

**Greenland Institute
of Natural Resources
Uses Teledyne Marine
SeaBat T50-ER
Multibeam Sonar
System to Create
High-Resolution
Habitat Maps**



Product: Teledyne SeaBat
T50-ER Multibeam Sonar System

Application: Undersea
Landform Analysis, Mapping,
and Geomorphology

Project: Greenland Institute
of Natural Resources:
Hydrography and Marine
Geophysical Research

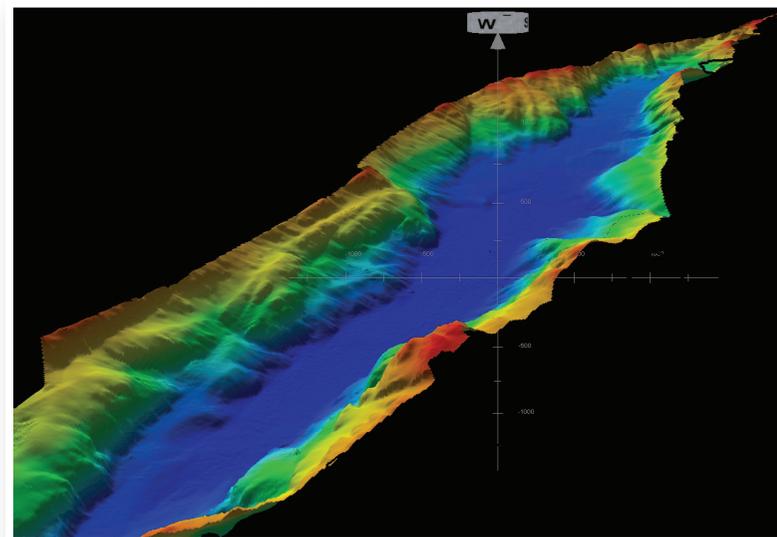
Location: Greenland

The Greenland Institute of Natural resources reports to Greenland's Self-Government. The institute collects, processes, and evaluates data regarding the utilization and protection of living resources. They are responsible for researching to assess living resources of importance to Greenland and contribute to studies of processes and ecological relationships in nature.

The institute participates in studies and development work assessing tools and methods for utilizing Greenland's natural resources. The institute needed a system that could conduct bathymetric surveys to determine the geomorphology and bottom composition off the coast of Greenland. Because of ship time costs and weather conditions, swift mobilization, reduced survey time, and a high level of accuracy were vital.

Overview

Research conducted by the Greenland Institute of Natural Resources focuses on the living resources and environment in and around Greenland. They advise the government of Greenland and municipalities regarding the environment, flora and fauna, and climate change. The institute recently purchased the Teledyne Marine SeaBat T50-ER extended-range multibeam sonar system for seafloor modeling to classify bottom types into habitats. The SeaBat T50-ER multibeam sonar has enabled them to organize these bottom types into habitats to model the seafloor for undersea landform analysis or geomorphology. Seafloor terrain affects the distribution and diversity of fish populations and other animals. Effects of bottom types and geography have been reported in fish populations worldwide. Seafloor mapping and landscape ecology analyses are essential in monitoring stock assessments and spawning sites. The Teledyne Marine SeaBat T50-ER multibeam sonar system is a vital tool for understanding the geomorphology of undersea landforms to focus on monitoring commercial species. The SeaBat T50-ER plays a significant role in the ongoing scientific documentation of population sizes. For the Greenland Institute of Natural Resources, this monitoring is integral to the institute's research.



“ Your multibeam has introduced a new opportunity of creating high-resolution habitat maps of the ocean seafloor around Greenland, thus filling major knowledge gaps and providing baseline information on the sea bottom for the vast number of end-users in Greenland, from fisheries management and environmental assessments to mining companies. Basically, we pioneered this field of research in Greenland. We are very happy about the SeaBat T50-ER! And we will surely make the best of it!

— Diana Krawczyk, Ph.D.
Scientist, Greenland Climate
Research Centre

The Challenge

The importance of seafloor modeling and the ongoing exploration to classify bottom types into habitats is far-reaching. Because the institute is responsible for this vital research contributing to Greenland's economy, they acquired the SeaBat T50-ER multibeam sonar system to get the job done. Knowledge of annual fish and shrimp assessments is a critical part of the report submitted by the institute to the government of Greenland. Weather conditions often make it challenging to collect the necessary data. Ice and wind conditions, along with funding for ship time, can be obstacles to getting the data necessary for undersea landform analysis. That is where the SeaBat T50-ER multibeam sonar system comes in.

The Solution

The SeaBat T50-ER is designed for swift mobilization on any survey vessel, securing minimal interfacing and low space requirements. The SeaBat T50-ER is the latest addition to the world-leading SeaBat T-series platform. The highly compact and flexible rack-mounted sonar system with a built-in INS allows for fast mobilization, minimal interfacing, and extremely low space requirements. Because the SeaBat T50-ER multibeam is fully frequency agile from 190 to 420 kHz, it allows for improved swath performance and reduced survey time under challenging acoustic conditions. The Greenland Institute of Natural Resources continues its research using the SeaBat T50-ER as one of the tools in its arsenal to monitor, manage, and advise Greenland's Self-Government to promote the sustainability and biodiversity of its natural resources.

