

# Sea Level Change and Baselines

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# Sea Level Change and Baselines

- Global Climate Change and Sea Level Rise
  - Baselines in the United Convention on the Law of the Sea
  - Views on the Nature of Baselines
  - Graphics and Scenarios
  - Discussion
- 

# Global Climate Change and Sea Level Rise

- Global Warming
- Implications of sea level rise
- Sea Level Rise due to glacier and ice sheet melt and thermal expansion of water
- Contrasting opinions



Columbia Glacier c. 1980



Columbia Glacier 2005



Arapaho Glacier 1898



Arapaho Glacier 2003

# UNCLOS and Baselines

- Normal (Article 5)
- Straight (Article 7)
  - Archipelagic (Article 47)
- Closing Lines (Articles 9-13)
- The use of normal vs. straight baselines
- Due publicity and deposit of charts (Article 16)

# The Nature of Baselines

- Fixed
- Ambulatory
- Hybrid
  
- What is the legal baseline?
- How often should the baseline be updated?
  - Article 7.2
- Sea Level Rise or Decrease

# The Nature of Baselines

- Approximately 116 entities with partial or full straight baselines
- Approximately 22 of these have made revisions of an original claim
- 27 nations fulfilled deposit of charts requirements (as of 4 January 2008)

Note: Numbers based on data presented in the Maritime Claims Reference Manual (<http://www.dtic.mil/whs/directives/corres/html/20051m.htm>) and the United Nations Division for Ocean Affairs and Law of the Sea (<http://www.un.org/Depts/los/index.htm>)

# Graphics and Scenarios

- United States
- Bangladesh
- Denmark
- Indonesia

# Graphics and Scenarios

➤ There are several online sea level rise viewers and illustrations. Two of these are:

