

“Why is satellite derived bathymetry needed?”

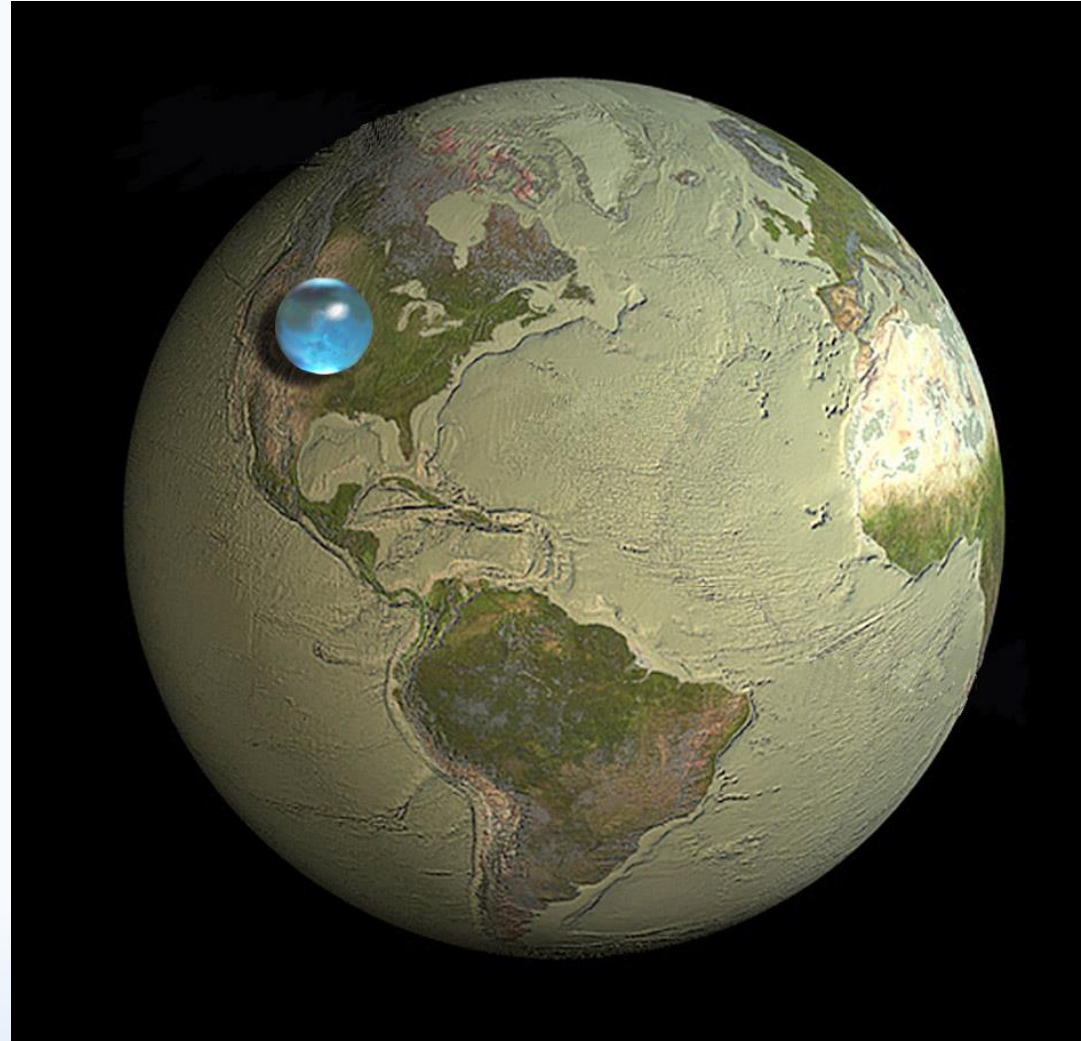
Key note

Mathias Jonas

Secretary-General IHO

