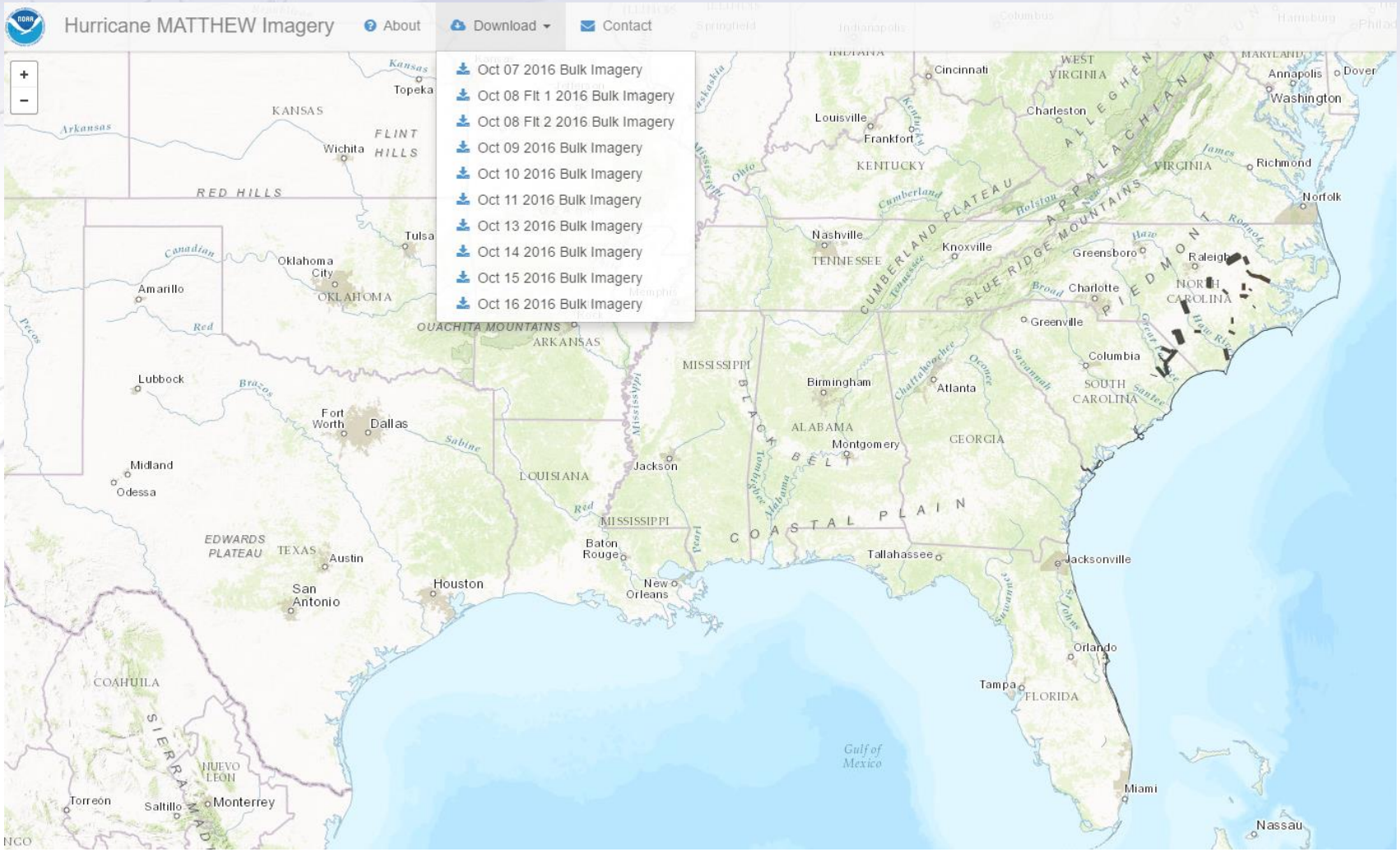
Satellite Derived Bathymetry

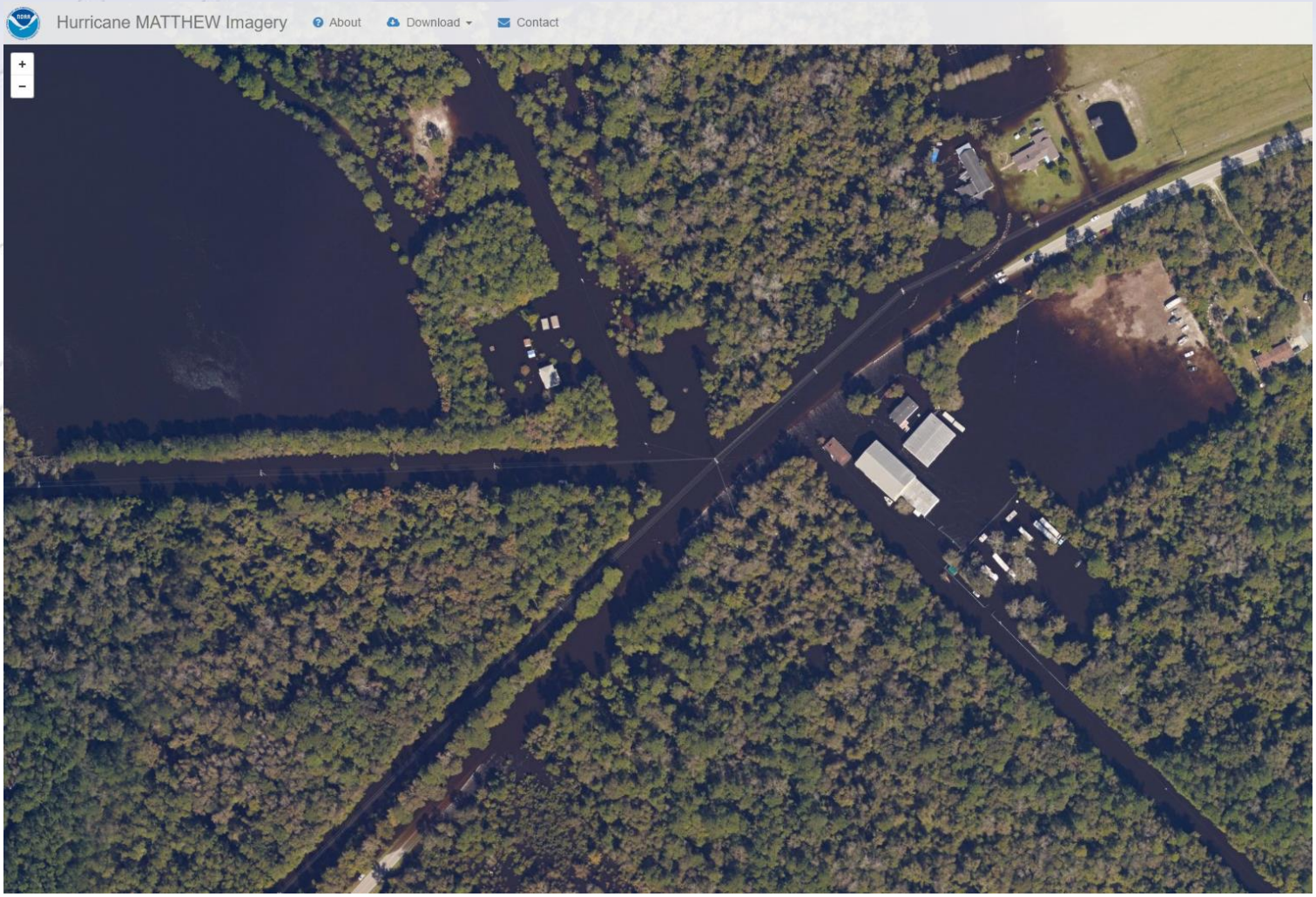
Maryellen Sault

NOAA's National Geodetic Survey

Hurricane Matthew



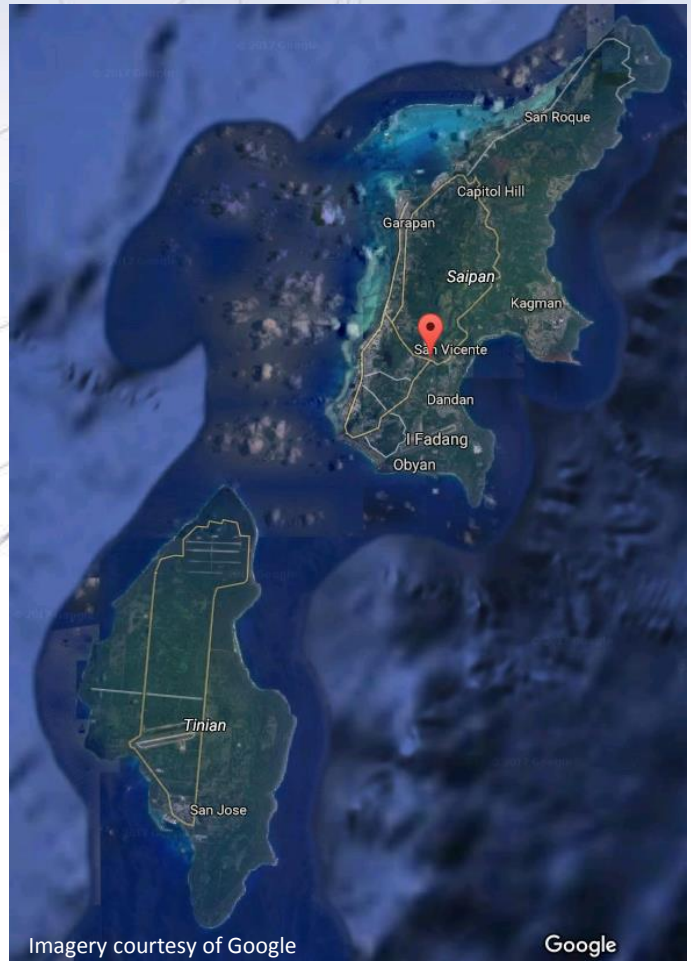
