Geophysical Research Abstracts
Vol. 18, EGU2016-6324, 2016
EGU General Assembly 2016

The ASTARTE Paleotsunami Deposits data base - a web-based reference for tsunami research around Europe

Paolo Marco De Martini (1), Simone Orefice (1), Antonio Patera (1), Raphael Paris (2), Pedro Terrinha (3), Joao Noiva (3), James Hunt (4), and Daniela Pantosti ()

(1) Istituto Nazionale di Geofisica e Vulcanologia, Seismology and Tectonophysics, Roma, Italy (paolomarco.demartini@ingv.it), (2) CNRS–UBP-IRD, Laboratoire Magmas et Volcans, Clermont-Ferrand, France, (3) Instituto Português do Mar e da Atmosfera, Lisboa, Portugal, (4) National Oceanography Centre, Southampton, United Kingdom

EU project ASTARTE aims at developing a higher level of tsunami hazard assessment in the North East Atlantic and Mediterranean (NEAM) region by a combination of field work, experimental work, numerical modeling and technical development. The project is a cooperative work of 26 institutes from 16 countries and links together the description of past tsunamigenic events, the characterization of tsunami sources, the calculation of the impact of such events, and the development of adequate resilience strategies (www.astarte.eu).
Within ASTARTE a web-based data base on Paleotsunami Deposits in the NEAM areas is being created that will be the future reference source for this kind of research in Europe. The aim is to integrate every existing scientific reference on the topic and update on new entries every six months, hosting information and detailed data that are crucial, e.g for tsunami modeling. At present 127 sites with evidence for at least one paleotsunami deposit have been collected.
A relational database managed by ArcGIS for Desktop 10.3 software has been implemented to allow all partners to collaborate through a common platform for archiving and exchanging data and interpretations, such as paleotsunami type of evidence (sediment, blocks, geomorphological signature, etc), geometric characteristics (thickness, depth, etc), but also age and dating method and type of analysis supporting the tsunami interpretation. Moreover, information on the type of the site (natural or artificial exposure, exploratory trench, hand or engine core, etc), on its geomorphic setting (coastal lake, marsh, fluvial plain, offshore, etc) and on its elevation and distance from the present shoreline are provided.
One of the final goals of the project is the public sharing of the archived datasets through a web-based map service that will allow to visualize, question, analyze, and interpret all datasets. The interactive map service will be hosted by ArcGIS Online and will deploy the cloud capabilities of the portal. Any interested users will be able to access the online GIS resources through any Internet browser or specific apps that run on desktop machines, smartphones, or tablets and will be able to use the analytical tools, key tasks, and workflows of the service. The research leading to these results has received funding from the European Union's Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 603839 (Project ASTARTE - Assessment, Strategy and Risk Reduction for Tsunamis in Europe).