

# Crowd-Sourced Bathymetry



# The Problem

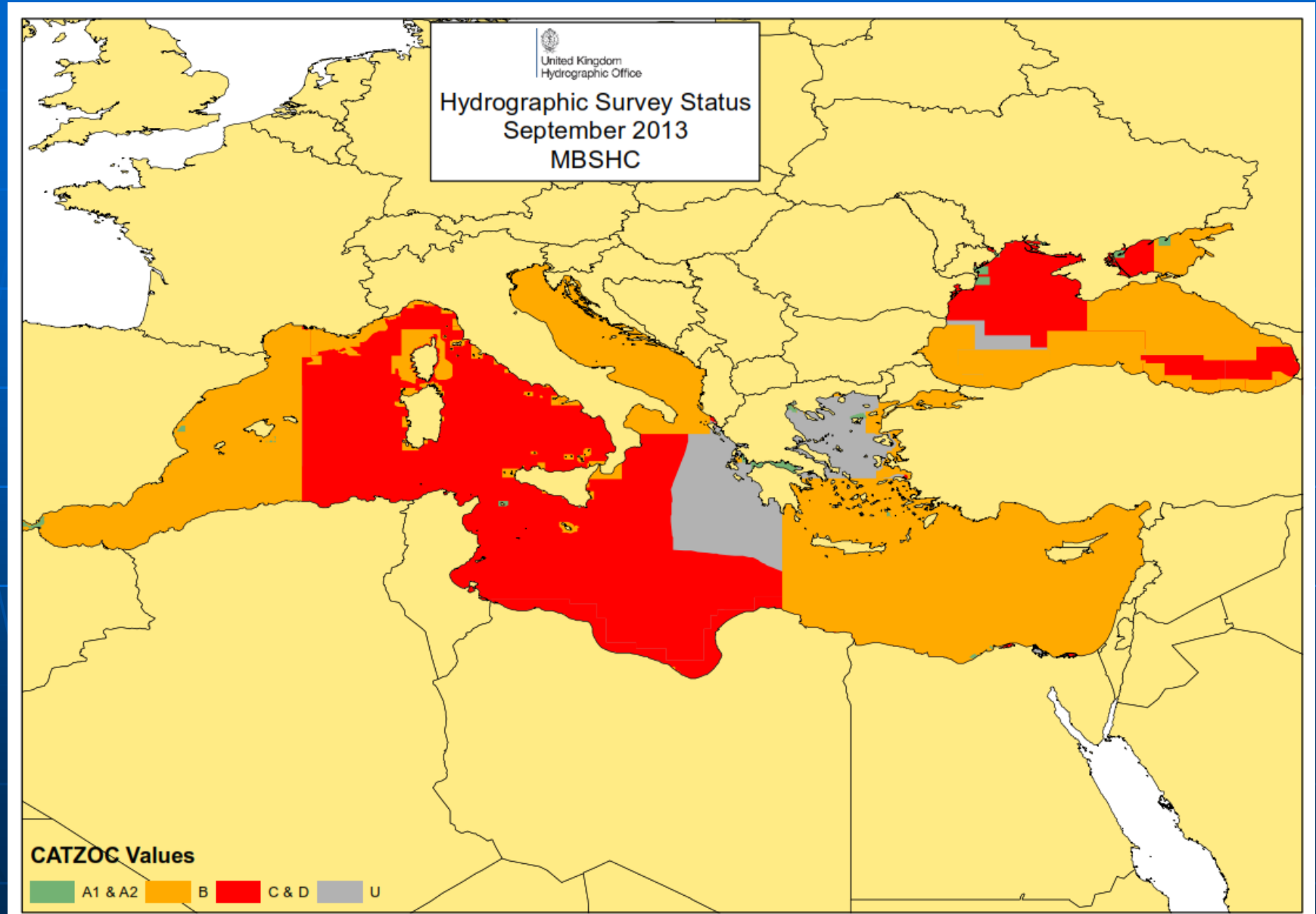
Less than 10 percent of the world's seas and oceans are surveyed to modern standards. There are higher resolution maps of the Moon and Mars than most of the world's sea and ocean areas.

There is no indication of any significant improvement, in the last three decades the numbers of surveying vessels has declined by 34% for offshore vessels and 35% for coastal vessels.

