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ICSU World Data Center for Marine and Environmental Sciences (WDC-MARE)

Report for IODE-XX, Bejing 2009

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WDC-MARE is operating on a long term basis. The institutional frame is supplied by MARUM, University Bremen in cooperation with the Alfred Wegener Institute (AWI), Bremerhaven, which is a member of the Helmholtz Association of National Research Centres, funded by the Federal Ministry of Education and Research. Around 20 people are associated with WDC-MARE. The budget amounts approximately 1,2 Mio Euro per year for personnel, hard-, and software. Third party funds are about 70% of the total budget. Data management services on an international level are supplied since 1996. Until 2008 PANGAEA® was and is a partner in more than 50 European to international projects covering all fields of environmental sciences (www.pangaea.de/Projects).

PANGAEA®, an information system for the processing, long-term storage, and publication of geo-referenced data related to earth science fields (www.pangaea.de), is used as an operating platform for WDC-MARE. Organisation of data management includes quality control and publication of data, and the dissemination of metadata according to international standards. All data are long-term archived, referenced by Digital Object Identifier (DOI), and freely accessible through a map-based search engine via the internet.

PANGAEA® currently holds 675.000 data sets comprising 4,5 billion data items from all earth science fields. The growth of the data inventory is exponential.

Besides the support for the research center (incl. all related institutes), WDC-MARE is currently supplying **data management services** for the European part of IODP (MSP) for „post cruise" data of IODP (NSF contract), for the EU projects HERMES (IP), CARBOOCEAN (IP), EUR-OCEANS (NoE), SESAME (IP), CENSOR (IP), ESONET (NoE), EPOCA (CP) und CoralFish (CP), as well as for a number of national programmes and projects (e.g. the german SOLAS). Within CARBOOCEAN WDC-MARE with contributions from CDIAC (WDC) presently compiles the largest global near-surface CO_2 data set. The project is supported by UNESCO/IOCCP, SOLAS, and IMBER. Further highlights are the recent take-over of the Baseline Surface Radiation Network (BSRN, World Climate Research Programme - WCRP) and the initiation of an „Open Access" journal – the „Earth System Science Data (ESSD)" at Copernicus (http://www.earth-system-science-data.net/).

A further focus lies on the implementation of standard conform **Spatial Data Infrastructures** (SDI), whereby PANGAEA® on the one hand takes the role as distributor of data and metadata (e.g. GBIF, OBIS) and on the other hand implements networks, portals, or serves as broker between different e-Infrastructures. Recent activities are the implementation of the Scientific Earth Drilling Information Service (**SEDIS**) for IODP (http://sedis.iodp.org/), for the World Data Center System (http://www.world-data-centers.org/), a national GRID project, and for the EU projects EUR-OCEANS and CARBOOCEAN, and ESONET/EMSO (ESFRI). The latter aims at networking European oceanographic observatories.

Political activities includes fostering the data publishing concept (e.g. SCOR/IODE meetings), the elaboration of a concept for sustainable management and archiving of data in the national context (science boards of German Science Foundation), and participation in the ICSU „Committee on Data and Information (SCID)", which recently published the report on the further development of the WDC System, the WDS, incl. the Unions based FAGS and CODATA (http://www.icsu.org/3_mediacentre/RELEASES/ICSU_29GA_Data_Information_Press_Release.pdf).

In 2007 WDC-MARE received the Info World 100 Award (http://www.infoworld.com/awards/index.html) for its information system PANGAEA® (best in the section "„Environment, Energy & Agriculture").