CoopEUS Case Study: Tsunami Modelling and Early Warning Systems for Near Source Areas (Mediterranean, Juan de Fuca).

Laura Beranzoli (1), Mairi Best (1,2), Francesco Chierici (3), Davide Embriaco (1), Nan Galbraith (4), Martin Heeseman (5), Deborah Kelley (6), Benoit Pirenne (5), Oscar Scofield (7), and Robert Weller (4)

(1) National Institute of Geophysics and Volcanology, Rome, Italy (laura.beranzoli@ingv.it), (2) Ocean Observing Consultant to EMSO, Canada (mmrbest@gmail.com), (3) CNR National Institute for Astrophysics, Rome, Italy, (4) WHOI, Monument Beach, MA, United States, (5) Ocean Networks Canada, Victoria, BC, Canada, (6) University of Washington, Seattle, WA, United States, (7) Rutgers University, New Brunswick, NJ, United States

There is a need for tsunami modeling and early warning systems for near-source areas. For example this is a common public safety threat in the Mediterranean and Juan de Fuca/NE Pacific Coast of N.A.; Regions covered by the EMSO, OOI, and ONC ocean observatories. Through the CoopEUS international cooperation project, a number of environmental research infrastructures have come together to coordinate efforts on environmental challenges; this tsunami case study tackles one such challenge. There is a mutual need of tsunami event field data and modeling to deepen our experience in testing methodology and developing real-time data processing. Tsunami field data are already available for past events, part of this use case compares these for compatibility, gap analysis, and model groundtruthing. It also reviews sensors needed and harmonizes instrument settings. Sensor metadata and registries are compared, harmonized, and aligned. Data policies and access are also compared and assessed for gap analysis. Modelling algorithms are compared and tested against archived and real-time data. This case study will then be extended to other related tsunami data and model sources globally with similar geographic and seismic scenarios.