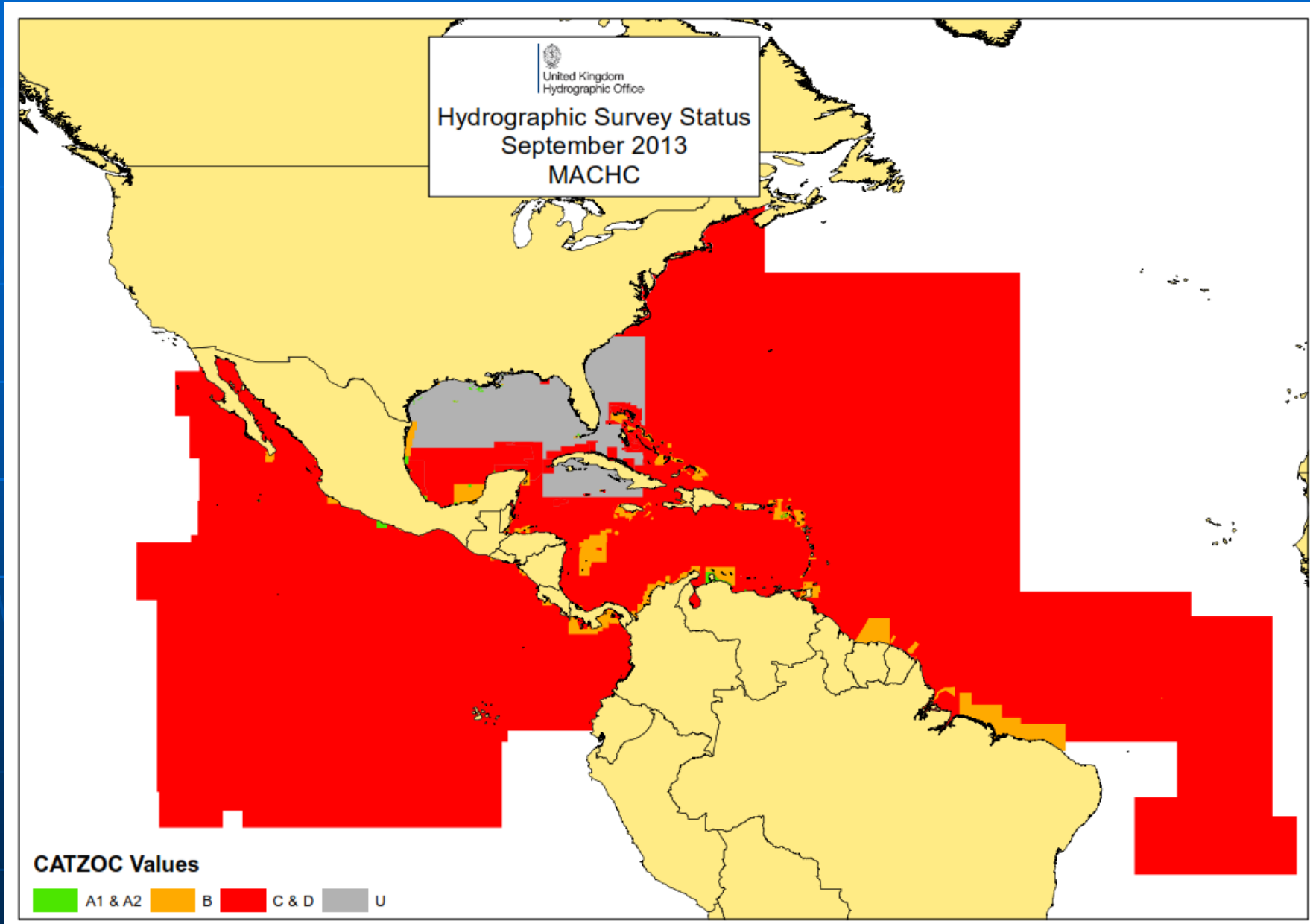
This reduction has not been matched by an increase in capacity through the use of more efficient technology or through governments opting to use commercial surveying contractors.