Hurricane Matthew



Deriving Bathymetry from Satellites

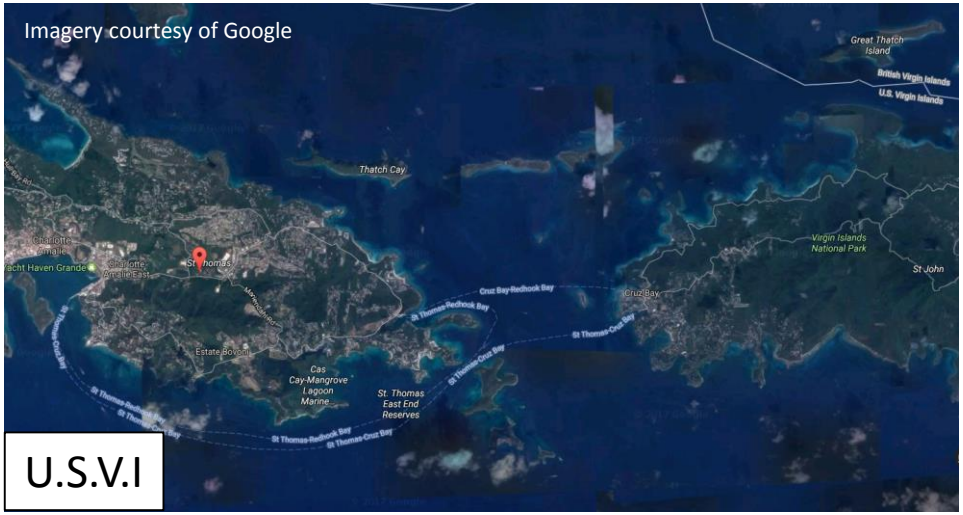
1. 2013 Project (Demo)
2. WorldView 2 (Envi's Relative Depth Tool)
3. Landsat (IHO GEBCO Cookbook)

