

Participants

CNR - ISMAR, Istituto di Scienze Marine – Sede di Bologna, Italy

FFCUL - Fundação da Faculdade de Ciências da Universidade de Lisboa - Centro de Geofísica da Universidade de Lisboa, Portugal

CSIC - Consejo Superior de Investigaciones Científicas – Unitat de Tecnologia Marina - Centre Mediterrani d'Investigacions Marines i Ambientals, Spain

AWI - Alfred-Wegener-Institute für Polar- und Meeresforschung Geophysics section, Germany

UBO - Université de Bretagne Occidentale Domaines Océaniques, France

INGV - Istituto Nazionale Geofisica e Vulcanologia Roma 2 section – Marine Unit RIDGE, Italy

TFH - Technische Fachhochschule Berlin - FB VIII - Maschinenbau, Verfahrens- und Umwelttechnik - AG Tiefseesysteme, Germany

UGR - Instituto Andaluz de Geofísica - Universidad De Granada, Spain

IM - Instituto de Meteorologia Divisão de Sismologia, Portugal

CNRST - Centre National pour la Recherche Scientifique et Technique, Morocco

XISTOS - XISTOS Développement S.A., France

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NEAREST



**Integrated Observations from
NEAR shore sourceS of
Tsunamis: towards an early
warning system**

<http://nearest.bo.ismar.cnr.it>

SIXTH FRAMEWORK PROGRAMME
PRIORITY 1.1.6.3
GLOBAL CHANGE AND ECOSYSTEM
Contract n. 037110
01 October 2006 – 30 september 2009



Objectives

The main goals to be reached within NEAREST are scientific and technological:

The identification and characterisation of large potential tsunami sources located near shore in the Gulf of Cadiz.

The improvement of near real-time detection of signals by a multiparameter seafloor observatory (GEOSTAR) for the characterisation of potential tsunamigenic sources.

The development of an Early Warning System (EWS) Prototype.

The improvement of integrated numerical models enabling more accurate scenarios of tsunami impact and the production of accurate inundation maps in selected areas of the Algarve (SW Portugal), struck by the 1755 tsunamis.

The test of near real time tsunami warning from seafloor system to main land station.

Seafloor Observatory



Integration of seismic land networks, tide gauge network and seismic sea network

Modelling of the potential tsunami impact in SW Portugal

Expected results

Maps of potential tsunamigenic sources in the Gulf of Cadiz and in SW Portugal.

Maps of vulnerable areas: from generation to inundation in a very high-risk area.

Provision of a working example of a nearshore tsunami Early Warning System.

Geological and geophysical database

Actions

Review of potential tsunamigenic sources (tectonic and slope instabilities) in the Gulf of Cadiz and in SW Portugal

Site characterisation and selection for the deployment of the multiparameter seafloor observatory (GEOSTAR)

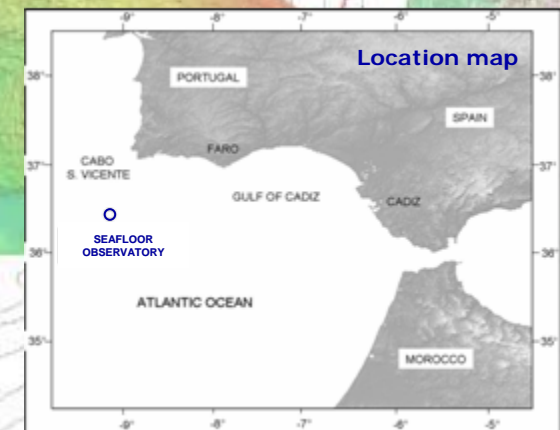
Definition of sensors, software requirements and devices for the GEOSTAR to allow the real time tsunami detection

One year deployment of a broad band OBS (Ocean Bottom Seismometers) array, seismological and seismic data acquisition

One year deployment of the multiparameter seafloor observatory and data acquisition

Links

www.transferproject.eu



0 25 50 100 Kilometers