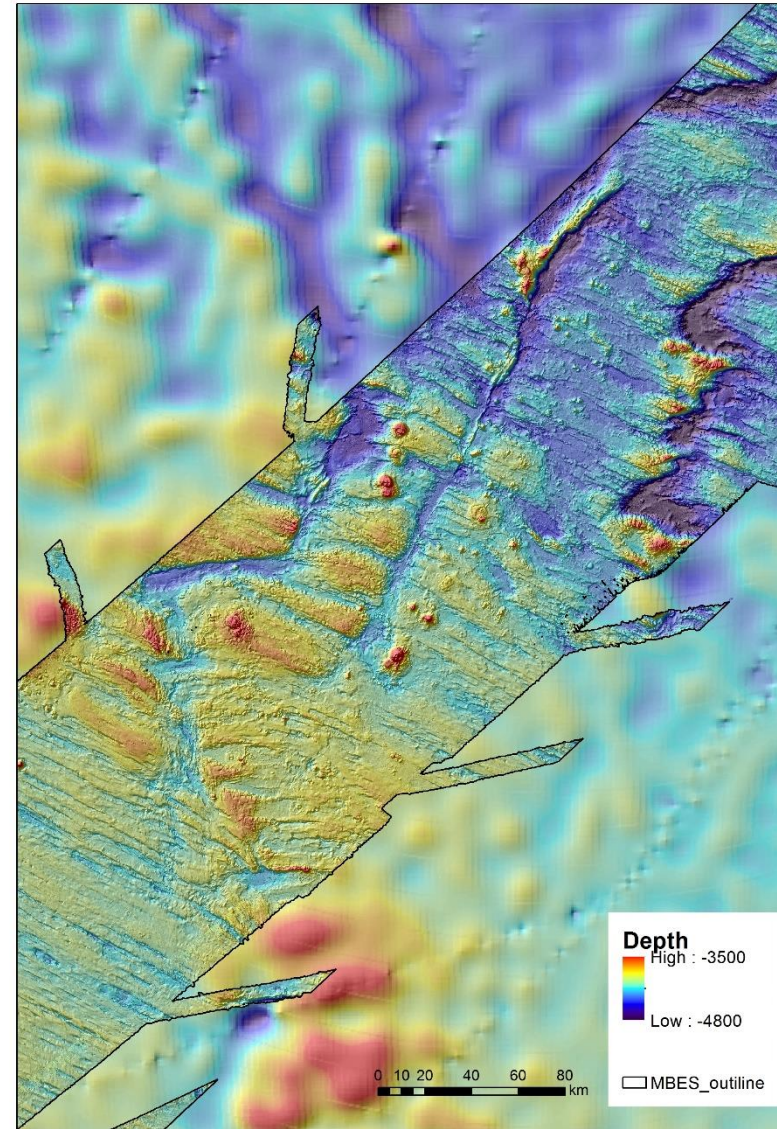


All waters on earth

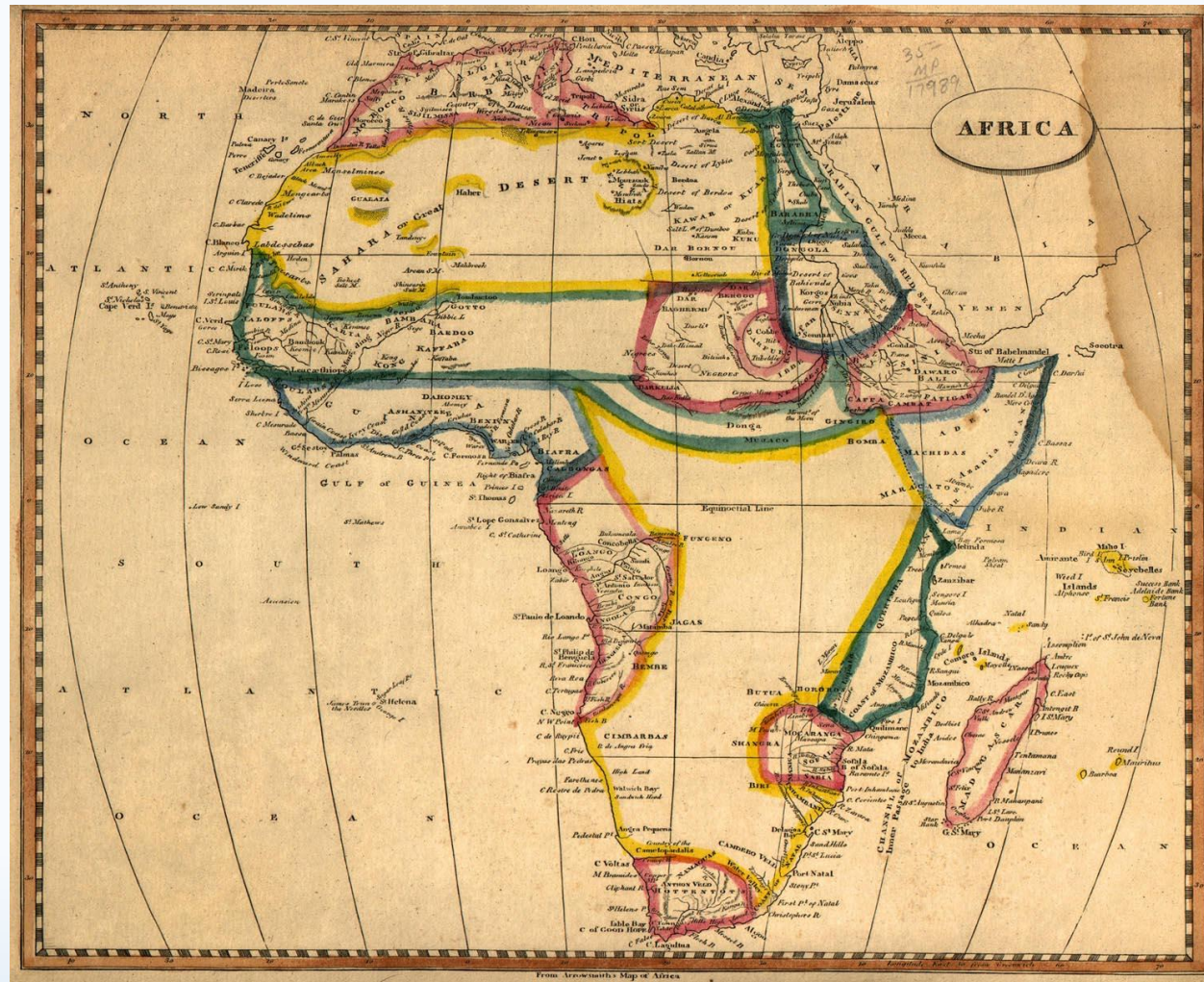


... to achieve greater detail.

Detailed mapping of the MH370 transit areas
(1 % of the Indian Ocean) took
over 2 years with the effort of one
ship.



