

# TSCOM XXX Activities and Preoccupations

7 October 2013  
Venice, Italy

# TSCOM Topics

- TSCOM leadership issues
- TSCOM Goals
- Science Day
- IHO-IOC GEBCO Cook Book
- Progress on the GEBCO grid:
  - Updating (continue using SRTM 5 base, add new regional compilations)
  - Data Store (tested, status quo)
  - Metadata and Attributions (Pauline Weatherall)
  - 100 m Grid (Multi-scale resolution)(Vicki Ferrini)
  - Data access portals (EMODNet; Eric Moussat)
  - Public Display (Google, Jennifer Austin Foulkes)
- Suggested break-out sessions

# TSCOM leadership issues

- Walter Smith has been Chairman since 2004 (9 years)
- Karen Marks and Bruce Goleby appointed Interim Co-Chairs of TSCOM at 2012 GEBCO GC Meeting
- In August 2013, Interim TSCOM members were appointed and tasked with:
  - preparation of formal nominated membership list
  - developing goals
  - electing new chairperson

# TSCOM Terms of Reference (ToR)

- TSCOM reports to Joint IOC-IHO GEBCO Guiding Committee (GGC)
  - Works to maintain and improve GEBCO products
- TSCOM normally consists of up to 10 members appointed by the GGC
  - Members are expected to attend every meeting
  - Absences for two consecutive years are normally considered to have resigned and new nominations are sought
  - A quorum is 6 members
  - Members appointed for 5-year periods, renewable with approval
- Chairperson and Vice-Chairperson elected by the Sub-Committee subject to GGC endorsement
  - Elected for 5 year periods
  - Normally Vice-Chairperson succeeds Chairperson
  - May be re-elected by the Sub-Committee for additional 5 years
- Scientific Advisors, individuals, entities, and organizations may contribute with observer status

# Interim TSCOM members

- Jenifer Austin Foulkes – Google Earth, USA
- Vicki Ferrini – LDEO, USA
- Bruce Goleby – Geoscience Australia
- John Hall – Geological Survey of Israel
- Timothy Kearns – OneOcean Corporation, USA
- Karen Marks – NOAA, USA
- Marzia Rovere – Istituto di Scienze Marine, Consiglio Nazionale delle Ricerche, Italy
- Thierry Schmitt – SHOM, France
- Walter Smith – NOAA, USA
- Shin Tani – Hydrographic and Oceanographic, Coast Guard, Japan
- Pauline Weatherall – British Oceanographic Data Center, UK

# TSCOM Goals

- GEBCO Digital Atlas – Pauline Weatherall
- Metadata and Attribution – Pauline Weatherall, Tony Pharaoh
- Common Data Store – Tim Kearns
- Connecting to High Resolution Data – Thierry Schmitt, Marzia Rovere
- 100 m Grid, Multi-scale resolution- Vicki Ferrini
- Public Display – Jenifer Austin Foulkes
- IHO-IOC GEBCO Cook Book – Karen Marks
- Science Day – Paul Elmore

# Status of Interim TSCOM member Tasks

- Interim TSCOM members submitted formal nominated members list to Guiding Committee
- TSCOM goals matched with member's interests
- Election of new chairperson to be discussed

# Science Day

- The 8<sup>th</sup> Annual GEBCO Bathymetric Science Day will be held on Oct. 8, 2013 at the Istituto di Scienze Marine
- Paul Elmore is the Science Day coordinator, Marzia Rovere and Federica Foglini are the local coordinators, and Pauline Weatherall the GEBCO webmaster
- 15 oral and 16 poster presentations scheduled for science day
- Science Day is a popular feature of the GEBCO meetings