2013 WorldView 2 Demo Bathy Project



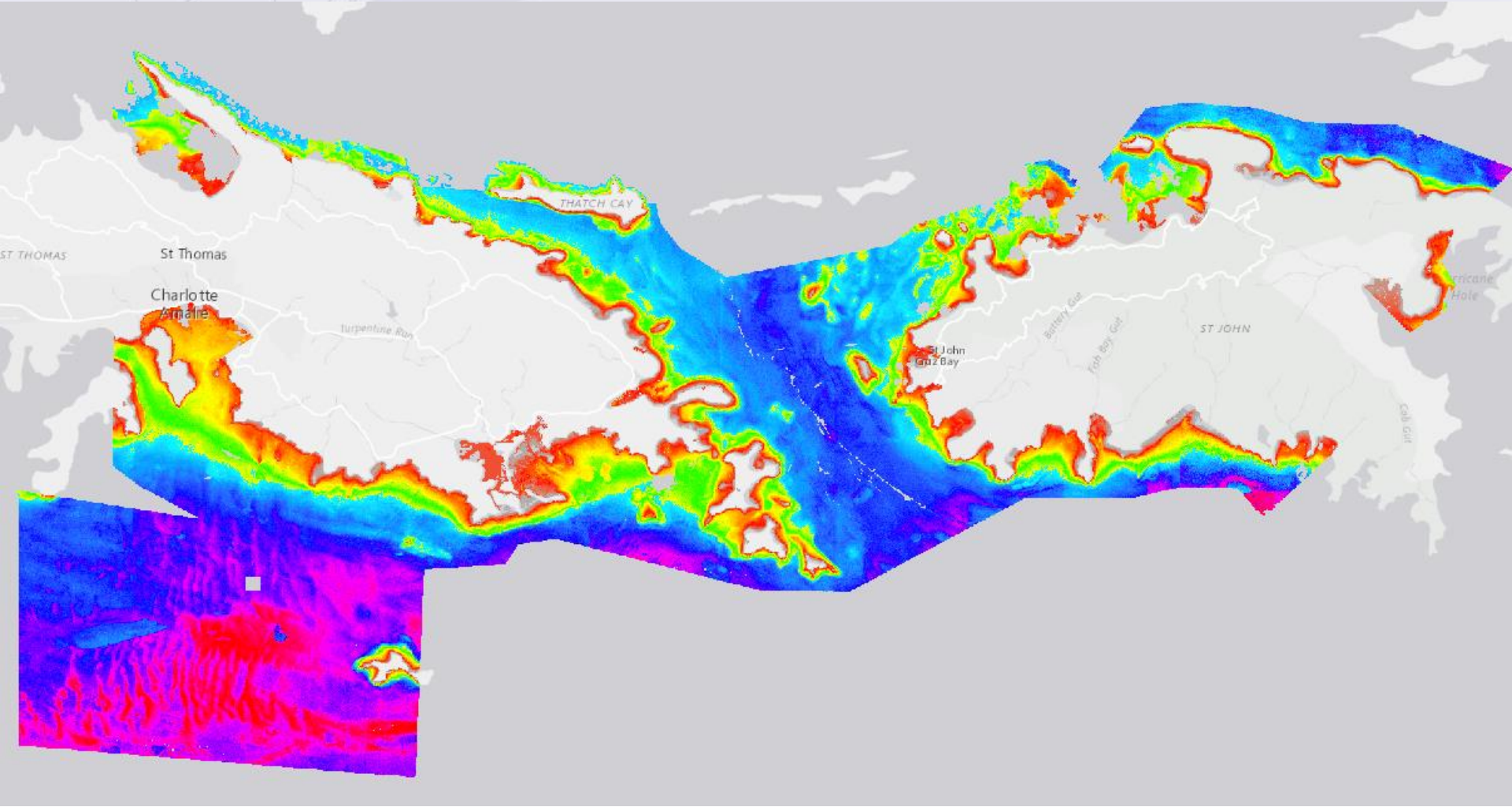
Saipan and Tinian Island

Simeonof Island, AK



U.S.V.I

2013 WorldView 2 Demo Bathy Project



2013 WorldView 2 Demo Bathy Project

Geographic Zone
- Land
- Salt Pond
- Shoreline Intertidal
- Lagoon
- Reef Flat
- Back Reef
- Reef Crest
- Fore Reef
- Bank/Shelf
- Bank/Shelf
- Escarpment
- Channel
- Dredged
- Unknown

Geomorphological Structure
- Coral Reef and Hard Bottom
  - Rock Outcrop
  - Boulder
  - Aggregate Reef
  - Individual Patch Reef