The cartographic challenge of the 19th Century



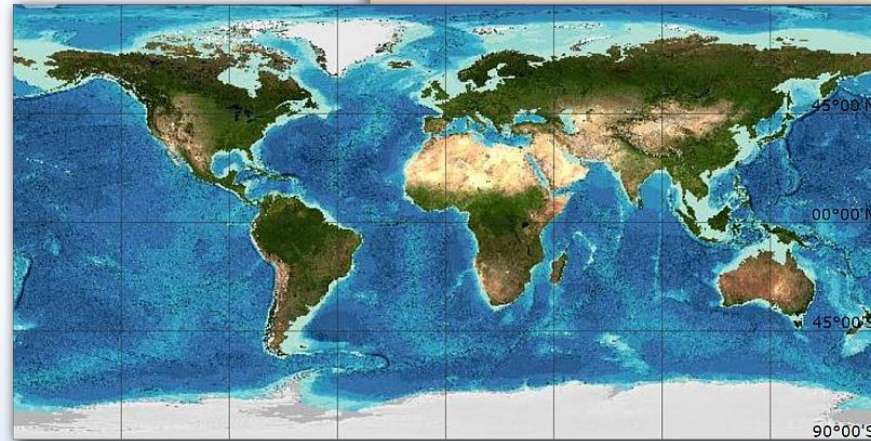
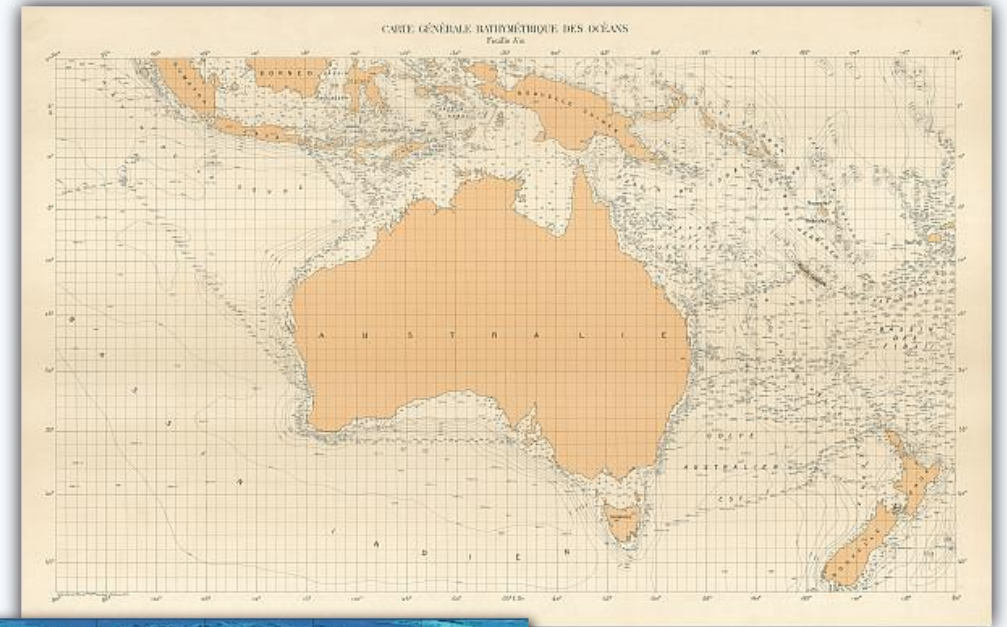
20th Century idea: GEBCO – General bathymetric map of the oceans

The first edition (also known as the Monaco Chart) took just 7 months to compile and was published in 1903. The lithoprinted maps were presented at the Paris Academy of Science in January 1904 and the Eighth International Geographical Congress held in Washington, D.C later in the year.

