

# A progress report on OPUS - The Open Portal to Underwater Soundscapes to explore global ocean soundscapes

*Friday, June 9, 2023 11:00 AM (15 minutes)*

In an era of rapid anthropogenically induced changes in the world's oceans, ocean sound is considered an essential ocean variable (EOV) for understanding and monitoring long-term trends in anthropogenic sound and its effects on marine life and ecosystem health.

The International Quiet Ocean Experiment (IQOE) has identified the need to monitor the distribution of ocean sound in space and time, e.g. current levels of anthropogenic sound in the ocean.

The OPUS (Open Portal to Underwater Soundscapes) data portal, is currently being developed at the Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research (AWI) in Bremerhaven, Germany, in the framework of the German Marine Research Alliance (DAM) DataHUB/MareHUB initiative.

OPUS is designed as an expeditious discovery tool for archived passive acoustic data, envisioned to promote the use of archived acoustic data collected worldwide, thereby contributing to an improved understanding of the world's oceans soundscapes and anthropogenic impacts thereon over various temporal and spatial scales. To motivate data provision and use, OPUS adopts the FAIR principles for submitted data while assigning a most permissive CC-BY 4.0 license to all OPUS products (visualizations of and lossy compressed audio data). OPUS provides direct access to underwater recordings collected world-wide, allowing a broad range of stakeholders (i.e., the public, artists, journalists, fellow scientists, regulatory agencies, consulting companies and the marine industry) to learn about and access this data for their respective needs. With data becoming openly accessible, the public and marine stakeholders will be able to easily compare soundscapes from different regions, seasons and environments, with and without anthropogenic contributions.

Here, an update on achieved and upcoming milestones and developments of OPUS will be presented, together with ongoing and future case studies and use cases of the portal for different user groups.

**Authors:** THOMISCH, Karolin (Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung); HESS, Robin (Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung); PROBST, Lewin; BOEBEL, Olaf (Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung)

**Presenter:** THOMISCH, Karolin (Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung)

**Session Classification:** Talks