



Data Policy

of the DAM Research Mission "Marine Carbon Sinks in Decarbonization Pathways" (in short: "CDRmare") of the German Federal Ministry of Education and Research (BMBF)

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The central data management of the Research Mission CDRmare^[1,2,3] and the data managers of the six associated consortia declare the following binding Data Policy for all consortia and their partners in accordance with the consortia coordinators and the office of the German Marine Research Alliance (DAM^[4]):

Basic rules

Based on the Research Data Policy at the DAM^[5] and the regulations mentioned in the tender of this Research Mission^[6], as well as in accordance with the guidelines of the associated institutes, all databases and data used will be in agreement to the General Data Protection Regulation (GDPR) (EU) 2016/679^[7], the latest EU law on data protection and privacy for all individuals within the European Union (EU) and the European Economic Area (EEA). Newly collected data will be made available sustainably on a long-term basis adhering to the Open Access, Open Science and to the FAIR Data Principles (Findable – Accessible – Interoperable – Reusable^[8]), hence in accordance with the German Research Foundation (DFG) Code of Conduct *Guidelines for Safeguarding Good Research Practice*^[9]. Each consortium has to provide a data management plan (DMP) in agreement with the above regulations and in close collaboration with the central Research Mission's data management. Quality control of data as well as a workflow for delivery of metadata and data from observation to archive and publishing will be handled within the respective consortia.

Data responsibilities

The central data management collaborates tightly with the data managers of the consortia which, in turn, have direct contact to the individual scientists. All data managers provide support and advice regarding, e.g. harmonization and standardization, archival, integration, and documentation of data and metadata. They will also provide advice to scientists in the Research Mission on how to make data FAIR.

Data exchange

Within the Research Mission period, metadata will be collected and shared by the scientists, e.g. via the information system OSIS^[10] at GEOMAR or via links to repositories or contact persons that are specified in the DMPs in the internal CDRmare portal, thus enabling data sharing within and between all consortia. Research results must be reproducible through access to metadata and data.

Data publication

Beyond the end of the project, data together with standard metadata must be archived and published in suitable, sustainably operated, trustworthy long-term repositories, e.g. PANGAEA^[11], CERA^[12], or the BGR product centre^[13]. The deposited data must be published no later than two years after the data acquisition and may be subject to an embargo for a maximum of two further years. After expiry of the moratorium period, the data must be made public immediately and actively following the FAIR Data Principles. Appropriate time limits for data embargos must be noted down in the DMPs.

Data visibility

By means of metadata harvesting, the data of the consortia published in appropriate data repositories will be findable in the DAM marine data portal^[14].

References

- [1] <https://www.ptj.de/projektfoerderung/mare-n/dam-dekarbonisierung>
- [2] https://www.bmbf.de/bmbf/shareddocs/bekanntmachungen/de/2020/05/3017_bekanntmachung
- [3] <https://cdrmare.de/>
- [4] <https://www.allianz-meeresforschung.de/en/>
- [5] <https://www.allianz-meeresforschung.de/app/uploads/2021/06/dam-forschungsdatenleitlinie-stand-210520-2.pdf> (German version; English version will be available soon)
- [6] https://www.allianz-meeresforschung.de/app/uploads/2020/02/researchmissionmarinecarbonsinksindecarbonizationpathways_feb2020.pdf
- [7] <https://gdpr-info.eu/>
- [8] Wilkinson, M.D., et al. (2016): The FAIR Guiding Principles for scientific data management and stewardship. Sci Data 3: 160018. <https://doi.org/10.1038/sdata.2016.18>
- [9] <https://doi.org/10.5281/zenodo.3923602>
- [10] <https://osis.geomar.de>
- [11] <https://pangaea.de/>
- [12] <https://cera-www.dkrz.de/>
- [13] <https://produktcenter.bgr.de/terraCatalog/Start.do>
- [14] <https://marine-data.de/>