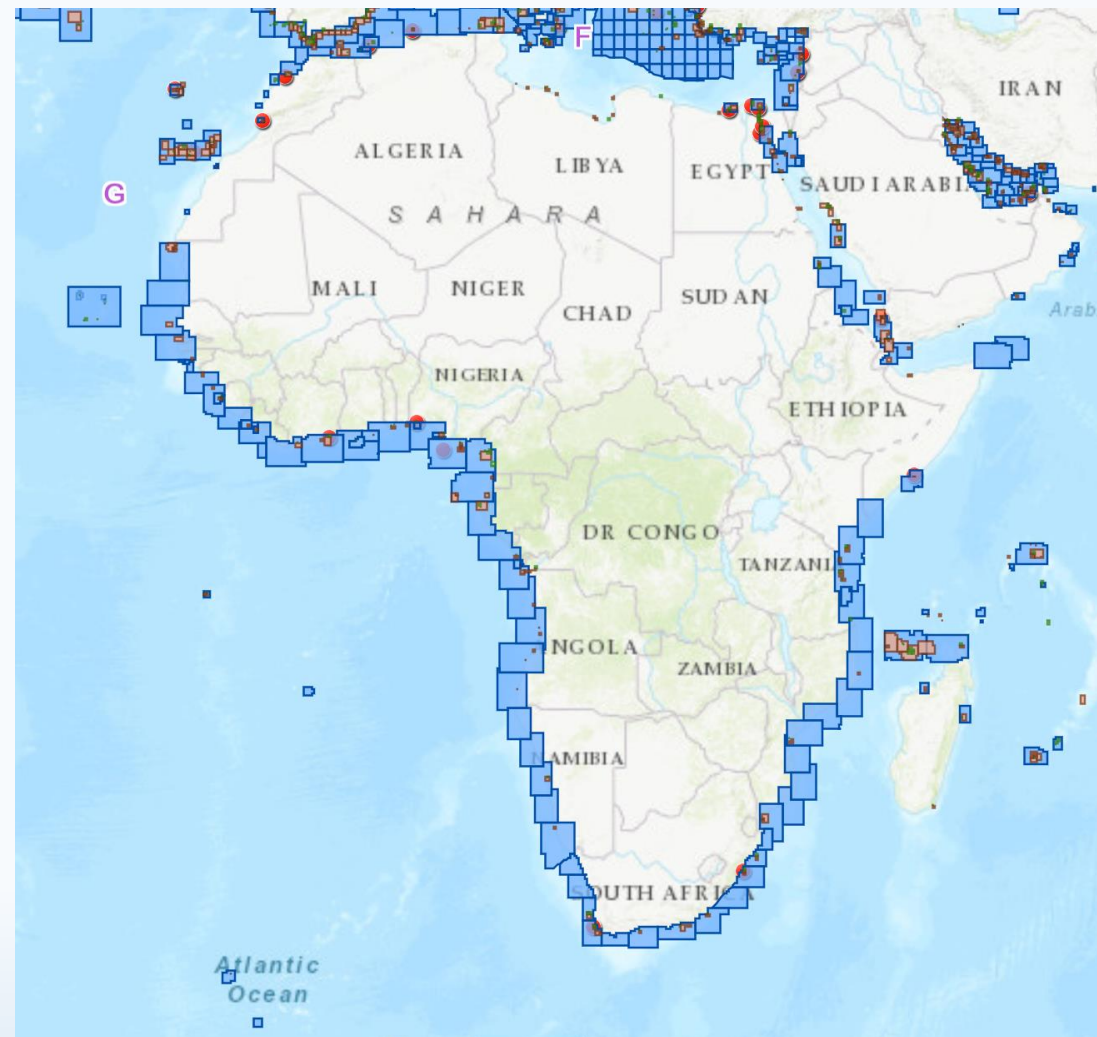
First Edition based on 18 000 measured depths (soundings)

Five editions of GEBCO printed charts that were produced between 1904 and 1982.