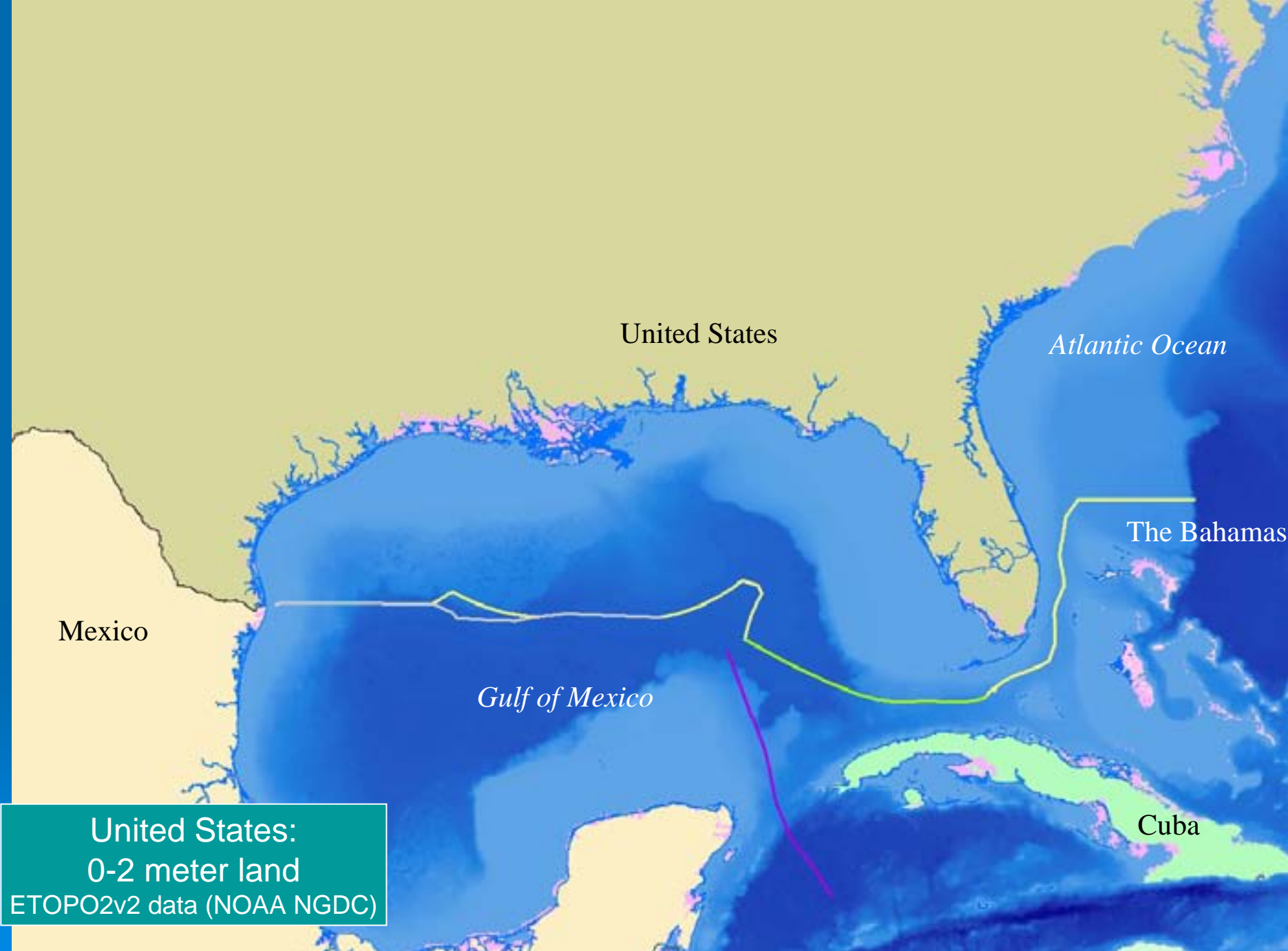
- University of Arizona: 1-6 meters