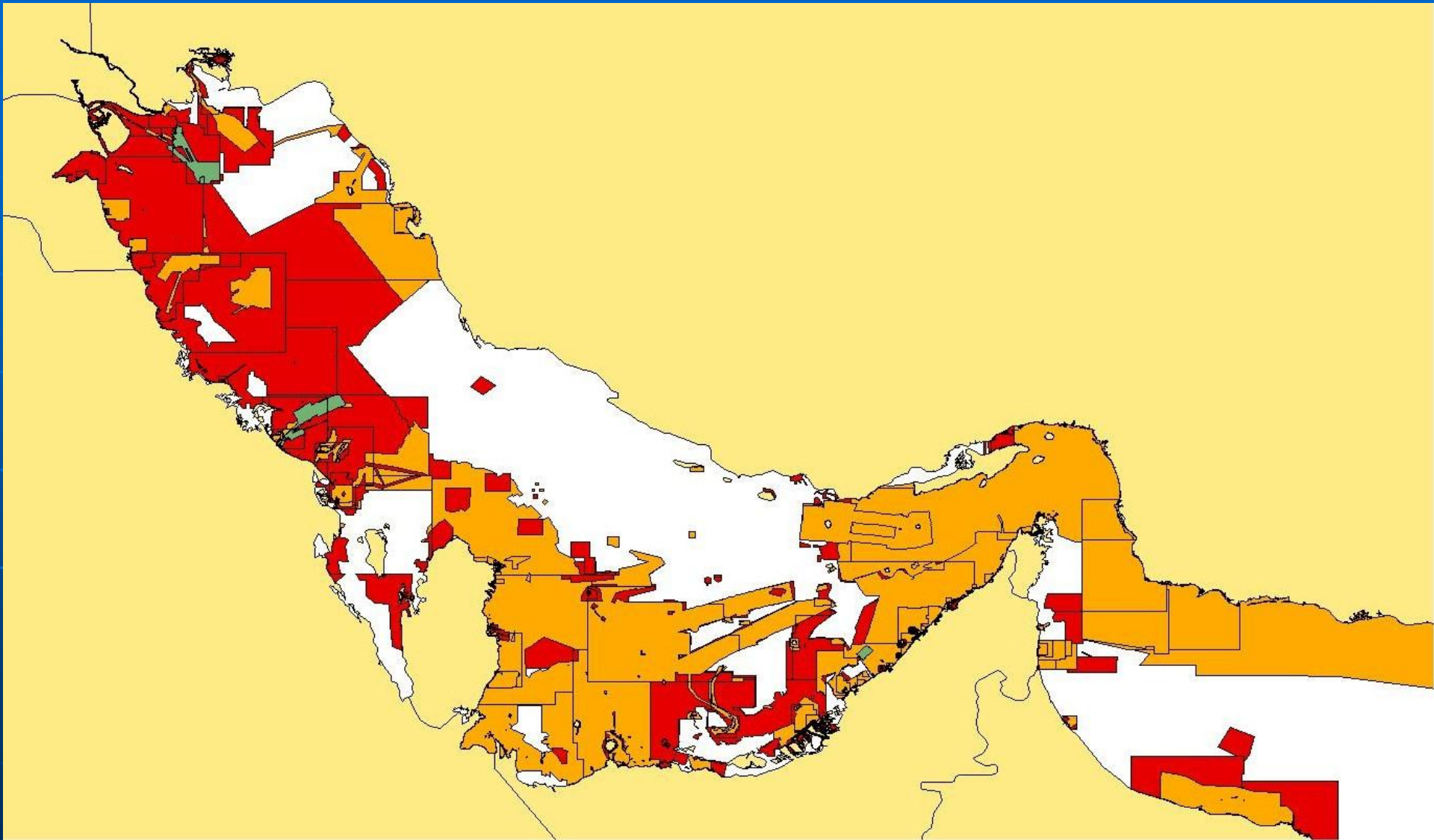
# Data Coverage in Mediterranean Sea



