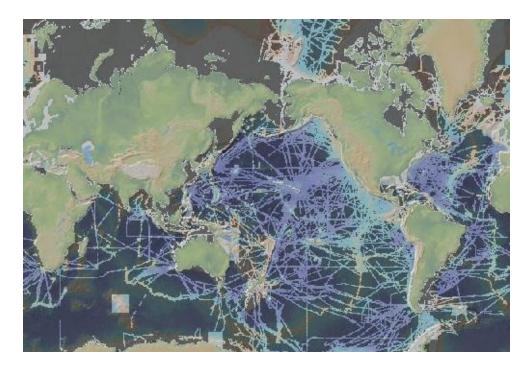The Global Multi-Resolution Topography (GMRT) Synthesis is a multi-resolution Digital Elevation Model (DEM) maintained in three projections and managed with a scalable global architecture that offers infrastructure for accessing the DEM as grids, images, points and profiles. A mask layer is available that highlights the location of high-resolution data. Most curatorial effort for GMRT is focused on cleaning and processing ship-based multibeam sonar data acquired by the US Academic Research Fleet (ARF) so they can be gridded at their full spatial resolution (~100m in the deep sea). These data are seamlessly overlain on lower resolution observed and predicted bathymetry data and are integrated with terrestrial elevation data to deliver to users the best resolution data that have been curated for a particular area area of interest.

GMRT v3.8 was released in October 2020 and includes 34,764,597 square kilometers of curated multibeam data from 1,192 cruises data from more than 75 gridded data sets.

Accessing GMRT
- GMRT MapTool is an online tool that allows users to generate custom maps and grids directly from the GMRT compilation.
- GMRT is accessible through a suite of Web Services
- GMRT is the default basemap in our visualization and analysis tool GeoMapApp, which can be used to create custom maps and grids, and to import and analyze other data sets within the context of GMRT.

https://www.gmrt.org