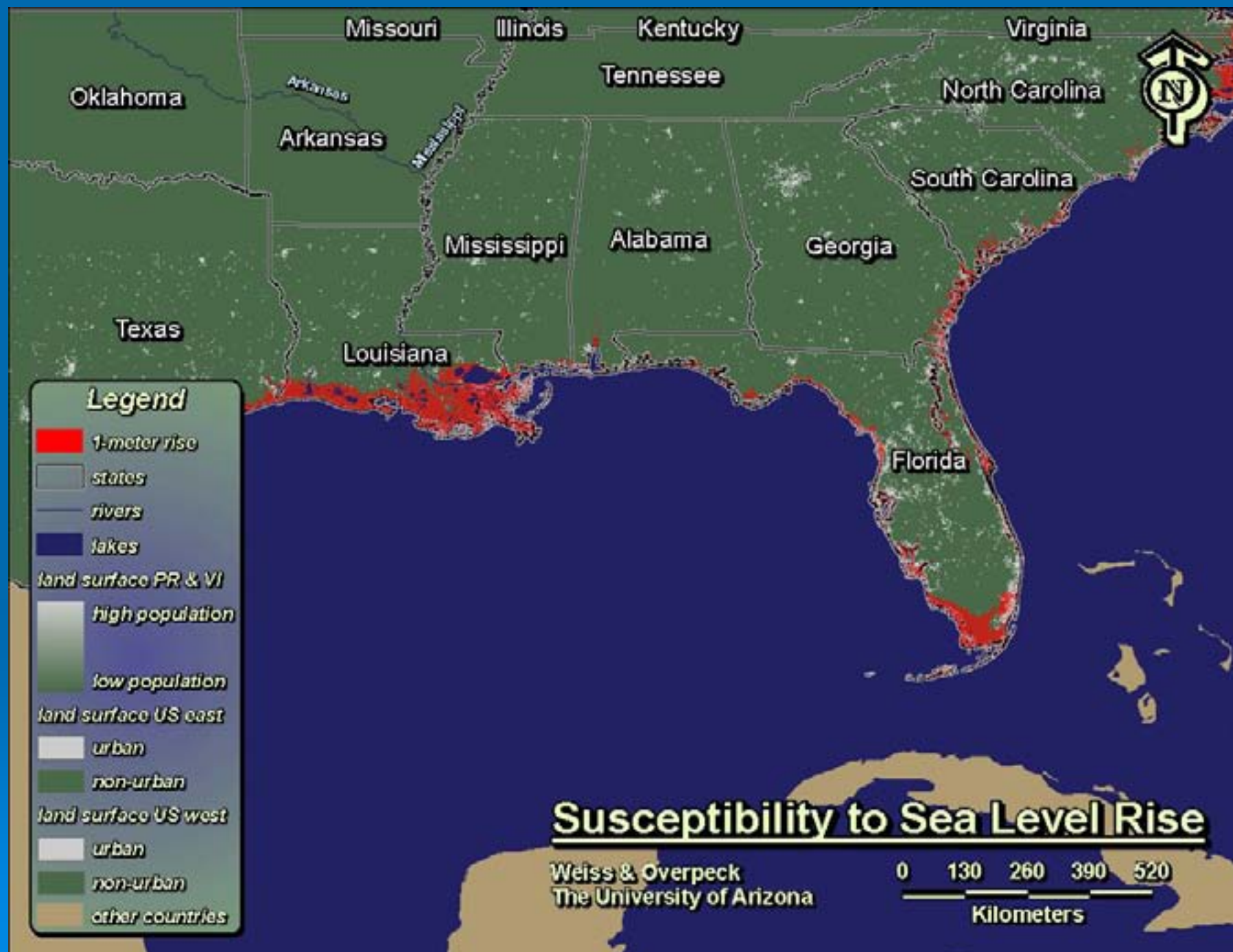
(<http://geongrid.geo.arizona.edu/arcims/website/slrus48prvi/viewer.htm>)