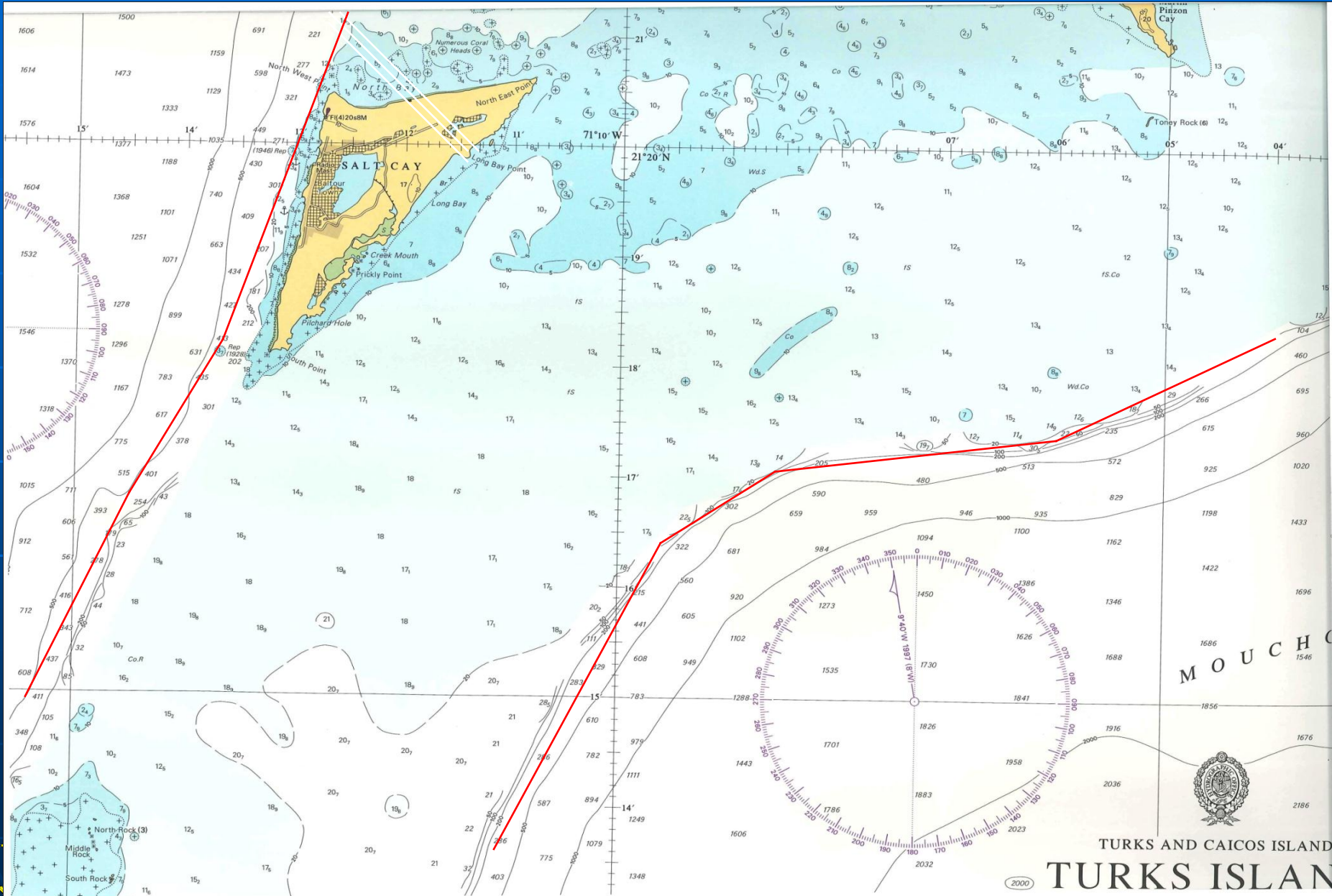
# Data Coverage in Caribbean Sea



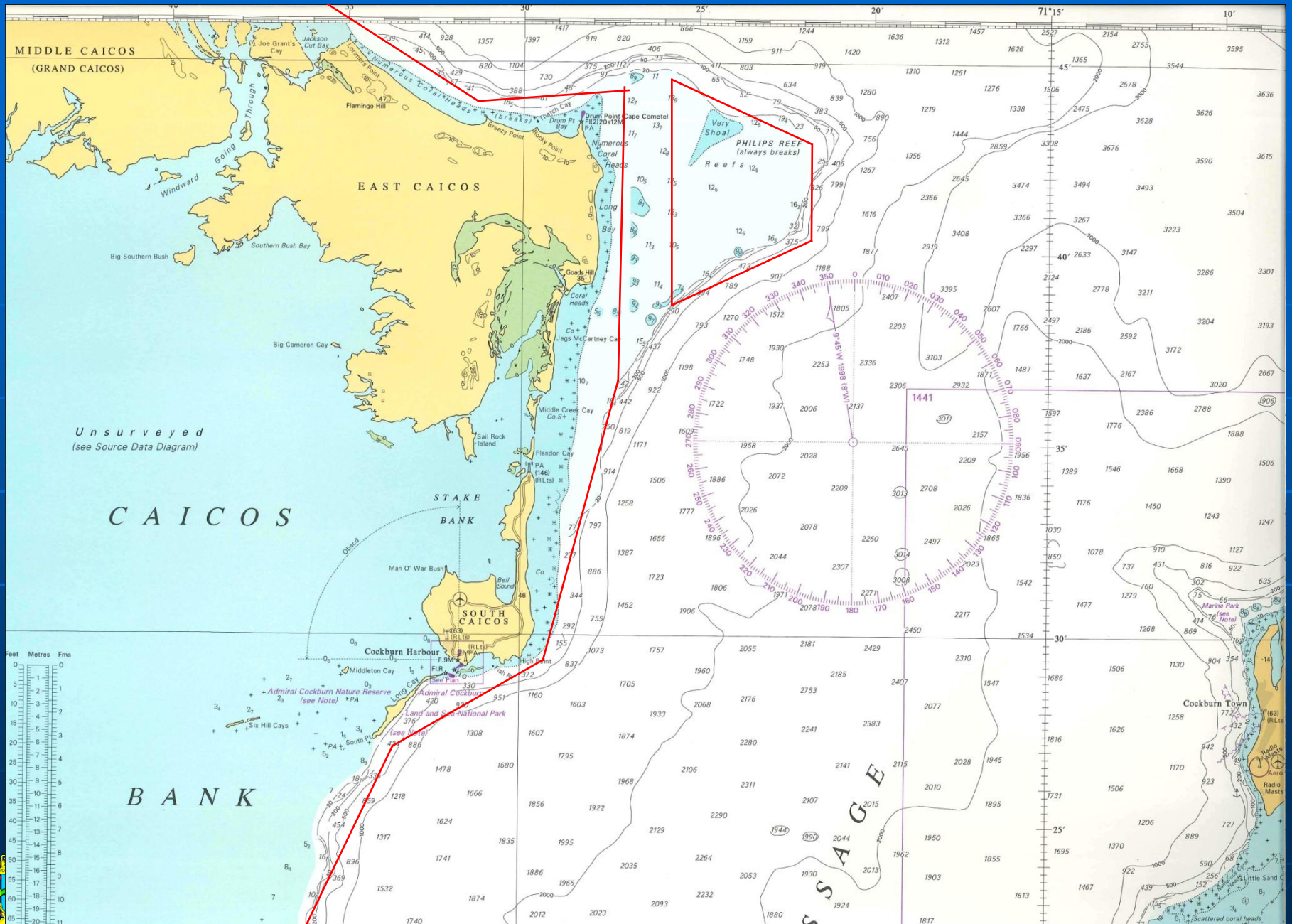
