Research programmes

MeTIBAS Project: Methods and Technologies for the Cultural Heritage of Basilicata region : Research program aimed at the acquisition of data and information usable for a palaeoenvironmental reconstruction of the Metaponto area.

Activities carried out in Association Agreement with the IMAA-CNR of Tito Scalo (PZ), 2013-2014 ([poster](#)).

Study of the Geomorphologic Evolution of the Pincio Hill (Rome):

Collaboration between ISPRA and S.S.B.A.R. Superintendence of Cultural Heritage of Rome (2015- 2016), ([poster](#)).

BISENZIO Project: Triennial Research Project DFG 2015/2017 " Bisenzio. Multi-disciplinary research on a major Etruscan centre from the Late Bronze Age to the Archaic Period", funded by the Deutsche Forschungsgemeinschaft, and coordinated by Dr. Andrea Babbi of the Institute for Archaeologies of RGZM, Romish-Germanisches Zentralmuseum di Mainz. ISPRA-DFG-RGZM-Ludwig Boltzmann Institut (2015-2017).

(*)Works published prior to the birth of the PHES Project

Arthur P., Guarino P.M., Jones D.A., Schiattarella M. (1991). *Applicazione integrata di metodologie geologiche in Archeologia Ambientale: l'esempio del Progetto Eubea*. GEOLOGIA TECNICA, ISSN: 0435-3897

Giano S.I., Guarino P.M. (1996). *Trasformazioni ambientali in età storica del territorio di Oria (Brindisi)*. Il QUATERNARIO, vol. 9, ISSN: 0394-3356

Guarino P.M. (2002). *Scavo e prospezioni a Torre di Mare. La stratigrafia geologica e le prospezioni geoelettriche*. Torre di Mare: Ricerche archeologiche nell'insediamento medievale di Metaponto. BARI: Adda, ISBN/ISSN: 88-8082-450-3

Bravi S, Fuscaldo M.D, Guarino P.M., Schiattarella M. (2003). *Evoluzione sedimentaria olocenica dell'area dell'antico porto di Cumae (Campi Flegrei, Italia Meridionale)*. Variazioni climatico-ambientali e impatto sull'uomo nell'area circum-mediterranea durante l'Olocene. Edipuglia

Aversa M., Berti D., Comerci V., Lucarini M., Torre R., Ventura G., Vittori E. (2007). *A possible bradyseismic event in Roman times near Ardea (Tyrrhenian sea coast of Latium, central Italy)*. EGU 2007 (Vienna)

Beneduce P., Gallipoli R., Guarino P.M., Mucciarelli M., Piscitelli S., Rizzo E., Schiattarella M. (2008). *Il contributo delle geoscienze per l'individuazione dell'area portuale di Pompei: primi risultati*. Nuove ricerche archeologiche nell'area vesuviana (scavi 2003-2006). ROMA: L'Erma di Bretschneider

Di Fabbio A., Lucarini M., Stocco R., (2009). *I Pantani*. In: Meneghini R., Santangeli Valenzani R. (a cura di) "I Fori Imperiali. Gli scavi del Comune di Roma (1991-2007)". Campagna 2004-2006. Sovrintendenza ai Beni Culturali Direzione Area Archeologica dei Fori Imperiali. L'Erma Di Bretschneider

Di Fabbio A., Lucarini M. (2011). *Studio geopedologico dei depositi colluviali rinvenuti nel Foro di Nomentum*. In: "Il Foro di Nomentum". Accademia di Danimarca. In stampa