SeaDataNet II (2011 - 2015) is a pan-European infrastructure providing harmonised discovery services and access to ocean and marine environmental data sets managed in distributed data centres. The partnership is composed of 44 institutions directly involved in the project as partner and 10 other institutions as associate partner, from 35 countries riparian to European seas. At present 83 data centres are connected to the SeaDataNet infrastructure, giving access to already more than 1.5 million data sets for physical oceanography, chemistry, geology, geophysics, bathymetry and biology.

The fourth edition of the SeaDataNet series of International Conference on Marine Data and Information Systems IMDIS 2013 has been organised and hosted by SeaDataNet in Lucca - Italy from 23 to 25 September 2013. The IMDIS series of Conferences is promoting the meeting of different communities working in informatics, data management, research, environmental protection, etc. It is focused on-line access to data, meta-data and products, communication standards and adapted technology to ensure platforms interoperability. IMDIS 2013 aims at providing an overview of the existing information on marine environmental data, and showing the progresses on development of efficient infrastructures for managing large and diverse data sets. The number of abstracts submitted to IMDIS 2013 have been 155 in total. An international board of referees have evaluated them and selected those deserving an oral presentation. The final numbers of the selection are: 50 were selected for oral presentation, 83 were accepted as posters.

Session 1
Issues discussed were: Encapsulate a methodology for publishing data and metadata in a structured format, rise in the demand for large quantities of high quality interoperable data, standards, vocabularies, government of the information systems have been presented and different experiences compared.

Session 2
Hybrid data infrastructures have been proposed as data management model in which computing, storage, data and software are made available as-a-service. The session concluded that the growing computation power and storage equipment capabilities give opportunity of increasing data volume archived and processed in data centers. Exploding data volumes also lead to demand of new services (multidimensional analysis, data visualization, extraction of information), all integrated in unique platform.

Session 3
A series of service related issues have been presented and discussed: IODE quality flag scheme to define a common set of quality flags and facilitate the exchange of data between systems; unique georeferenced standards of marine placenames and areas (Marine Regions); marine species trend analysis as a tool for Census of Marine Life; software for data processing, variational data analysis for generating ocean climatologies, 3D/4D viewing.

Session 4
Community driven data synthesis have been shown. The short session posed and discussed guidelines to assist those involved in collection, processing, quality control and exchange of various type of data.

The proceedings have been published in the Vol. 54 – supplement of Bollettino of Geofisica. An electronic version of the book of abstracts is also downloadable at web address: http://imdis2013.seadatanet.org/Proceedings.