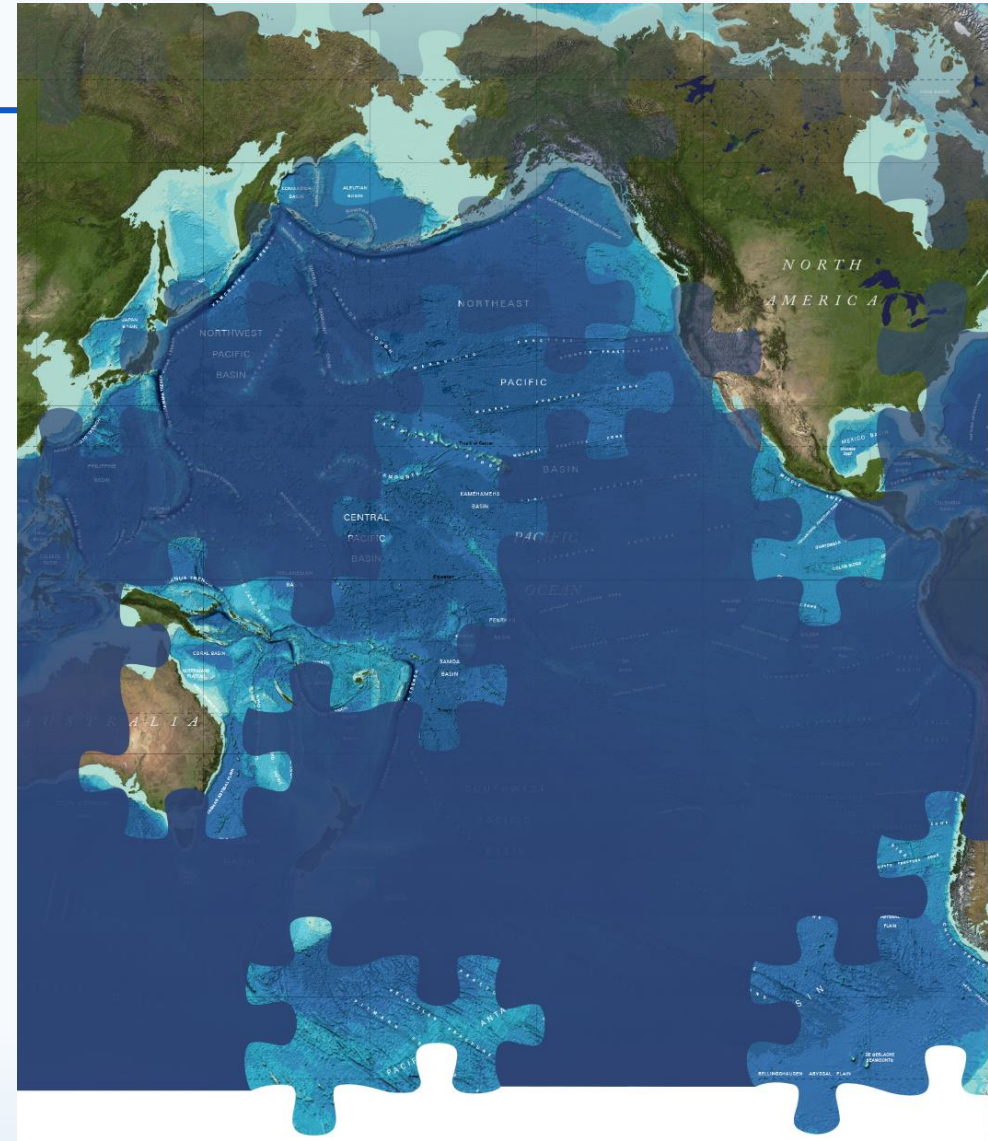
Since the early 1990s, GEBCO has moved to producing and making available digital bathymetric data sets products.



1:80,000 – 1:40,000 scale ENC Coverage (Nov 2017)



The hydrographic challenge of the 21st Century



The Nippon Foundation – GEBCO – Seabed 2030 Roadmap for Future Ocean Floor Mapping