  - Aggregated Patch Reefs
  - Spur and Groove
  - Pavement
  - Pavement with Sand Channels
  - Reef Rubble
  - Rhodoliths
  - Unknown
- Unconsolidated Sediment
  - Sand
  - Mud
  - Sand with Scattered Coral & Rock
  - Unknown
- Other Delineations
  - Land
  - Artificial
  - Unknown

Biological Cover

Major Cover
- Algae
- Live Coral
- Coralline Algae
- Mangrove
- Seagrass
- No Cover
- Unknown

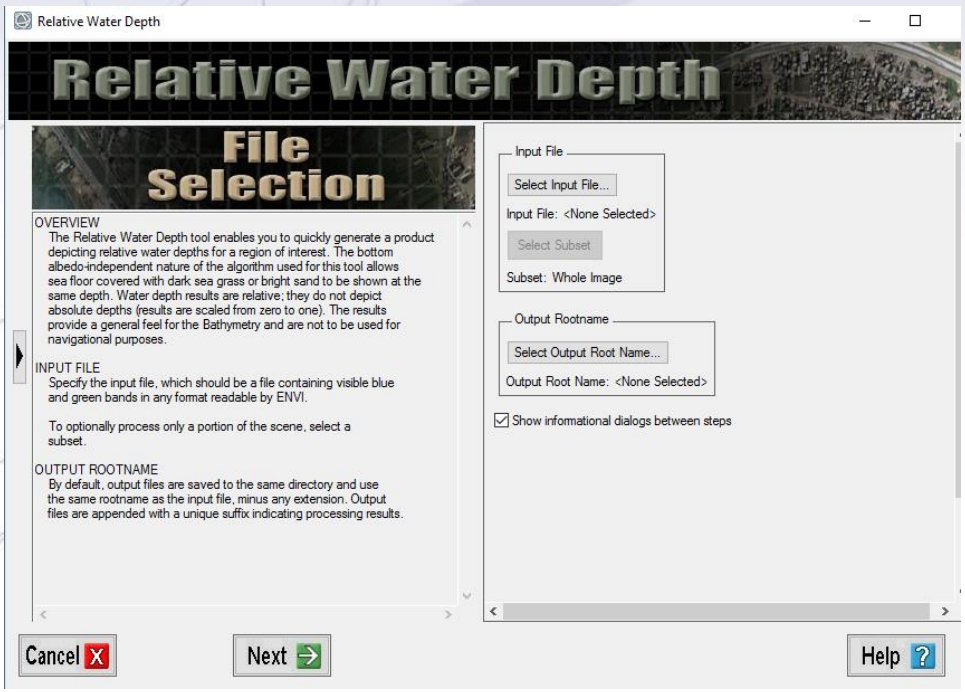
Percent Major Cover
- 10% - <50%
- 50% - <90%
- 90% - 100%
- Unknown

