

## Standardisation and Harmonisation of Geological and Geophysical data for improved Seabed Habitat Mapping

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Seabed habitat mapping is mostly based on the assumption that the ecological value of an area can be represented by its abiotic characteristics (substrate type, topography and energy regime). Within this realm geological and geophysical data are crucial, as are their derivatives. For end-users, the availability of data is not always clear, and when data are compiled from various sources, problems arise on how to harmonise the data. More standardised archiving of data is needed, as also more standardised approaches on how to deal with the data. Geo-Seas, an FP7 pan-European e-infrastructure for geological and geophysical data is addressing this need. Geo-Seas targeted ‘Seabed Habitat Mapping’ as a field where standardisation and harmonisation of geological data can lead to better mapping products. Sediment and terrain characterisation is focussed on, respecting applications on a regional (>500m), medium- (50m) to fine-scale (<5m).

A report is produced highlighting: (1) the importance of sediment/terrain characterisation within habitat mapping initiatives (soft vs hard bottom types / flat vs high relief areas); (2) a demonstration of main methodological approaches and classification; (3) an investigation on how different resolution of data affects the sediment/terrain characterisation; and (4) recommendations on parameters, resolution, formats, confidence, and data query tools to be used for habitat mapping. Results are framed within the context of major European Directives (e.g. Europe’s Marine Strategy Framework Directive). Cross-fertilisation exists between Geo-Seas (<http://www.geoseas.eu>) and EMODNET-Geology (EU DG MARE, <http://www.emodnet-geology.eu/>).