

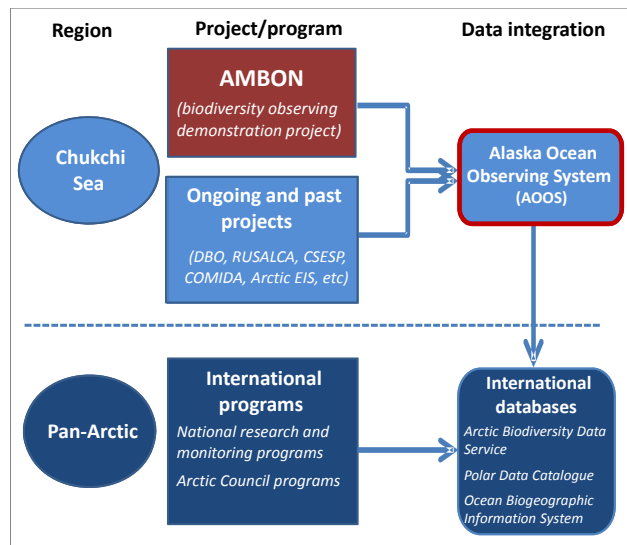
What is AMBON?

The goal of the new Arctic Marine Biodiversity Observing Network (AMBON) project is to demonstrate and build an operational marine biodiversity observing network from microbes to whales. The AMBON field region is located on the Chukchi Sea continental shelf in the US Arctic as a region exposed to climatic changes and anthropogenic influences. The AMBON has four main goals:

1. To close current gaps in taxonomic and spatial coverage in biodiversity observations on the Chukchi shelf.
2. To integrate and synthesize past and ongoing research programs on the US Arctic shelf into an Arctic biodiversity observation network with publicly accessible data.
3. To demonstrate how a sustainable observing network could be developed for this and other regions and ecosystems.
4. To link with international programs on the pan-Arctic level.

The AMBON aims to develop a sustainable model of continuous biodiversity observation including all levels of diversity from genetic to organismal to ecosystem.

Organizational structure



AMBON coverage

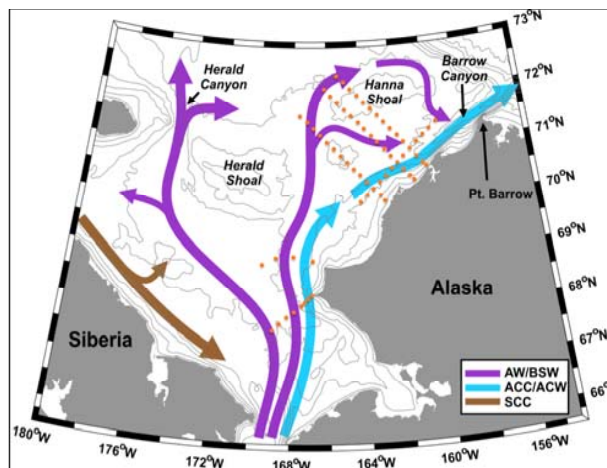


Fig. 1: Map of the study region. Southern lines are time series stations previously covered through other projects

Partnerships

AMBON is a 5-year research partnership (2015-2020) between university and federal investigators, and integrates with the Alaska Ocean Observing System (AOS) as the central data node to provide a publicly accessible and user-friendly database.

AMBON is funded through the National Ocean Partnership Program, with contributions from the National Oceanographic and Atmospheric Administration (NOAA), the Bureau of Ocean and Energy Management (BOEM), and Shell Exploration and Production Company.

Through these partnerships, AMBON will make biodiversity data available to a broad audience of users and stakeholders, from local to pan-Arctic to global.

AMBON funding partners



What do we measure?

Environment

- Hydrography** (synoptic measurements, link to long-term moorings)
- Chlorophyll *a*** (water column, sediment)
- Nutrients** (nitrate, ammonia, silicate, phosphate)
- Sediment** (grain size, organic content)

Biodiversity

- Microbes** – genetic analysis of water column and sediment microbes
- Phytoplankton** – species composition
- Zooplankton** – taxonomic analysis of all zooplankton groups
- Benthos** – species identifications of infauna and epifauna and genetic identification of meiofauna
- Fish** – demersal fish diversity
- Seabirds** – observational data on all seabirds
- Marine mammals** – observational data on seals and whales

Data management structure

Data management through AOS is an AMBON key component, providing essential compatible linkages to past and present programs and open data accessibility. Data are archived and publicly available through the **Data Portal** on the AOS website. The Data Portal can then be linked to other national and international data bases.