



GEBCO / Nippon Foundation Scholars Projects at NOAA's National Geophysical Data Center (NGDC)

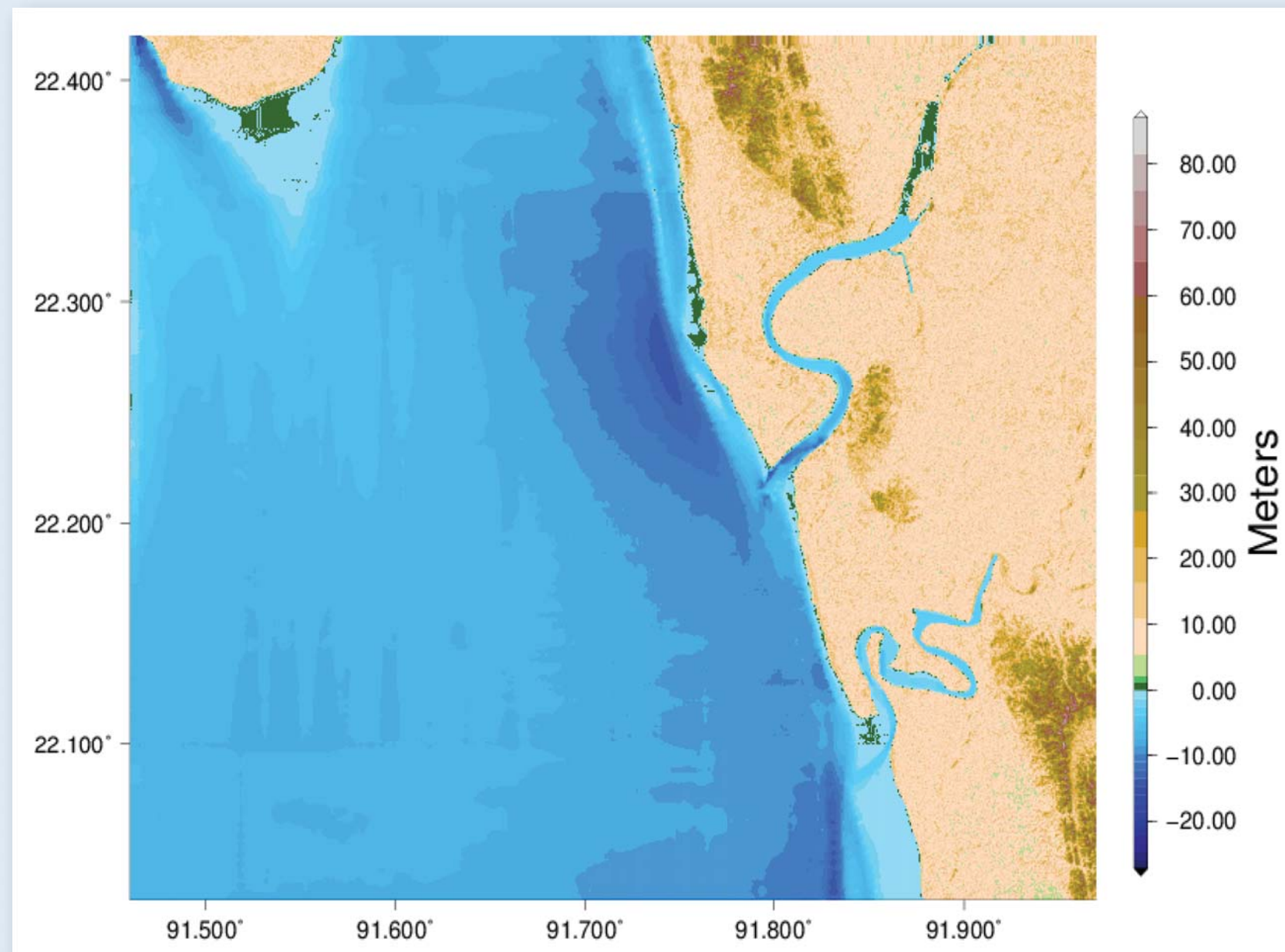


Mohammad Chowdhury, Norhizam Hassan, Saw Nu Sanda Thein and Rochelle Wigley

MOHAMMAD CHOWDHURY - BANGLADESH

Bangladesh is a low-lying country that is frequently flooded by severe cyclones and seasonal floods. The development of a coast-line Digital Elevation Model (DEM) is important for understanding and modelling inundation scenarios for increased prediction capabilities and aid to disaster preparedness. The objective of this lab visit is to develop a continuous DEM for Bangladesh using both bathymetry and topographic data and to share the DEM with NGDC.

