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The Sea Monitoring Virtual Research Community (VRC) in the EVER-EST Project (a virtual research environment for the Earth Sciences).

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The EU's H2020 EVER-EST Project is dedicated to the realization of a Virtual Research Environment (VRE) for Earth Science researchers during 2015-2018. In this framework the Sea monitoring represents one of the four use case VRCs chosen to validate the EVER-EST e-infrastructure, which is aimed at representing a wide and multidisciplinary Earth Science domain.
The objective of the Sea Monitoring Virtual Research Community (VRC) is to provide useful and applicable contributions to the identification and definition of variables indicated by the European Commission in the Marine Directive under the framework for Good Environment Status (GES). The European Marine Strategy Framework Directive (MSFD, http://ec.europa.eu/environment/marine/index_en.htm) has defined the descriptors for Good Environmental Status in marine waters. The first descriptor is biodiversity; the second one is the presence of non-indigenous species while the remaining nine (even when they consider physical, chemical or geological variables) require proper functioning of the ecosystem, linked to a good state of biodiversity.
The Sea Monitoring VRC is direct to provide practical methods, procedures and protocols to support coherent and widely accepted interpretation of the Descriptors 1(Biodiversity), 2 (non- indigenous species), 4 (food webs) and 6 (seafloor integrity) identified in GES. In that context, the criteria and methodological standards already identified by the European Commission, and at same time considering the activities and projects in progress in the marine framework, will be taken into account. This research of practical methods to estimate and measure GES parameters requires a close cooperation among different disciplines including: biologists, geologists, geophysics, oceanographers, Earth observation experts and others. It will also require a number of different types of scientific data and observations (e.g. biology related, chemico-physical, etc.) from different inputs and sensors (e.g. remote sensing, on-site buoys, marine stations, administrations, citizen observations, etc.). Furthermore, different communities require support and guidance to be able to effectively interoperate and share practices, methods, standards and terminologies. The EVER-EST VRE will provide the Sea Monitoring VRC users community with an innovative framework aimed at enhancing their ability to interoperate and share knowledge, experience and methods for GES assessment and monitoring.
Furthermore the Sea monitoring VRC will focus the attention on the implementation of Research Object (RO, a semantically rich aggregation of resources bringing together data, documents and methods in scientific investigations) for GES assessment to be shared among the wide sea monitoring community for the first time.