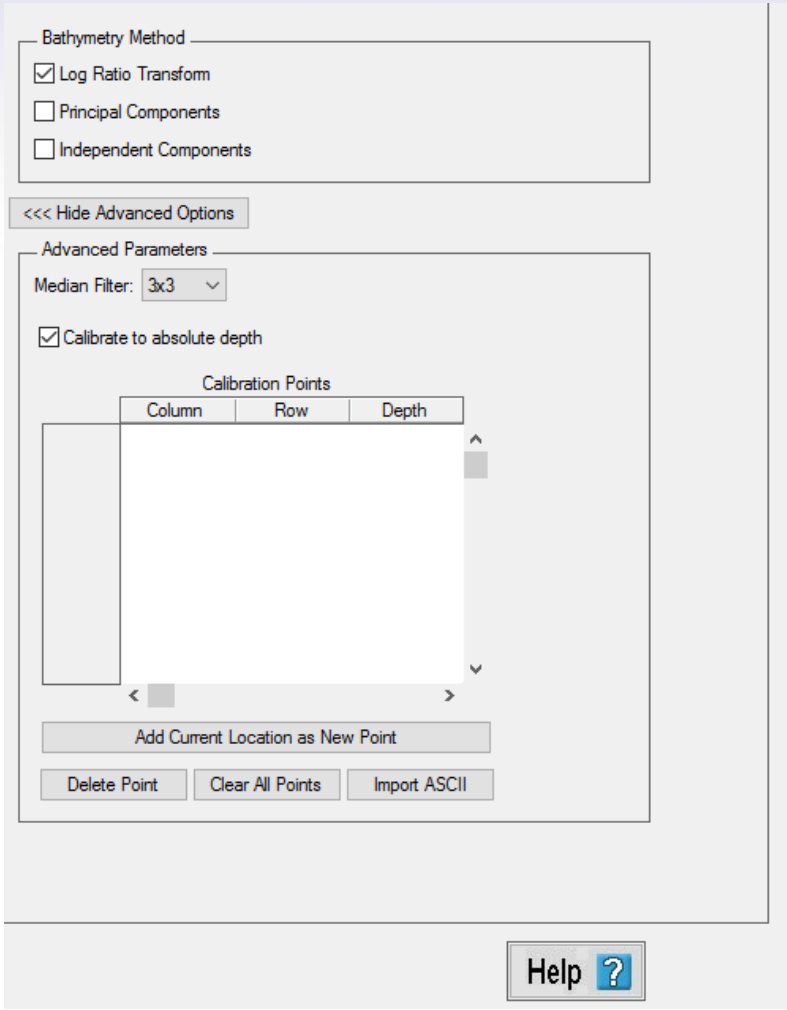
Coral Cover

Percent Coral Cover
- 0% - <10%
- 10% - <50%
- 50% - <90%
- 90% - 100%
- Unknown

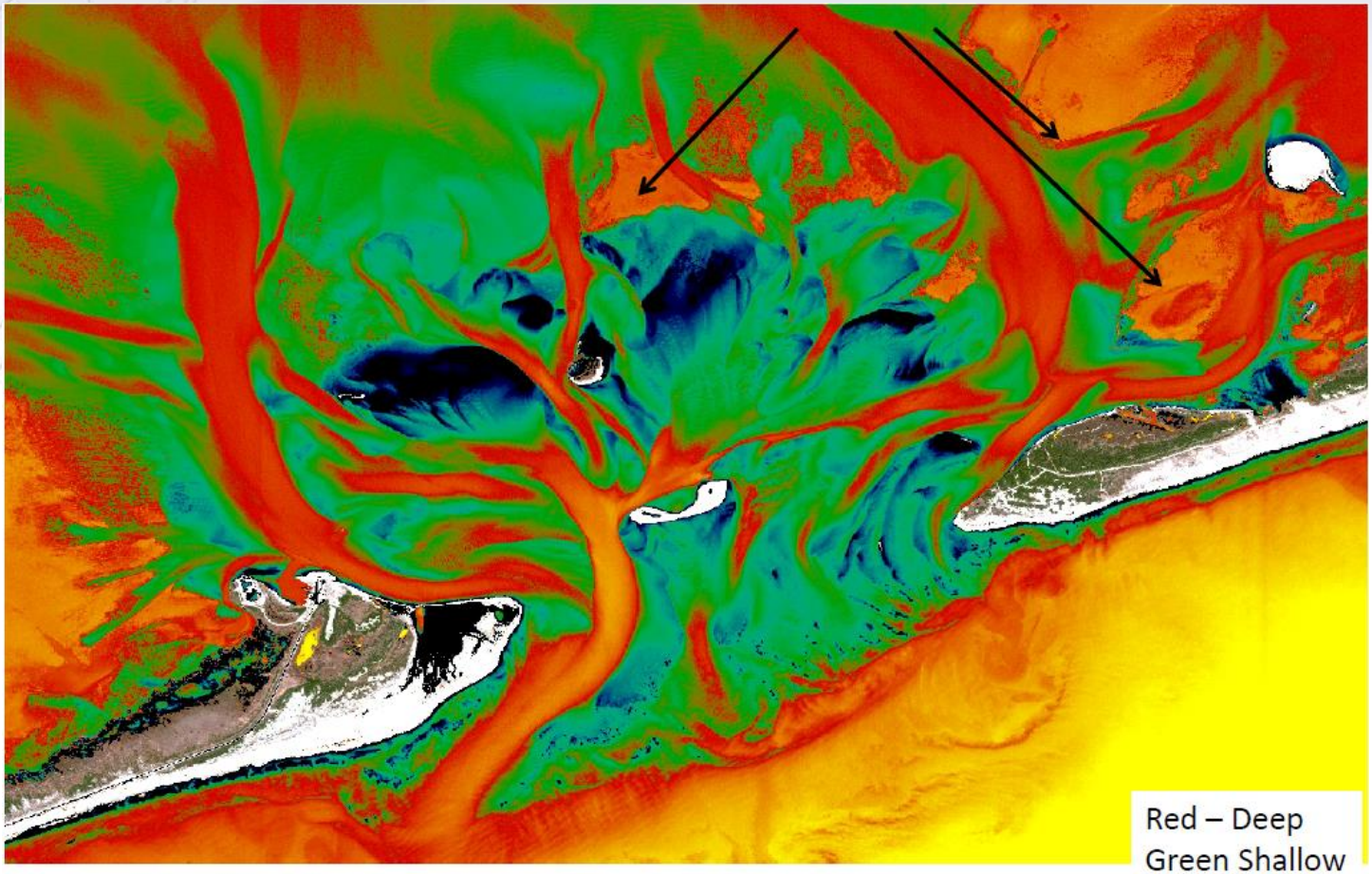
Hatteras Inlet Satellite-Derived Bathy

ENVI's Relative Water Depth Tool



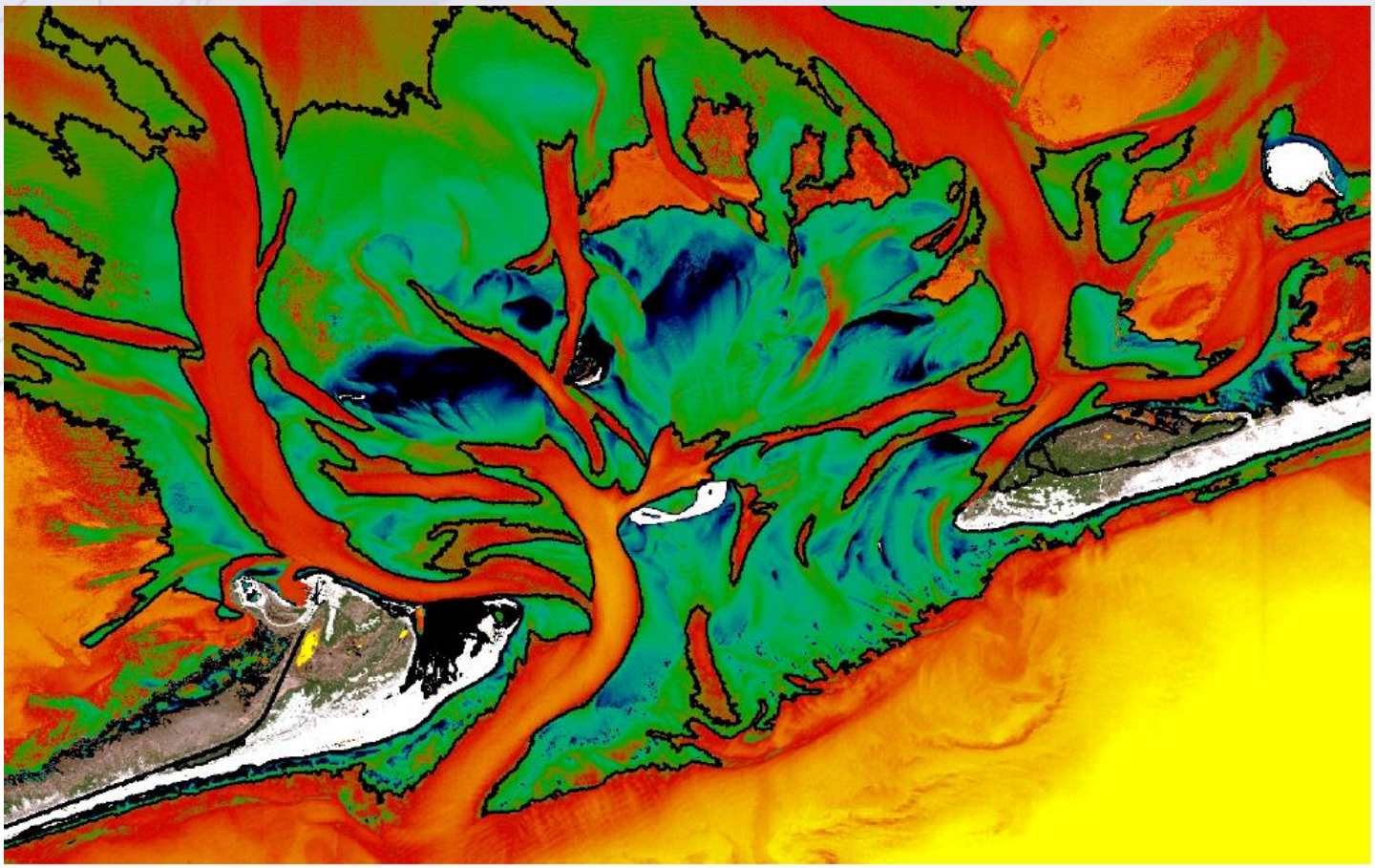


Hatteras Inlet Satellite-Derived Bathy



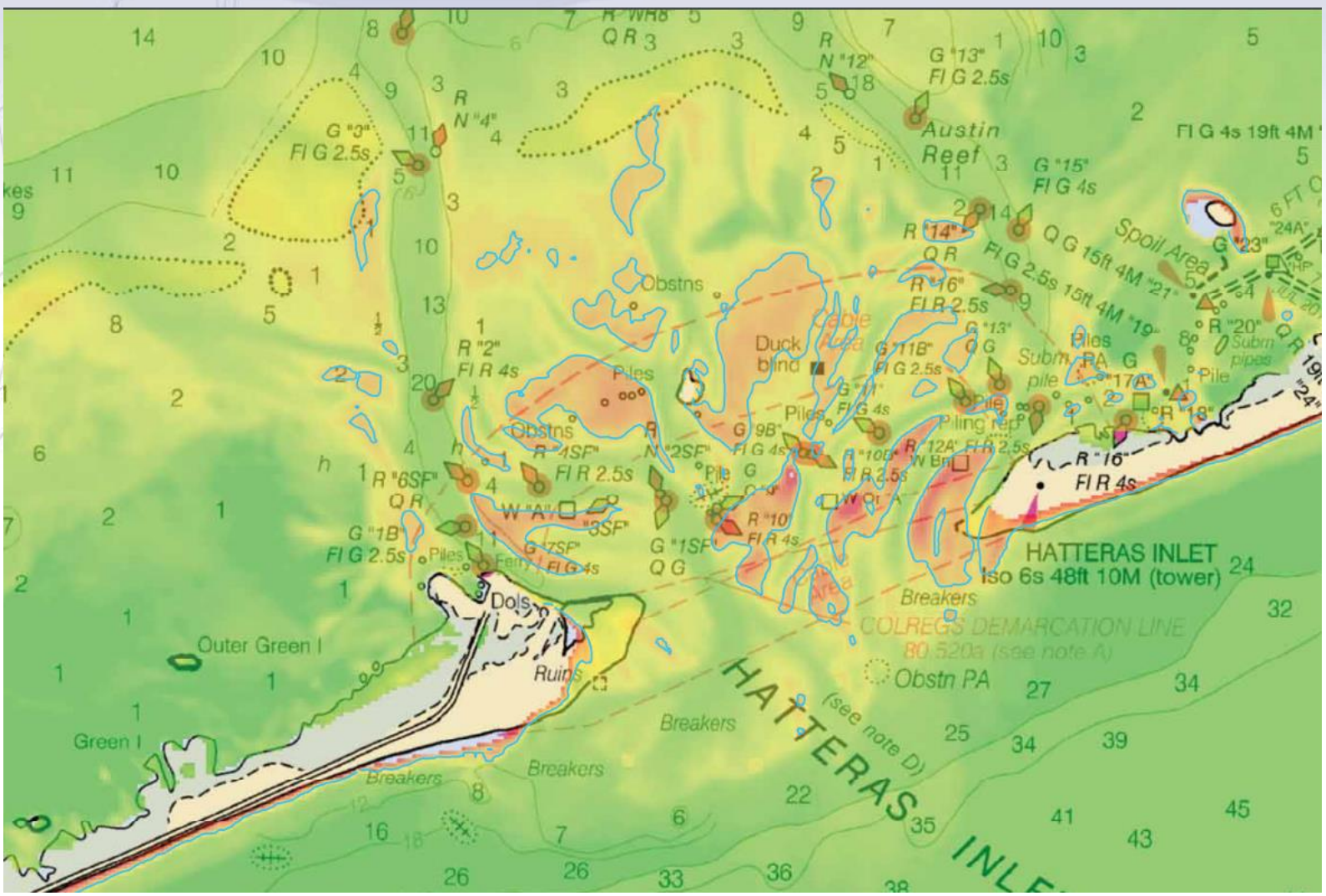
ENVI Relative Depth Image

Hatteras Inlet Satellite-Derived Bathy

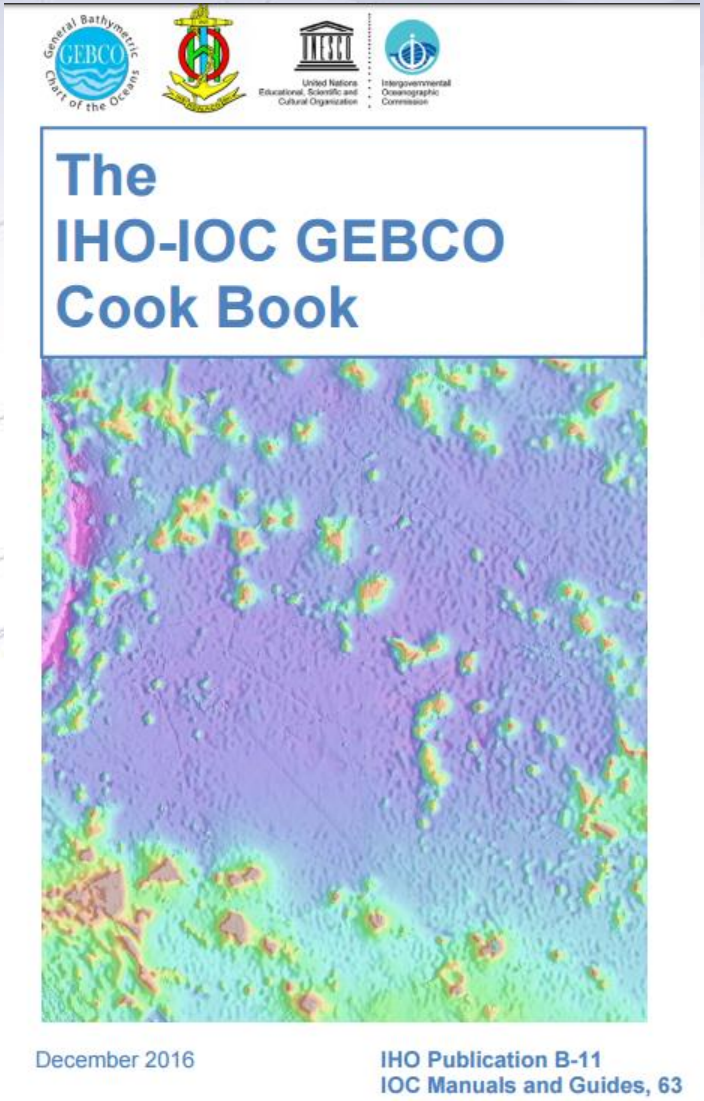


ENVI Relative Depth Image and Danger Area Boundary (in black)

Hurricane Matthew Request - Landsat



Deriving Satellite Derived Depths