- Firetree.net: 0-14 meters

(<http://flood.firetree.net/?ll=43.3251,-101.6015&z=13&m=7>)







Sea level rise: +1 m

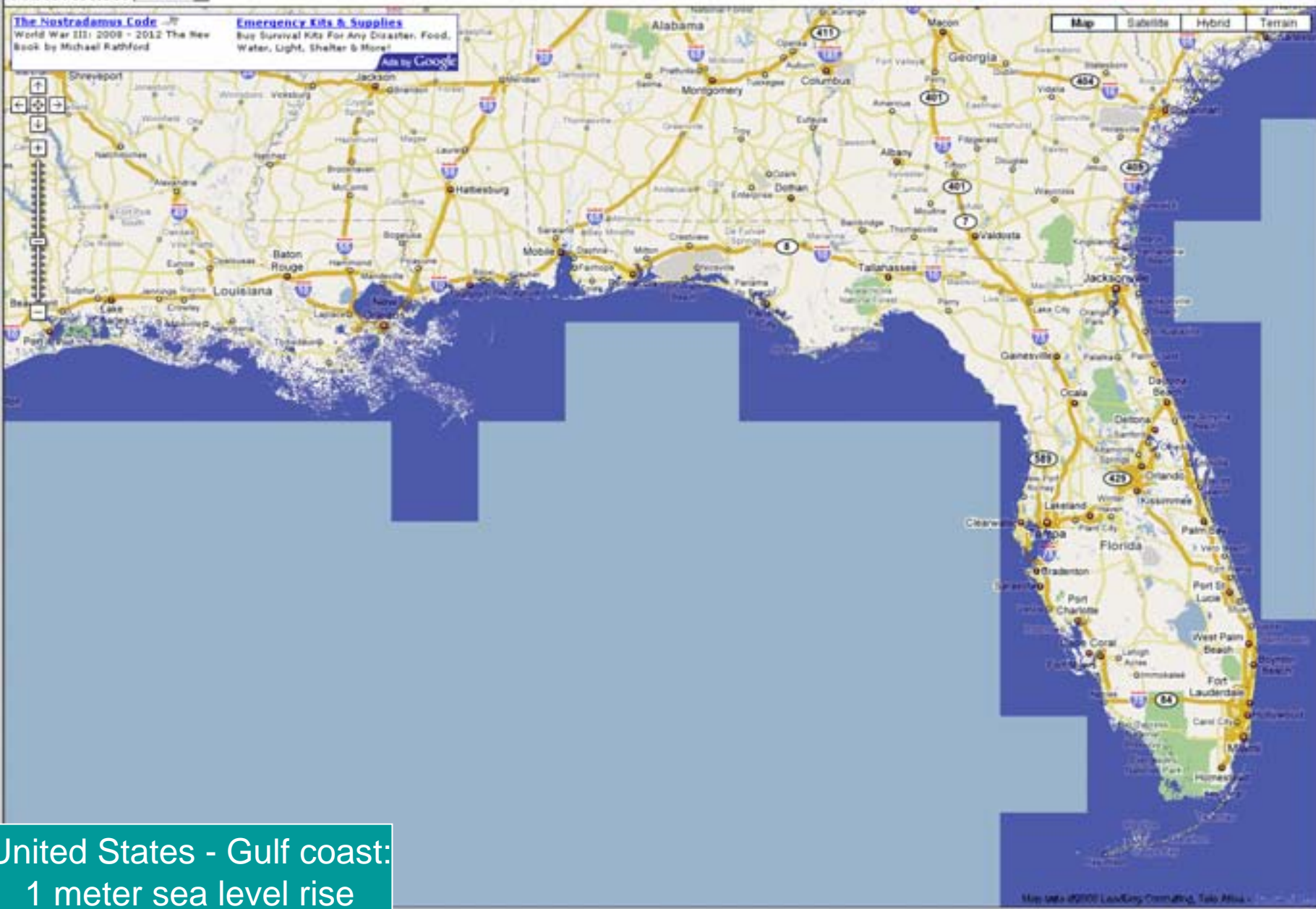
Europe N. America S. America Africa SE. Asia China & Japan Australia

