Contribution ID: **19**   Type: **Poster**

Data conversion and aggregation for the M-VRE webODV

Thursday 4 April 2024 17:10 (1 minute)

The MOSAiC Virtual Research Environment (M-VRE) project offers three different tools for MOSAiC data exploration. One of these tools is webODV, the online version of Ocean Data View (ODV) software for analysis and visualization of oceanographic and georeferenced data.

During the MOSAiC Expedition 2019-2020, a great amount of measurements in different disciplines were collected and published in the long-term archive PANGAEA. The M-VRE project aims to increase the visibility and usage of these data sets by presenting an online and user-friendly environment where the MOSAiC data is uploaded and kept up-to-date. In webODV, the MOSAiC data are aggregated into collections and displayed in different scientific disciplines. Exploration, visualization, and analysis of MOSAiC data with webODV, is only possible after the data are converted to an ODV readable format.

In our project, we developed a semi-automatic process that queries, filters, and downloads the data set and respective metadata from the PANGAEA archive onto our server. These data sets are gathered into collections before being aggregated and converted to the ODV format. The metadata is harmonized, ensuring that all data collections have a common set of meta variables. During the conversion process, no data is altered, only the format is changed. Following the concept of FAIR data (Findable, Accessible, Interoperable, and Reusable), all data presented in webODV contain the harmonized metadata and references to the original files in the PANGAEA archive, ensuring the traceability of authors and data sources, as well as transparency.

The MOSAiC data is very diverse in its scientific disciplines and different measurements. However, these data sets are also very different in format and structure, and many require an extra step before being converted into the ODV format. Data stored in netCDF files, tar files, and others, receive a unique script that downloads, reads, and writes an ASCII file containing all metadata and data variables. Other data sets require a special conversion due to the data structure, without this extra conversion, visualization and analysis possibilities with webODV would be limited. It is also part of our semi-automatic process to thoroughly verify the converted data collection before it is uploaded to webODV. These data collections are also available for DIVA and Data Cubes exploration in the M-VRE server.

Primary author: LINCK ROSENHAIM, Ingrid (Alfred Wegener Institute)

Co-author: MIERUCH-SCHNUELLE, Sebastian (AWI)

Presenter: LINCK ROSENHAIM, Ingrid (Alfred Wegener Institute)

Session Classification: Posters, Demos and Refreshments

Track Classification: Postersession