# Data Coverage in Persian Gulf



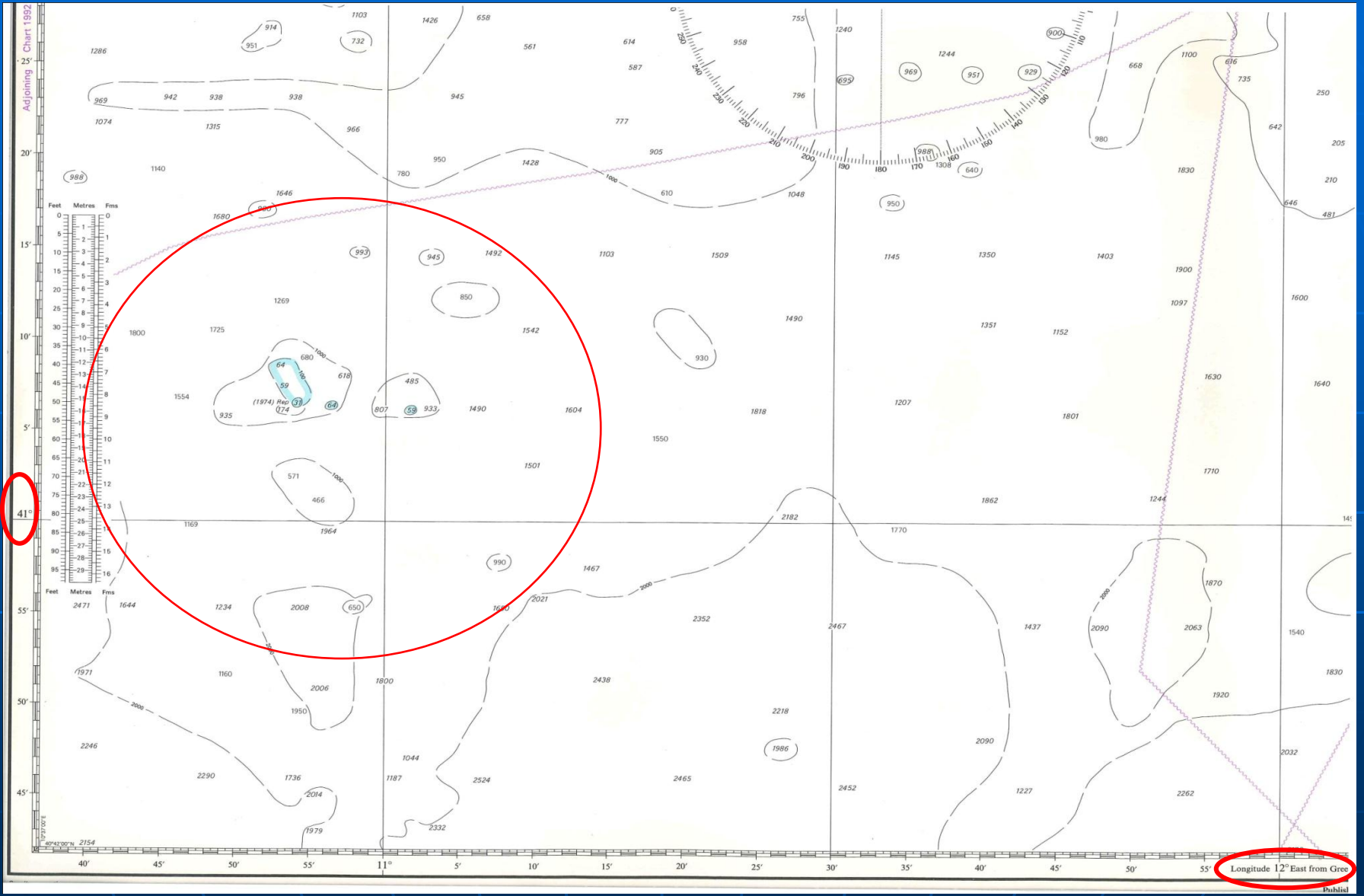
# BA 1441



# BA 1450