**The Nostradamus Code**  
World War III: 2008 - 2012 The New Book by Michael Rathford

**Emergency Kits & Supplies**  
Buy Survival Kits For Any Disaster. Food, Water, Light, Shelter & More!

Ads by Google

Map Satellite Hybrid Terrain



United States - Gulf coast:  
1 meter sea level rise  
<http://flood/firetree.net>

**FLORIDA**

## Rising Temperatures, Disappearing Coastlines

Greenland and Antarctica hold the world's largest reservoirs of fresh water, locked in their giant ice sheets. Global warming may cause large parts of these ice sheets to melt within centuries. If they did, this is what would happen to Florida...

**CONTINUE »**

REPLAY »

Everglades

Florida Keys

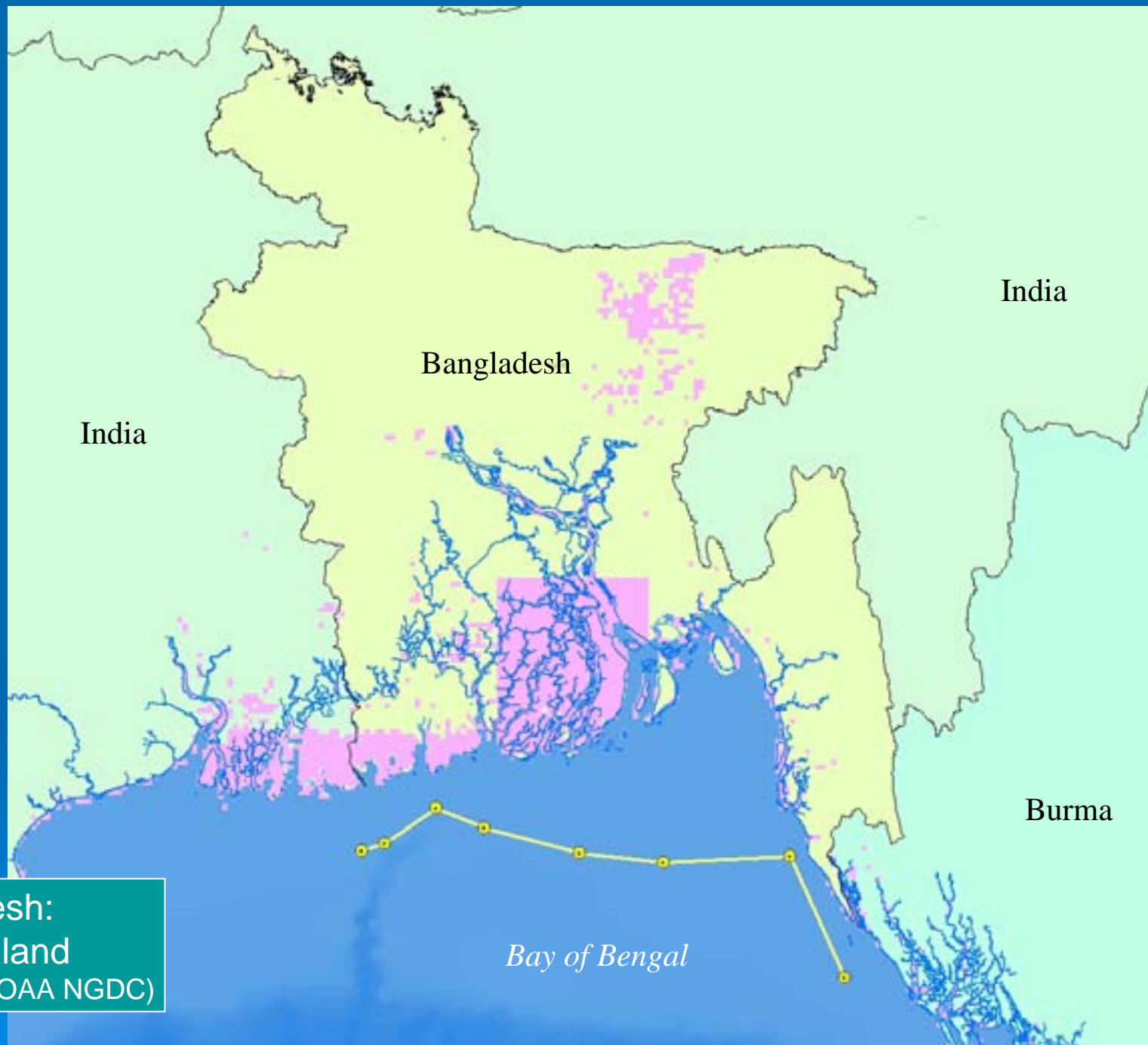
Miami

University of Arizona | Credits

Florida:  
6 meter sea level rise  
<http://www.npr.org>



Bangladesh:  
Straight Baseline Claim



Bangladesh:  
0-2 meter land  
ETOPO2v2 data (NOAA NGDC)