Example of a 2D and 3D DEM for the Chittagong area of Bangladesh developed during visit to NGDC.

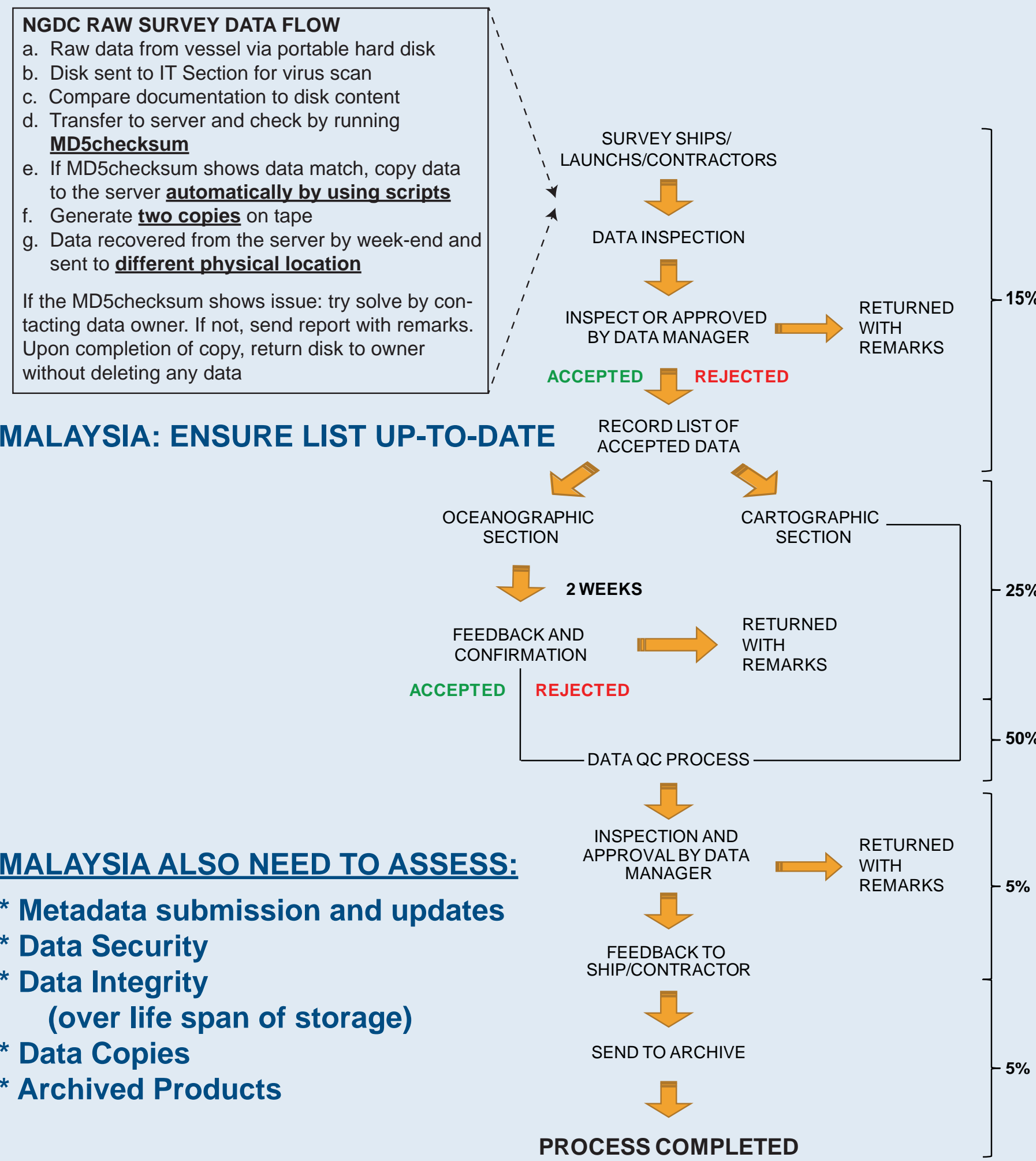


The visit provided information on best practices for DEM generation as well as showing us how to evaluate the DEM model to improve accuracy. The introduction to open source data and software will allow ongoing DEM production at the Institute of Marine Sciences and Fisheries of the University of Chittagong.