# BA 1911

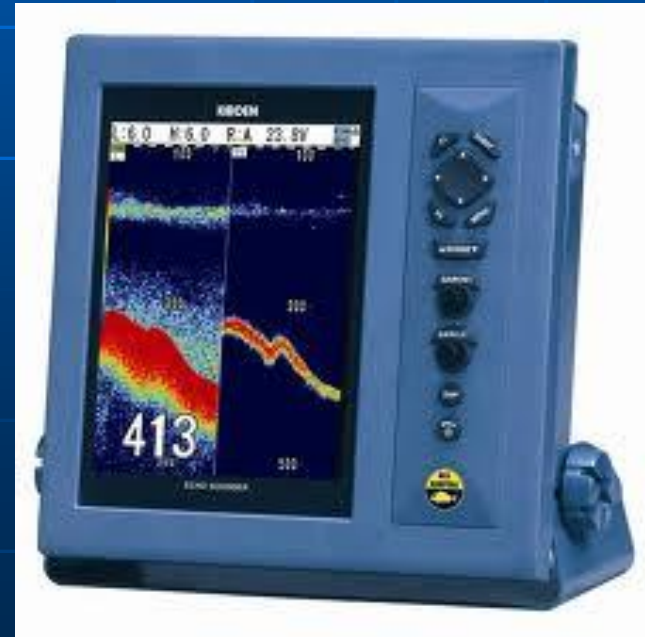
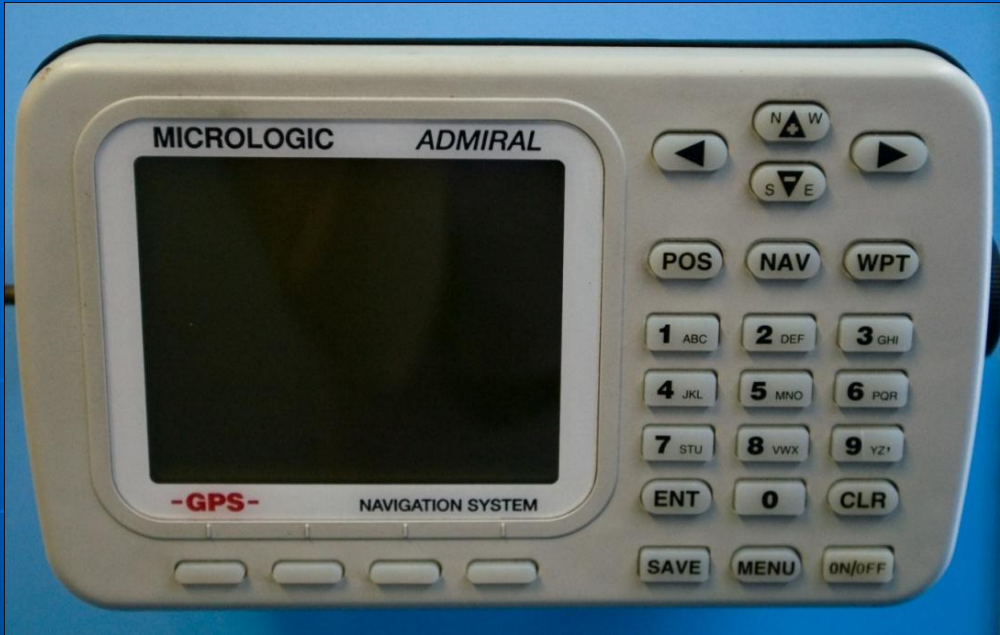




