



ESONET NoE (European Seas Observatory Network of Excellence) training course on  
“**Seafloor Observation Techniques for Marine Geohazard Monitoring**”

18-19 August 2009  
Istanbul, Turkey



The aims of the training course are:

- 1) To train young engineers and scientists on seafloor observatory techniques (addressed by the main second part of the course), and
- 2) To raise interest in seafloor observatories among stakeholders, funding organizations and public at large (addressed by the first part of the course).

This activity is an important deliverable of the ESONET Marmara DM project under WP6.

Young engineers and scientists from marine institutes, other related governmental and private organizations are invited to participate. High level officials from funding organizations in Turkey (e.g., TUBITAK, State Planning Department, TPAO, MTA) are invited to attend the introductory lectures (Part 1). The training workshop will follow a one-day symposium on “*An overview of the research in the Sea of Marmara region over the last 10 years*”, on the 10th Anniversary of 17 August 1999 Izmit Earthquakes.

## **Tentative programme**

**Tuesday, 18 August 2009**

### **Part 1: Introductory Lectures**

9:30: History of marine geological research and the need for seafloor observatories in the Sea of Marmara (Namık Çağatay, ITU-EMCOL)

10:15 Disaster risk reduction studies of Istanbul Metropolitan Municipality (Ahmet Emre Basmacı, IBB)

#### **11:00 Coffee break**

11:20 Seafloor observatories for geohazard and oceanographic studies (Louis Geli, Ifremer, France)

12:05 Relations between geofluids and marine geohazards (Pierre Henry, CNRS, France)

#### **12:50 Lunch**

### **Part 2: Technical Lectures**

14:15 Borehole monitoring: Case studies (Earl Davies, Canada)

15:00 Borehole instrumentation (Heinrich Villinger, Marum, Bremen, Germany)

#### **15:45 Coffee break**

16:05 Fluid sampling and analysis (Mike Tryon, Scripps Oceanographic Institution, USA)

16:50 Observatory design (Yves Auffret, Ifremer, France)

17:35 Acoustic sensors (Francesco Chierici, Italy)

**Wednesday, 19 August 2009**

***Part 2: Technical Lectures (continued)***

9:30 Gas-bubble monitoring (Carla Scalarbin, Ifremer, France)

10:15 Chemical sensors (Jean Luc Charlou, France)

**11:00 Coffee break**

11:20 SN-4 and Geostar stations for seafloor observations (Paolo Favali, INGV, Italy)

12:05 Ocean Bottom Seismometers (Cansun Güralp, Güralp Instruments, U.K.)

**12:50 Lunch**

14:15 Precise earthquake determination based on multiplet technique (Jean-Luc Got, Ifremer)

15:00: KOERI cabled seafloor observatory stations in the Sea of Marmara (Cemil Gürbüz, Koeri, Turkey)

**15:45 Coffee break**

16:05 Tsunami observatories (Klaus Schleisiek, SEND Off-Shore Electronics GmbH)

**16:50 Discussion and exercises**