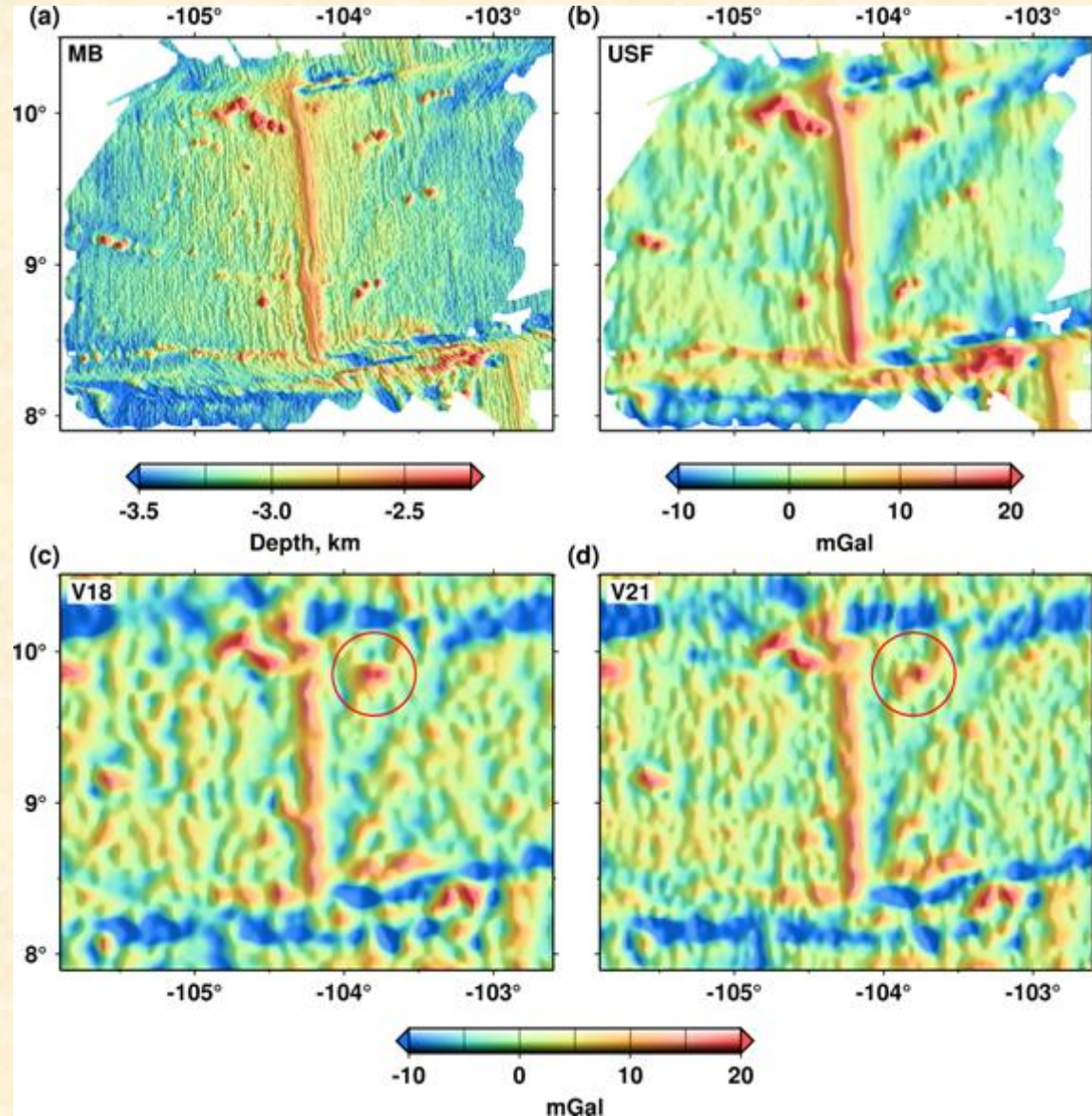


# Updating GEBCO\_08

- GEBCO\_08 is a continuous terrain model for ocean and land on a 30 arc-second grid available on [www.gebco.net](http://www.gebco.net)
- Ocean portion of current GEBCO\_08 version is based on SRTM30\_Plus V5
- SRTM30\_Plus is a 30-arc second global topography/bathymetry model based on Smith & Sandwell's bathymetric model that combines depths estimated from altimetric gravity with ship soundings
- Updates to the GEBCO\_08 grid:
  - continue to use SRTM30\_Plus V5
  - add new surveys and bathymetric compilations

# Future bathymetric models should improve with better marine gravity fields

- Recent satellite data added to marine gravity field V21
- Gravity anomalies from seafloor are:
  - more accurately located
  - better resolved
  - abyssal hill trends are emerging
- Future bathymetric models should improve