Norway

Sweden

*Skagerrak*

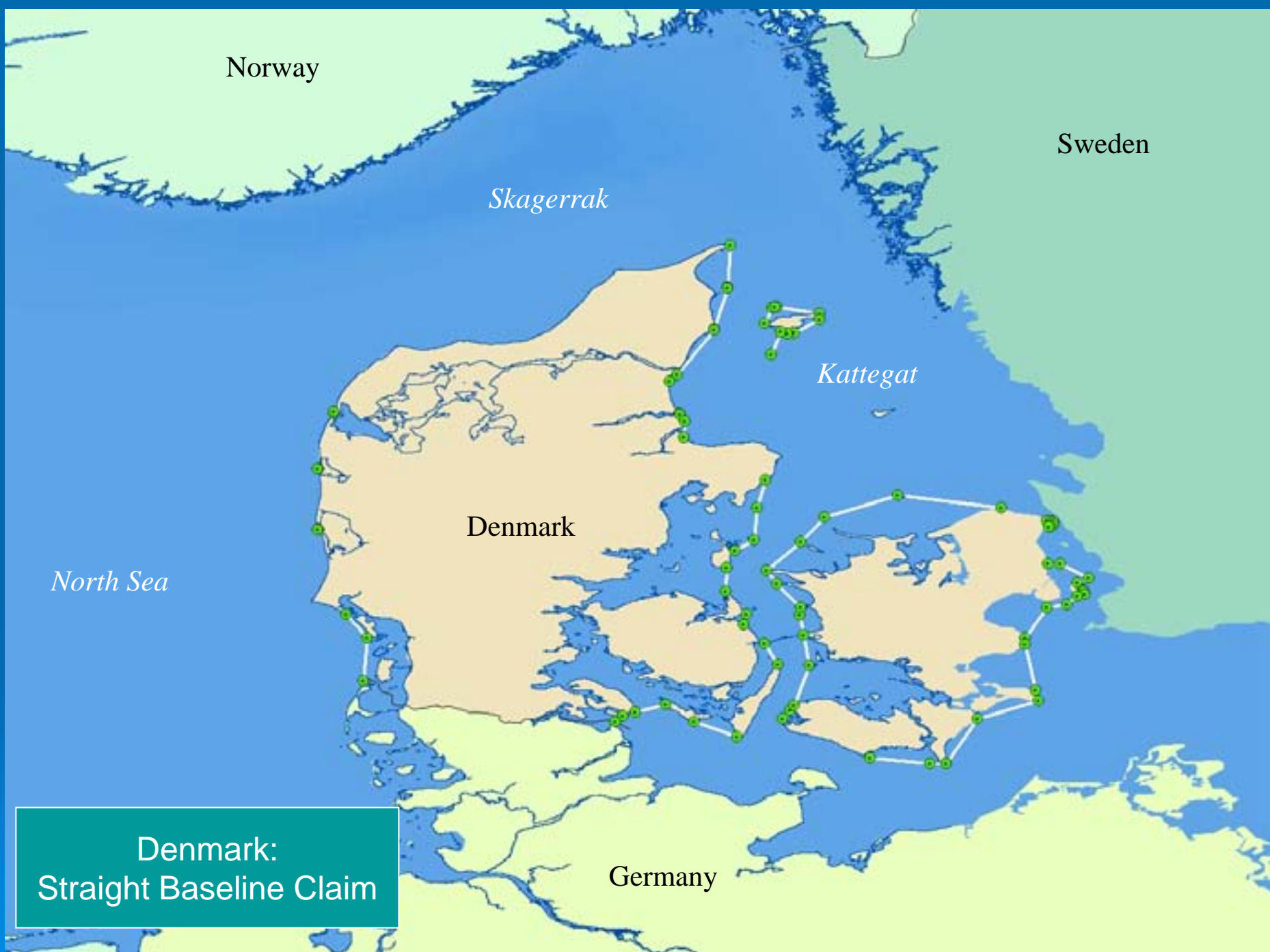
*Kattegat*

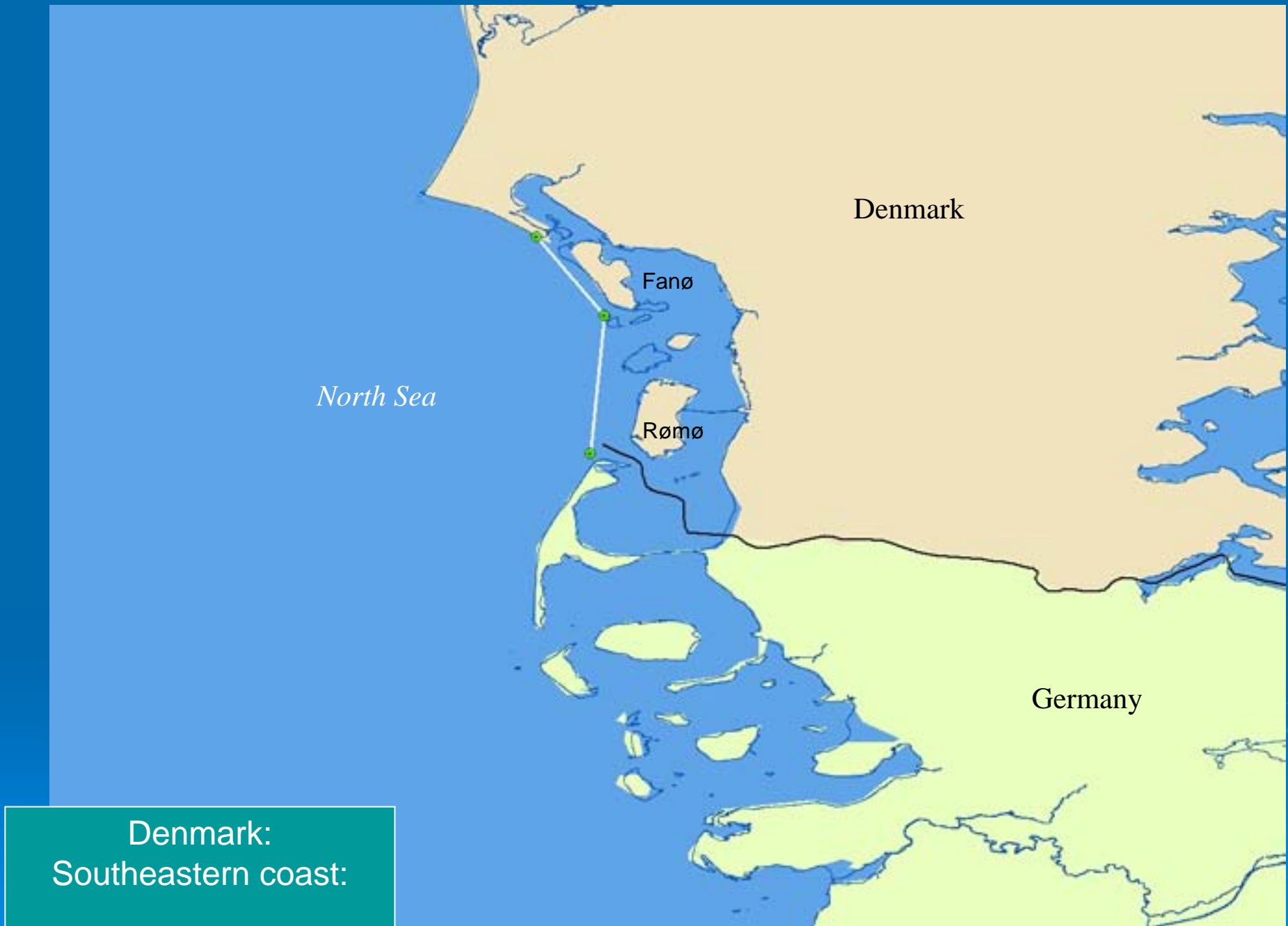
Denmark

*North Sea*

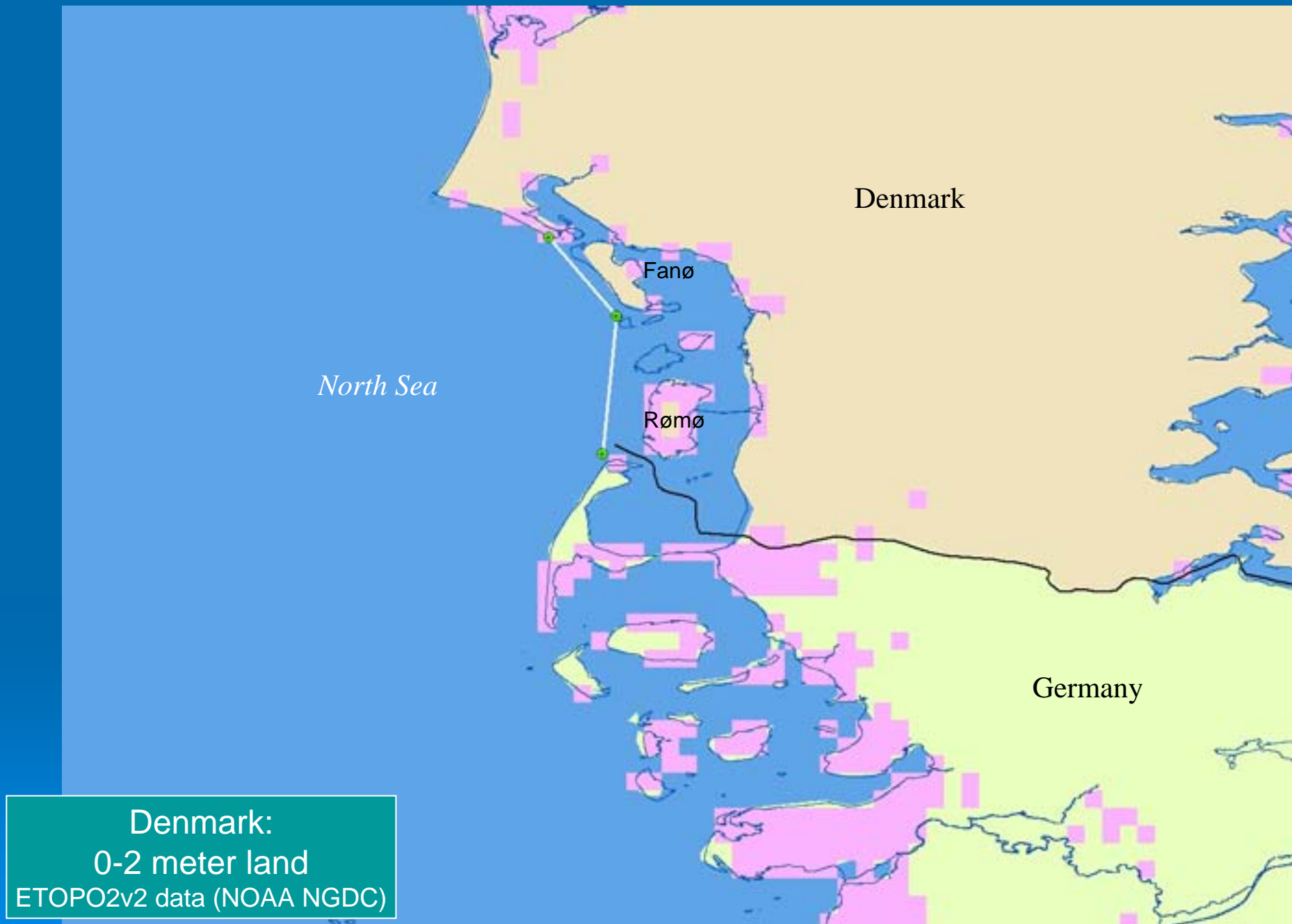
Germany

Denmark:  
Straight Baseline Claim





Denmark:  
Southeastern coast:



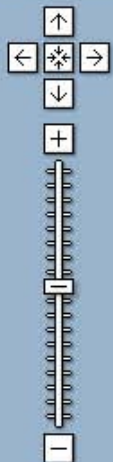
### Flood Information & Facts

Everyone is at Risk - Find Out How to  
Protect Your Home & Your Family!