NORHIZAM HASSAN - MALAYSIA

NGDC provides scientific stewardship, products, and services for ocean depth data and derived digital elevation models, as well as scientific stewardship, products, and services for the seafloor. The aim of this visit was to understand the procedures used to manage large amounts of bathymetric and global relief data. The knowledge gained will contribute to the development of my home organization and other related government agencies in Malaysia.

UPDATED QUALITY CONTROL FLOWCHART:



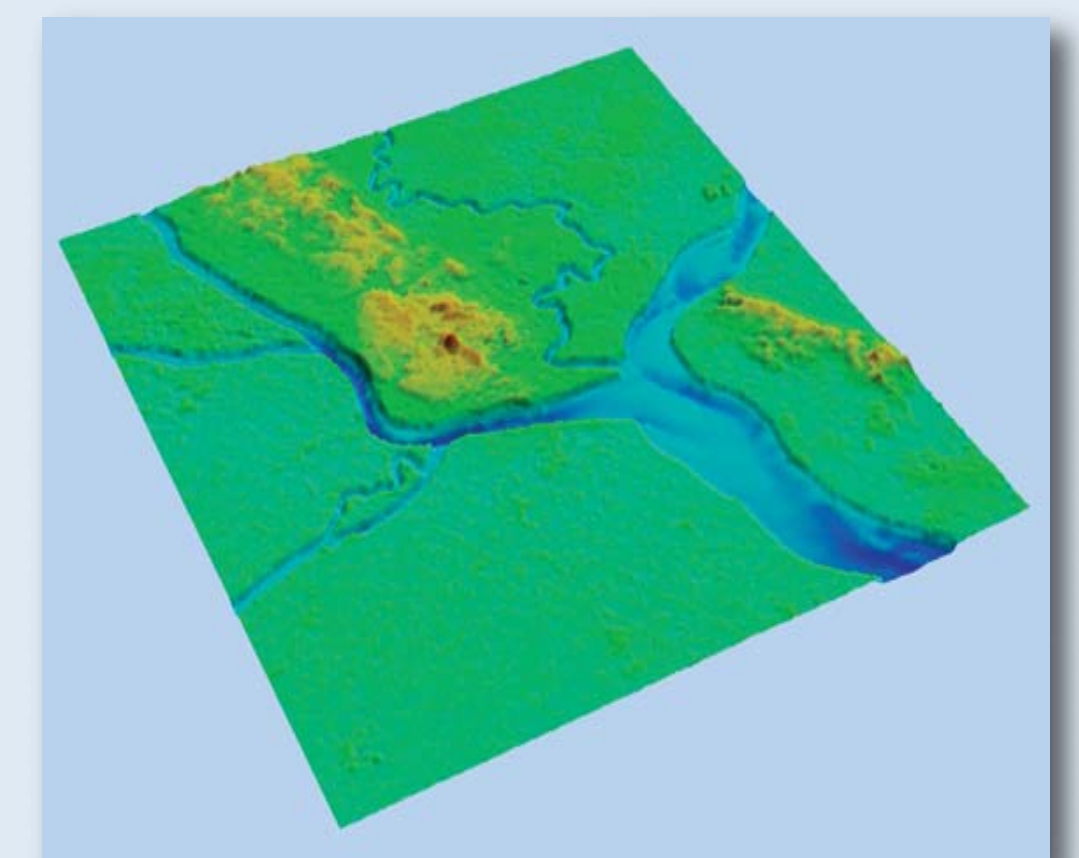
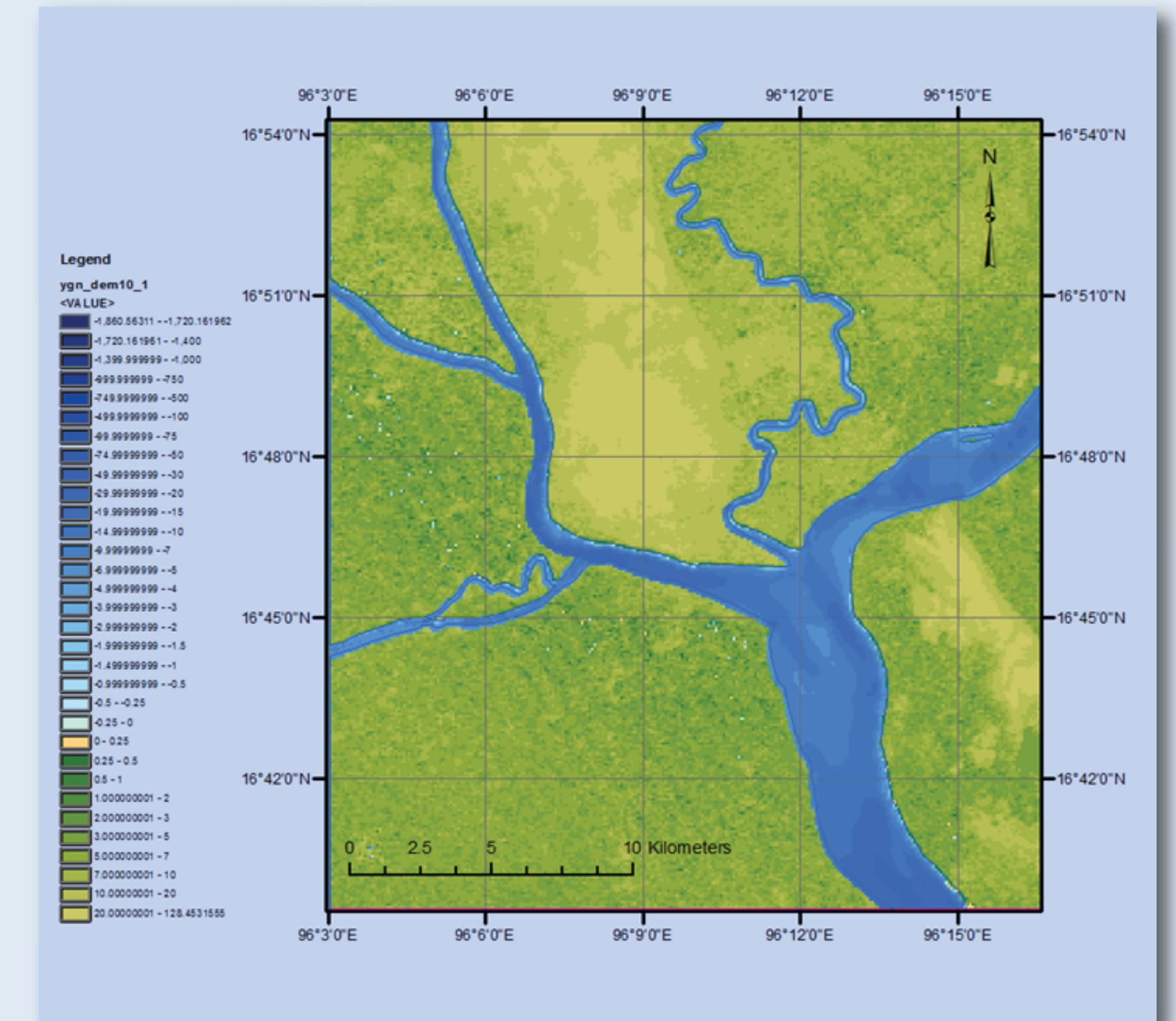
MALAYSIA: IMPROVE USER INTERFACE

This visit allowed an updated data flow procedure for Malaysia to be defined learning from NGDC experience. In addition, data was also gathered for the Malaysia extended continental shelf program and a Oracle database template was developed for the GEBCO / Nippon Foundation Indian Ocean Bathymetric Compilation project.

SAW NU SANDA THEIN - MYANMAR

The development of a coastal DEM for the Myanmar will produce a new product for my country, which can be used as input for the development of storm surge prediction models and tsunami forecasting systems. Yangon was selected as a study area as it has a population of over four million, who are threatened by the natural hazards such as storm surge flooding and tsunamis, and with severe tropical cyclonic storms that occur in the Bay of Bengal region.

Example of a 2D and 3D DEM for the Yangon area of Myanmar developed during visit to NGDC.



This visit assisted in our understanding of many of the problems associated with gridding sparse bathymetric datasets and allowed us to understand the importance of data verification and editing in the generation of a DEM utilising a variety of available software options.