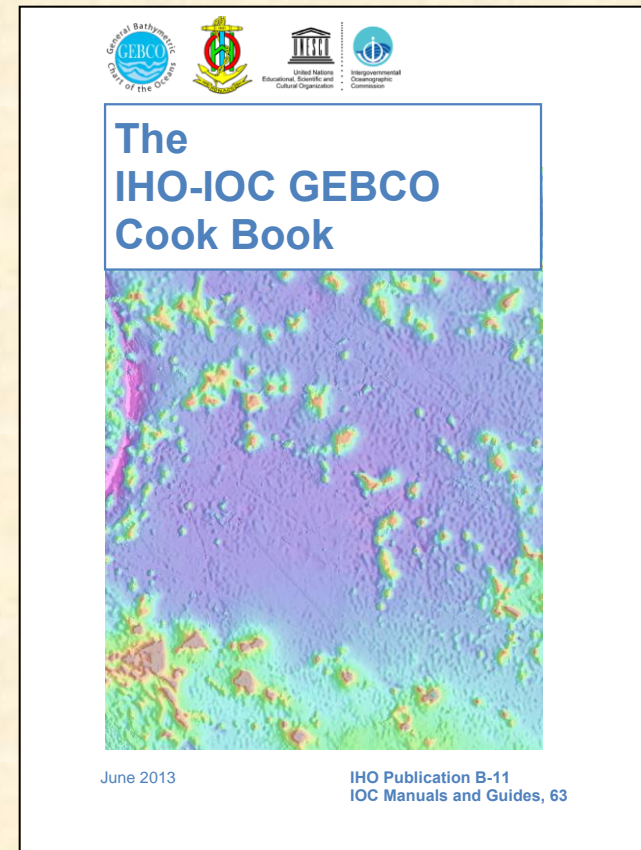
# Documenting GEBCO\_08 in journal article

- Discussions at 2012 GEBCO meeting included documenting GEBCO\_08 in a refereed journal
- Editor of Marine Geophysical Research indicated suitable for “Data Note” submission
- Break-out session suggested on this topic

# IHO-IOC GEBCO Cook Book

At the 2009 GEBCO 25<sup>th</sup> Meeting of TSCOM, the “Cook Book Working Group” was formed to “create a manual that enables users to prepare and grid data for inclusion in GEBCO products,” resulting in:

- IHO-IOC GEBCO Cook Book published:
  - IHO Publication B-11 (April, 2012)
  - IOC Manuals and Guides, 63 (Oct. 2012)
- Available for Download: <http://www.gebco.net>
- EOS “News Brief” announcing Cook Book was published in EOS Trans. AGU, Feb. 2013
- Continually updated with new contributions, current version June 2013
- Used as educational resource, including:
  - UNH CCOM/JHC Ocean Mapping classes
  - Texas A&M University
  - used internationally



