



ESONET: a network to integrate European research on sea observatories

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ESONET (European Seas Observatory Network) is a European Network of Excellence (NoE) associating 50 partners (research centres, universities, industrials and SMEs) from 14 countries. More than 300 scientists and engineers will participate to its activities.

The goal of the ESONET NOE is the lasting integration of European research on deep sea multidisciplinary observatories. Over the initial 4 years, the approach will be to merge the programmes of members Organisations through research activities addressing the scientific objectives and networking activities specially designed for integration and spreading Excellence.

ESONET NoE will create an organisation capable of implementing, operating and maintaining a network of multidisciplinary ocean observatories in deep waters around Europe from the Arctic Ocean to the Black Sea. The NoE will structure the resources of the participating institutes to create the necessary critical mass, remove barriers and through a joint programme of activities arrive at durable solutions for this future organisation.

Long-term observatories are crucial for European scientists to maintain world leadership that was developed through past and present framework programs. Only long-term observatories allow continuous observation of large numbers of parameters collected through power intensive sensors. This capability is crucial for observing natural processes that are either very episodic or statistically require long time series to detect

because they are hidden by noise of higher frequency. The ESONET predecessors have identified such processes in all fields of marine sciences. The most important ones are: (1) the episodic release of methane from the seabed affecting climate change, (2) the relationship between earthquakes, tsunami generation and submarine slope failures, and (3) the short term biogeochemical processes affecting the marine ecosystems.

The ESONET observatories will provide information on global change, warnings of natural hazards and a basis for sustainable management of the European Seas. They will be a sub-sea segment of the GMES and GEOSS initiatives and linked to the EU INSPIRE initiative.

A network of observatories around Europe will lead to unprecedented scientific advances in knowledge of submarine geology, the ecosystem of the seas and the environment around Europe. ESONET's efforts will be part of a system extending around the world in co-operation with Japan, USA and Canada. The integration process will permanently underlie ESONET NoE's action.

ESONET NoE will foster energies in Europe to constitute a permanent organisation within the 4 years of the project. The European Seas Observatory Network promotes infrastructures that will operate for 10 to 30 years. ESONET NoE has to experimentally verify the initial idea that it is only feasible and cost efficient with a permanent structure, owner of the ESONET LABEL and offering "Core Services": the NoE intends to give birth, if feasible, to such a structure. A strong link has also to be established with the EMSO (European Multidisciplinary Sea Observatories) proposal, one of the main components of ESFRI in the FP7.