# Modern luxury survey launch



# Modern survey equipment

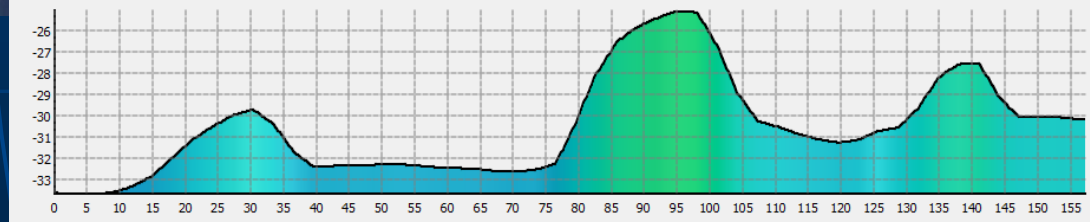
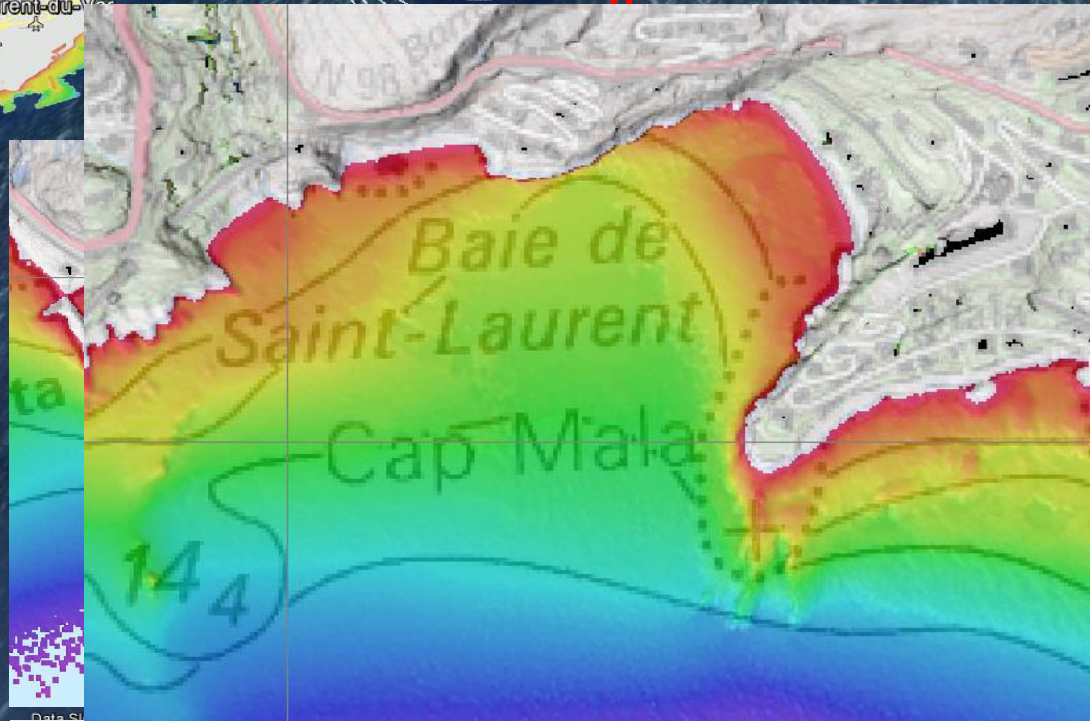
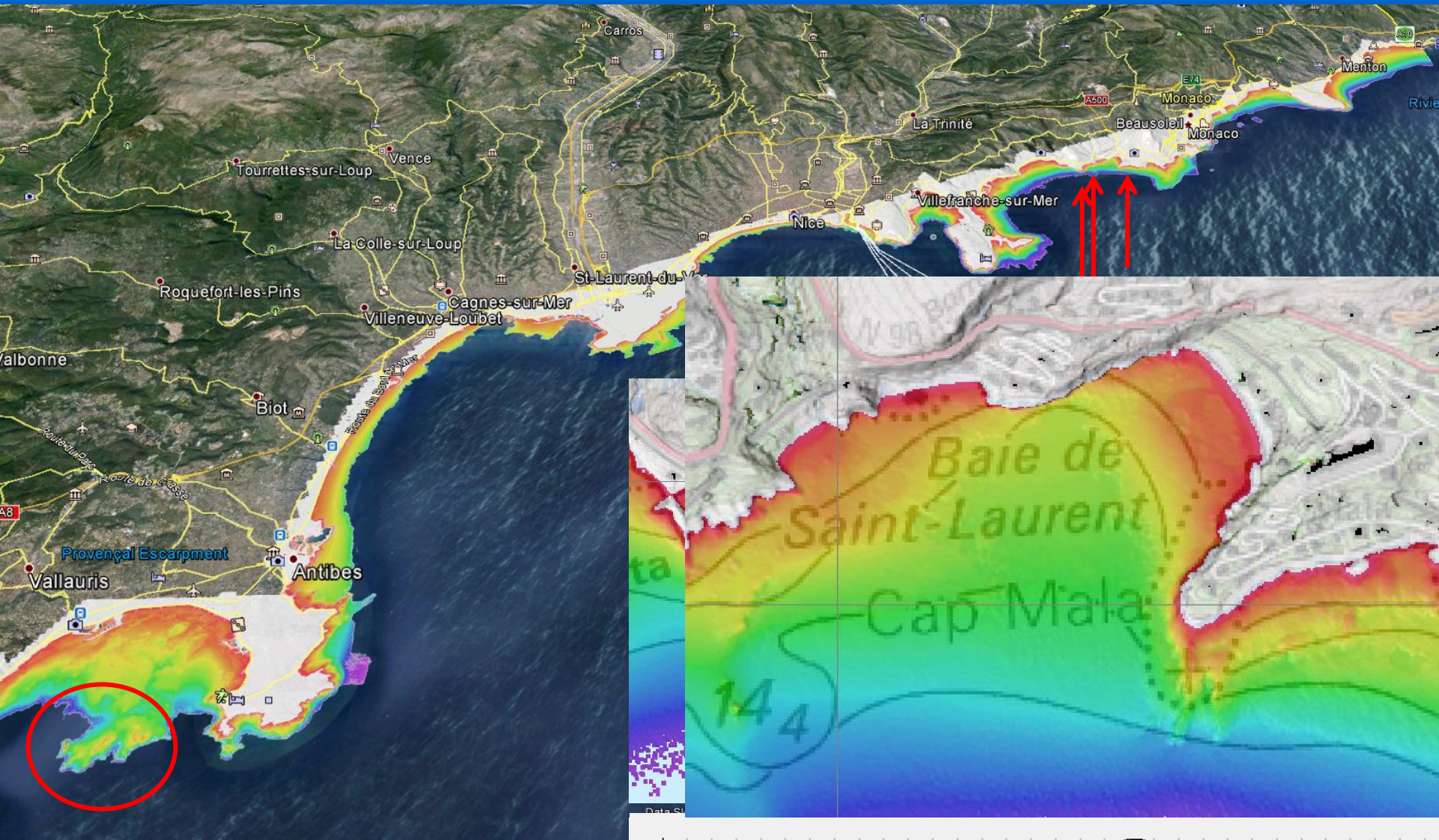


