



# The Lack of Hydrographic Data

- *Crowd-Sourced Bathymetry* -

# Survey and charting status 2013

(source: IHO C-55)

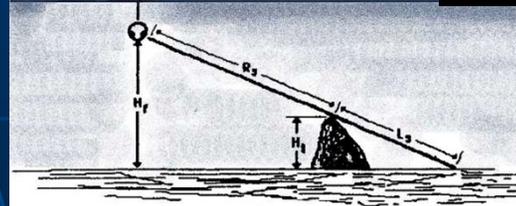
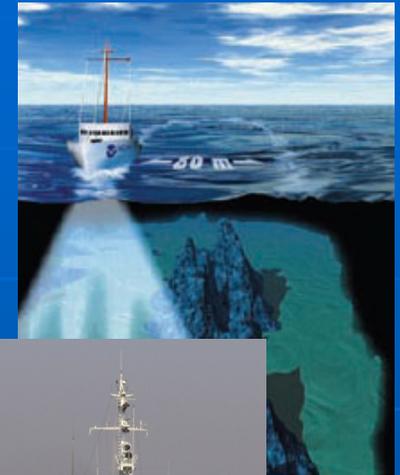
## Unsurveyed or requires better data (0-200m deep)

- SW Pacific >95%
- Polar regions > 95%
- Caribbean >80%
- W. Africa >80%
- Australia ~ 65%
- Greece ~ 65%
- USA ~ 40%
- UK ~ 30%
- France ~ 19%



# Global surveying capacity

- 35% reduction in government fleet in 25 years



# So, what can we do ?

- Raise Awareness
  - States
  - Public
  - Mariners
- More hydrographic capacity building – technical cooperation – IHO-IMO-IALA



- Encourage increased data collection
  - Holistic government survey and data gathering programmes
    - Infomar (Ireland)
    - Mareano (Norway)
    - EMODNET (EU)
    - .....
  - “Gathering data for the common good”
- *Crowd-sourcing* programmes using mariners
- Satellite derived bathymetry



# IHO Crowd-Sourced Bathymetry (CSB)

- Low cost – high impact
- Commercial programmes exist
- Non commercial
  - IHO - led
  - community based
- IHO/PYA initiative
- Concept trials starting 2014
- Aim: a logger in every professionally crewed ship

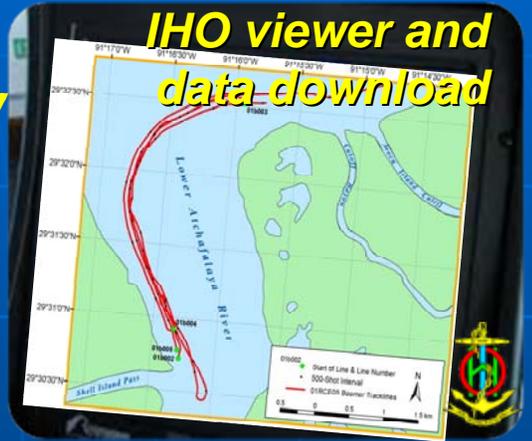


- Mariners' self-help programme
- Not new
- Not a replacement for surveys
- Issues:
  - Liability ?
  - Quality and reliability ?
- Is some data better than no data ?
- What is the alternative ?!





**Crowd-sourced data**



*data uploaded at mariners' convenience*

*near real-time update, view or download*



*(if required)*



*normal chart updating cycle*



*new or revised chart*

**IHO Data Centre for Digital Bathymetry**



# CSB: Issues to be addressed

- assessing CSB data quality for use in charts
- portraying CSB data in charts
- exposure to liability
  - observers
  - publishers





Higher resolution maps of the Moon and Mars ....

So, doing nothing is not an option