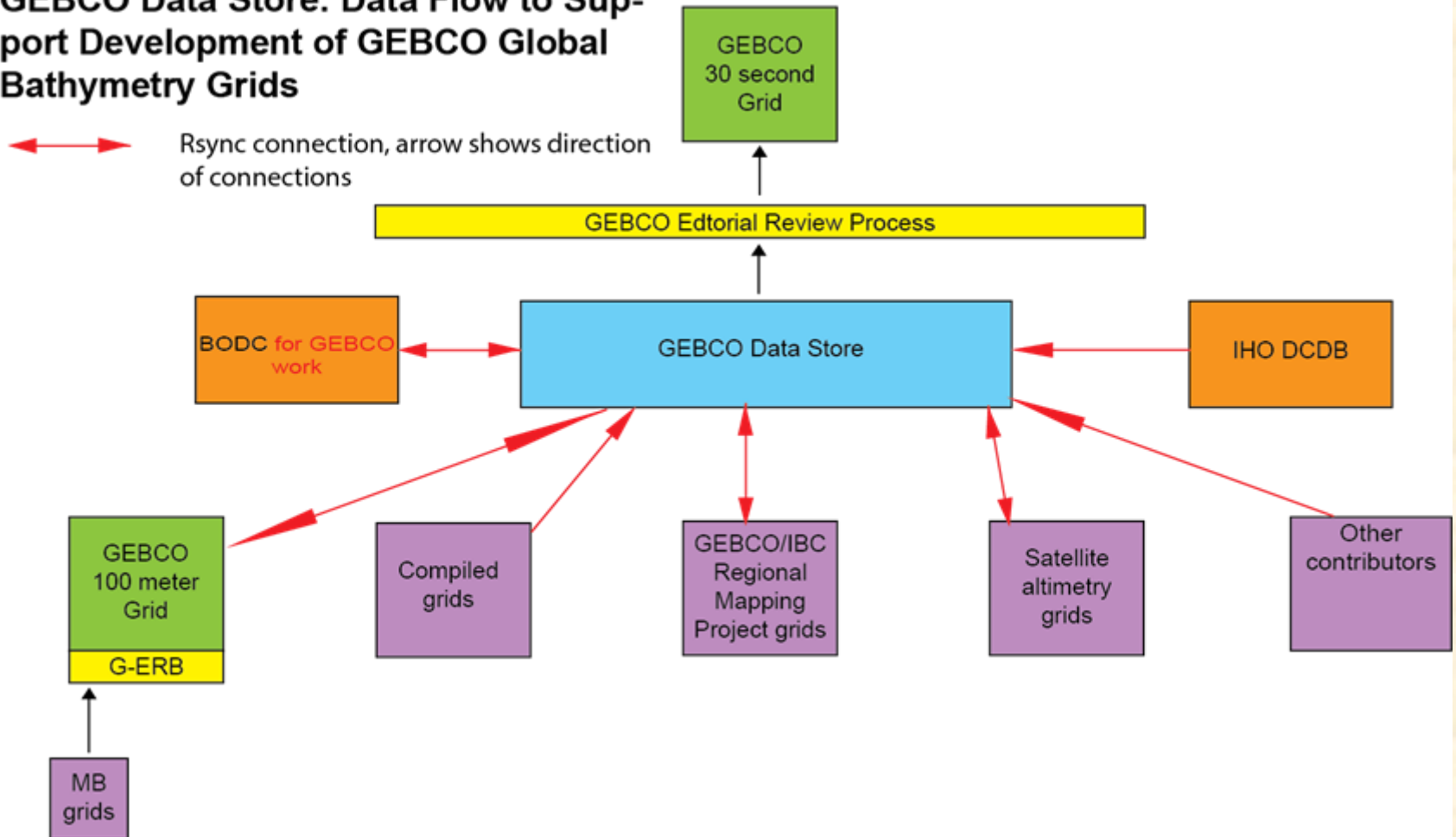
See poster at  
GEBCO Science Day

# GEBCO Data Store

- At the 2011 GEBCO meeting, NGDC agreed to set up a “GEBCO Data Store” to provide access to trackline and gridded data used to produce the GEBCO grid
- Reported at GEBCO 2012:
  - NGDC successfully pulled cleaned bathymetric trackline data from Scripps machine, demonstrating rsync worked
  - NGDC coordinated with BODC to set up a direct rsync with the GEBCO Data Store
  - BODC successfully pulled data from the GEBCO Data Store
- Status quo