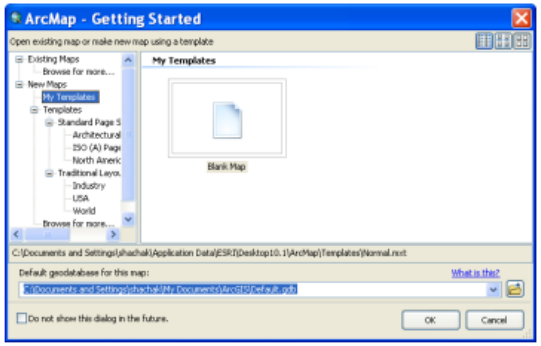


11.1 Pre-processing

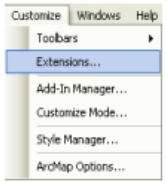
11.1.1 Setting up the workspace (ArcMap)

Open ArcMap (either by a double-click on the ArcMap icon or selection from the windows Start/All Programs).

Note: if this is your first time using ArcMap, you will get the following window. Press ***OK***.



Select ***Extensions…*** Under the ***Customize*** Tab.

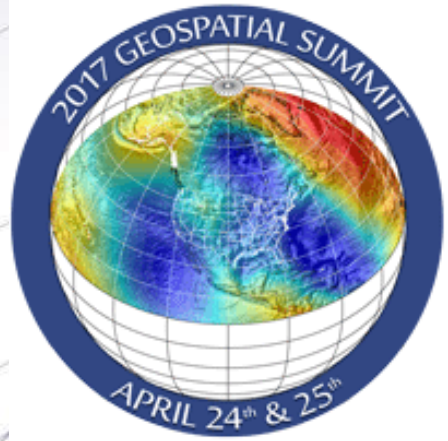


In the ***Extensions*** window, mark **3D Analyst** and **Spatial Analyst**. Press ***Close.***

https://www.star.nesdis.noaa.gov/sod/lsa/GEBCO_Cookbook/

Geospatial Summit

National Geodetic Survey



2017 Summit Home
Logistics
FAQs

Related Links
NGS 10-year plan
2015 Summit Proceedings
2010 Summit Proceedings
New Datums Web page

2017 Geospatial Summit

Save the Date

On April 24-25, 2017 we will host the 2017 Geospatial Summit in Silver Spring, Maryland.

The 2017 Geospatial Summit will provide updated information about the planned modernization of the National Spatial Reference System (NSRS). Specifically, NGS plans to replace the North American Datum of 1983 (NAD 83) and the North American Vertical Datum of 1988 (NAVD 88) in 2022.

The Summit will provide an opportunity for NGS to share updates and discuss the progress of projects related to NSRS Modernization. NGS also looks forward to hearing feedback and collecting requirements from its stakeholders across the federal, public and private sectors. This event will also help continue discussions from previous Geospatial Summits held in **2010** and **2015**.

Additional information about the 2017 Geospatial Summit will be posted online. In the coming months, NGS will update the web-page with information about the agenda, registration options, **logistics** and **frequently asked questions**. If you have questions or comments, **contact us**.

https://www.ngs.noaa.gov/geospatial-summit/index.shtml