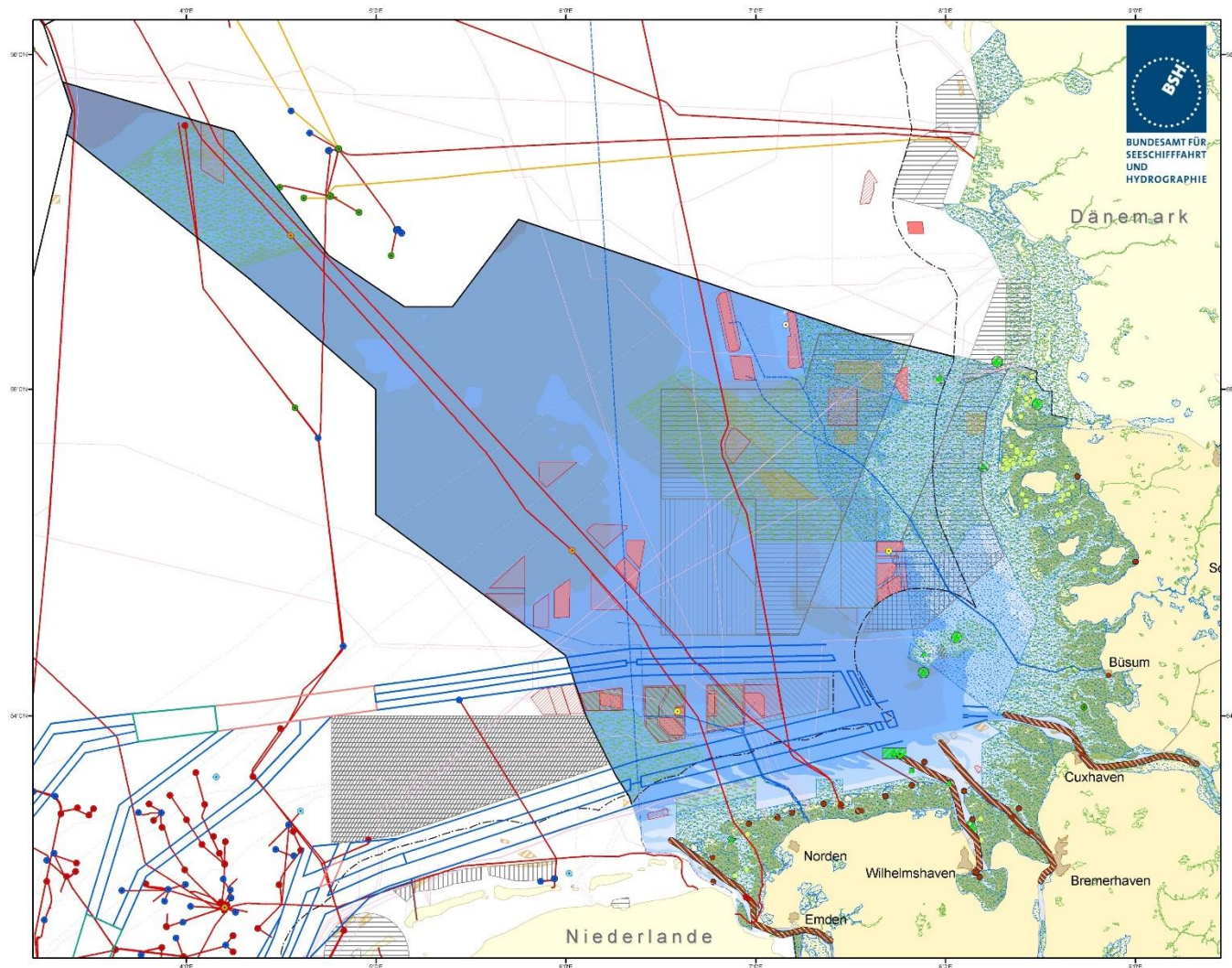


Why do we need dense bathymetry for the deep sea?

- Better basis for oceanographic modelling of the bigger processes (Tsunami warning systems, Climate change)
- Laying sea cables
- Exploitation and exploration (deep sea mining)



SDB is great for shallow waters



SDB is great for shallow waters

- Still to less ship bound survey capacity – especially in remote areas
- Lidar too costly – SDB is comparably cheap
- SDB addresses the problem of high frequent repeated survey
- Increasing interest for shallow waters by an expanding group of stakeholders:
 - Marine spatial planning
 - Coastal management
 - Aqua farming
 - Cabling and pipelines
 - Exploration of minerals
 - Defense
 - Tourism and leisure
 - All sorts of biologic sciences



... to complete our image of the earth.

“Did sea define the land or land the sea? Each drew new meaning from the waves’ collision. Sea broke on to full identity.”

Seamus Heaney

Irish poet, awarded with the Nobel Price 1995