# GEBCO Data Store

## GEBCO Data Store: Data Flow to Support Development of GEBCO Global Bathymetry Grids

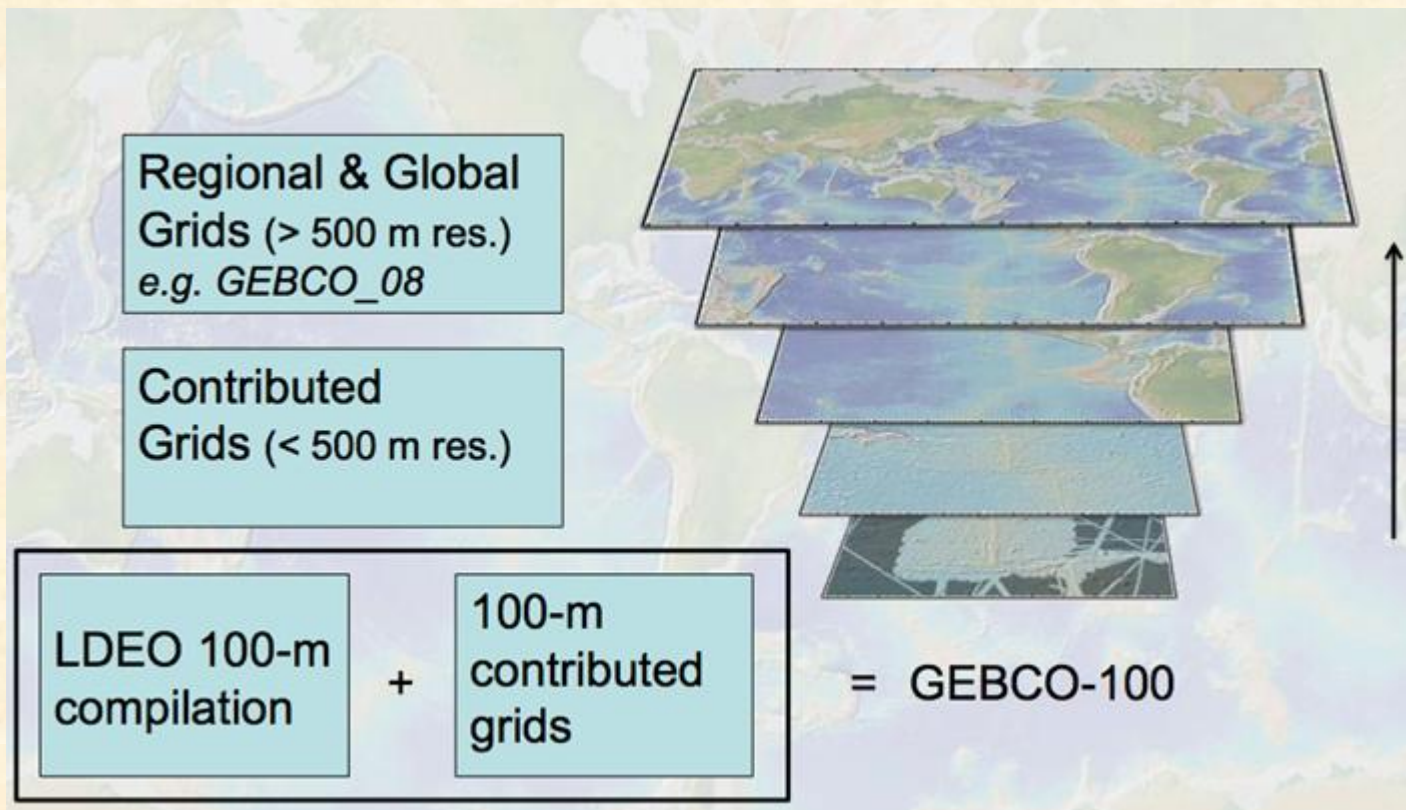


# Metadata

- **SID grid accompanies GEBCO grid**, it identifies which cells are based on existing surveys or are interpolated
- GEBCO has adopted the system used by SRTM30\_Plus team at SIO: **each survey has a unique SID number, which ties it to a corresponding survey metadata record**
- Original list of SID **metadata fields has been extended to include more information**
- **Work is underway to make a queryable Web Map Service (WMS) for the SID grid** that will allow users to click on a pixel to access metadata records for the contributing survey that provided the GEBCO\_08 depth value at that point
- Status report to be presented by Pauline Weatherall

# GEBCO 100

- Prototype effort to create new GEBCO product at 100 meter resolution
- Global grid (GEBCO\_08) combined with LDEO compilations and contributed grids
- Users can zoom-in, view data source attributes, and access data
- Global Multi-Scale Resolution Topography (GMRT) status will be presented by Vicki Ferrini





# Data Access Portals

- EMODNet Hydrography portal provides views and access to bathymetry surveys of Europe's sea basins
- Techniques may aid GEBCO development
- EMODNet status will be presented by Eric Moussat

**EMODnet** Pilot portal for Hydrography  
European Marine Observation and Data Network

EMODNET Pilot approach Metadata & Data Data products Promotion Partners

**More than 8400 survey datasets from 14 data centres and 114 data originators have been collated into regional EMODnet DTM's that are available for viewing and downloading via the Hydrography Products portal service <http://www.emodnet-hydrography.eu/>**

**The new EMODNET bathymetry action (2013-2016) will increase the resolution of the DTM from 1/4 to 1/8 minute for all European sea regions**

**The consortium expanded with new partners and associate partners, including GEBCO**

# Suggested Break-out Sessions

- Updating the GEBCO\_08 grid- techniques
- Metadata, attribution, multi-scale processes
- Crowd-sourcing
- Documenting GEBCO grid in journal article

End of presentation