# Crowd-Sourced Bathymetry (CSB)

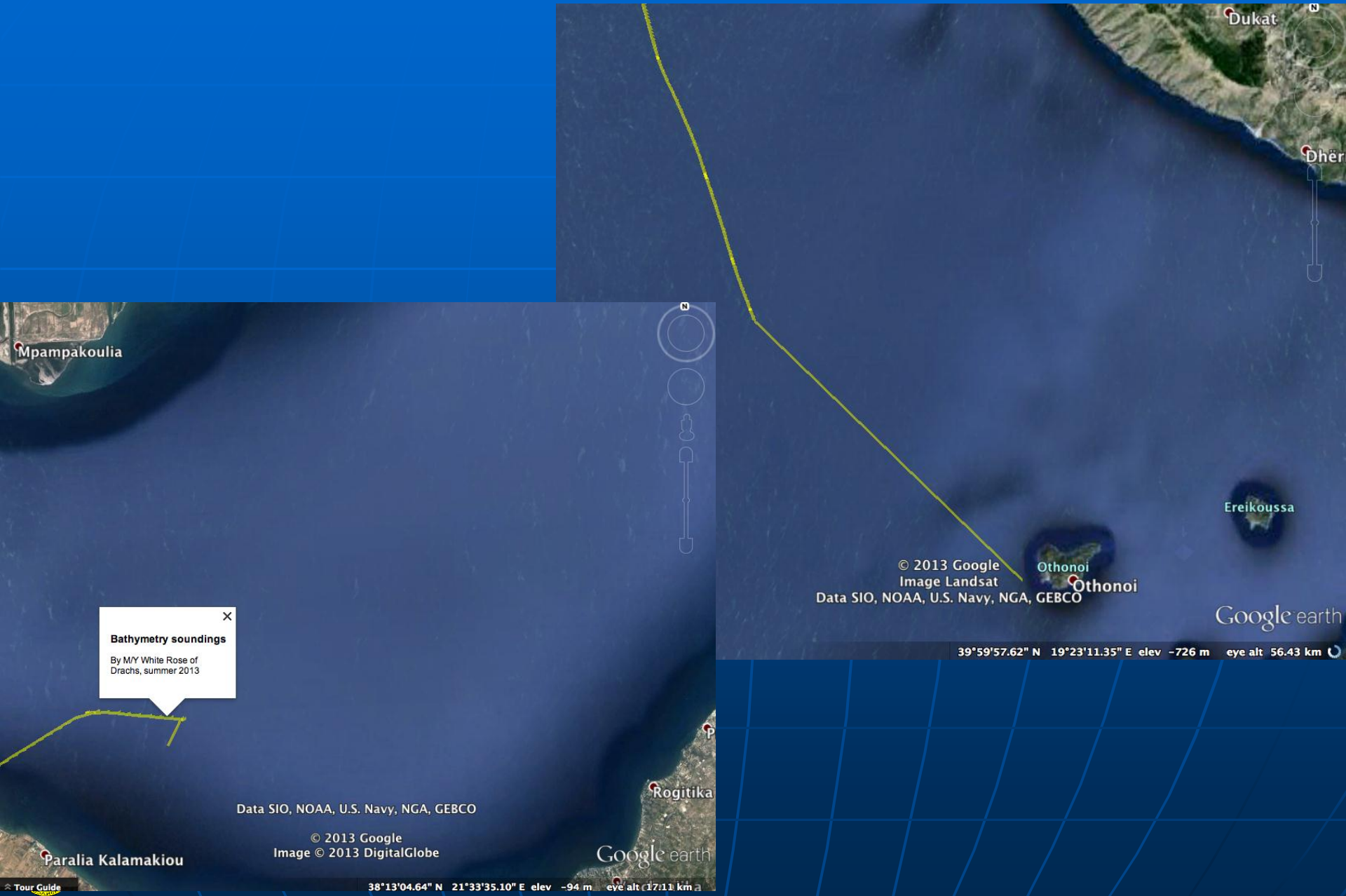
- New IHO initiative
- Mariners self-help programme
- Logger in every ship
- Low cost – high impact
- Starting in 2014 ?



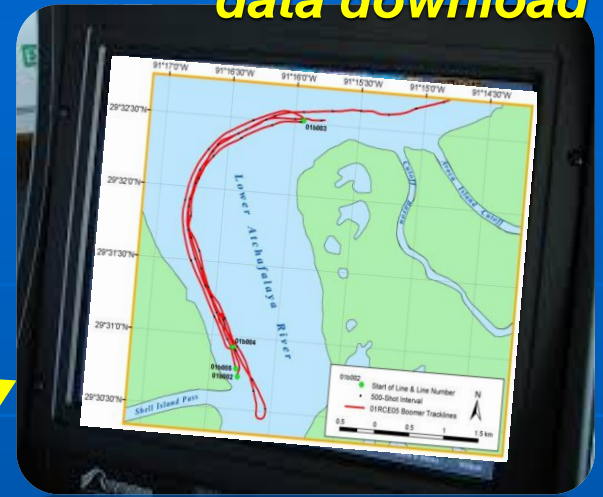
# Potential Confidence Check Sites



# WHITE ROSE Summer Track



# DCDB viewer and data download



Crowd-sourced data

data uploaded at mariners' convenience

near real-time update and view



(if required)



new or revised chart



normal chart updating cycle



Thank you, any questions?