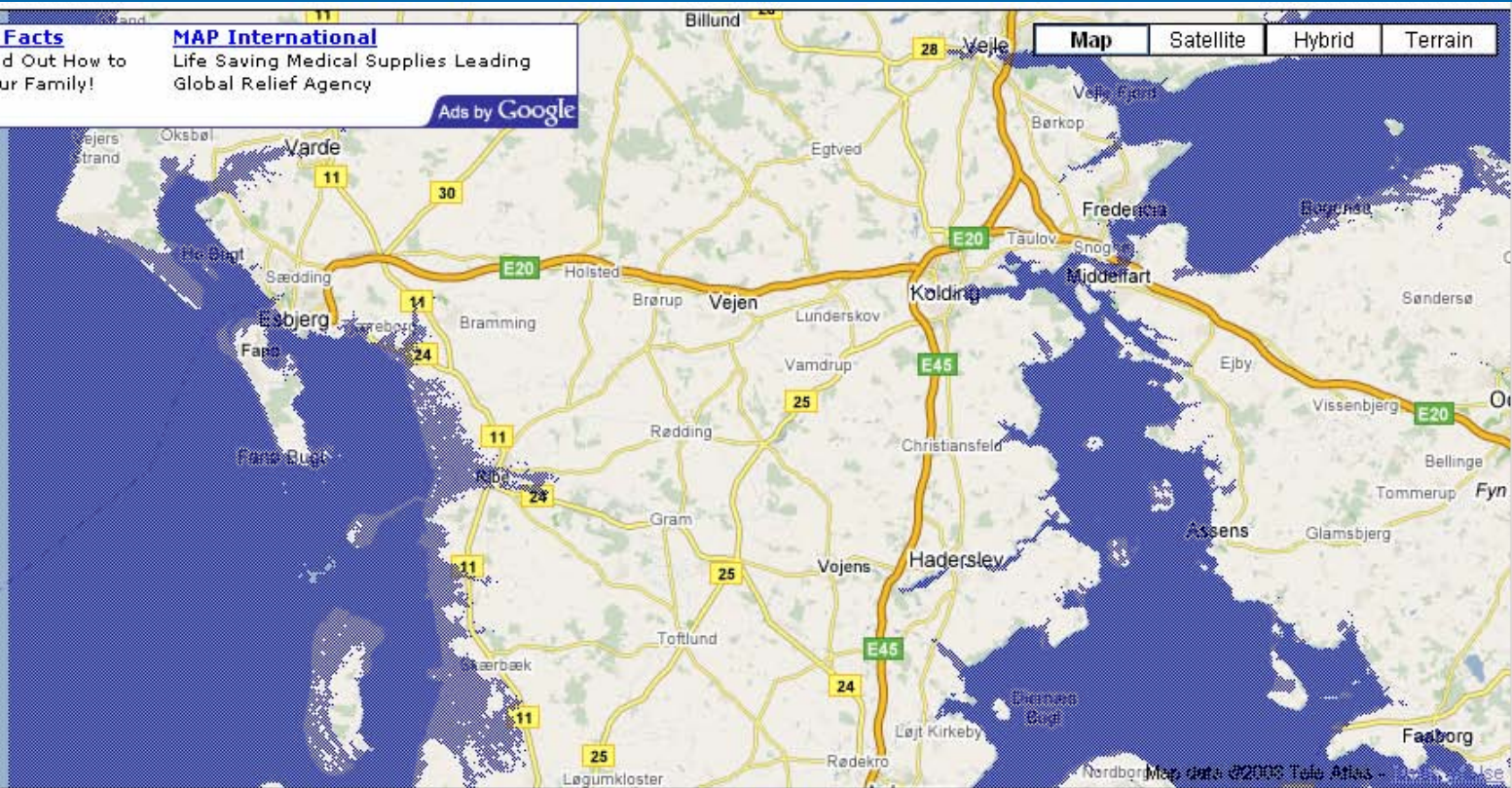
### MAP International

Life Saving Medical Supplies Leading  
Global Relief Agency

Ads by Google



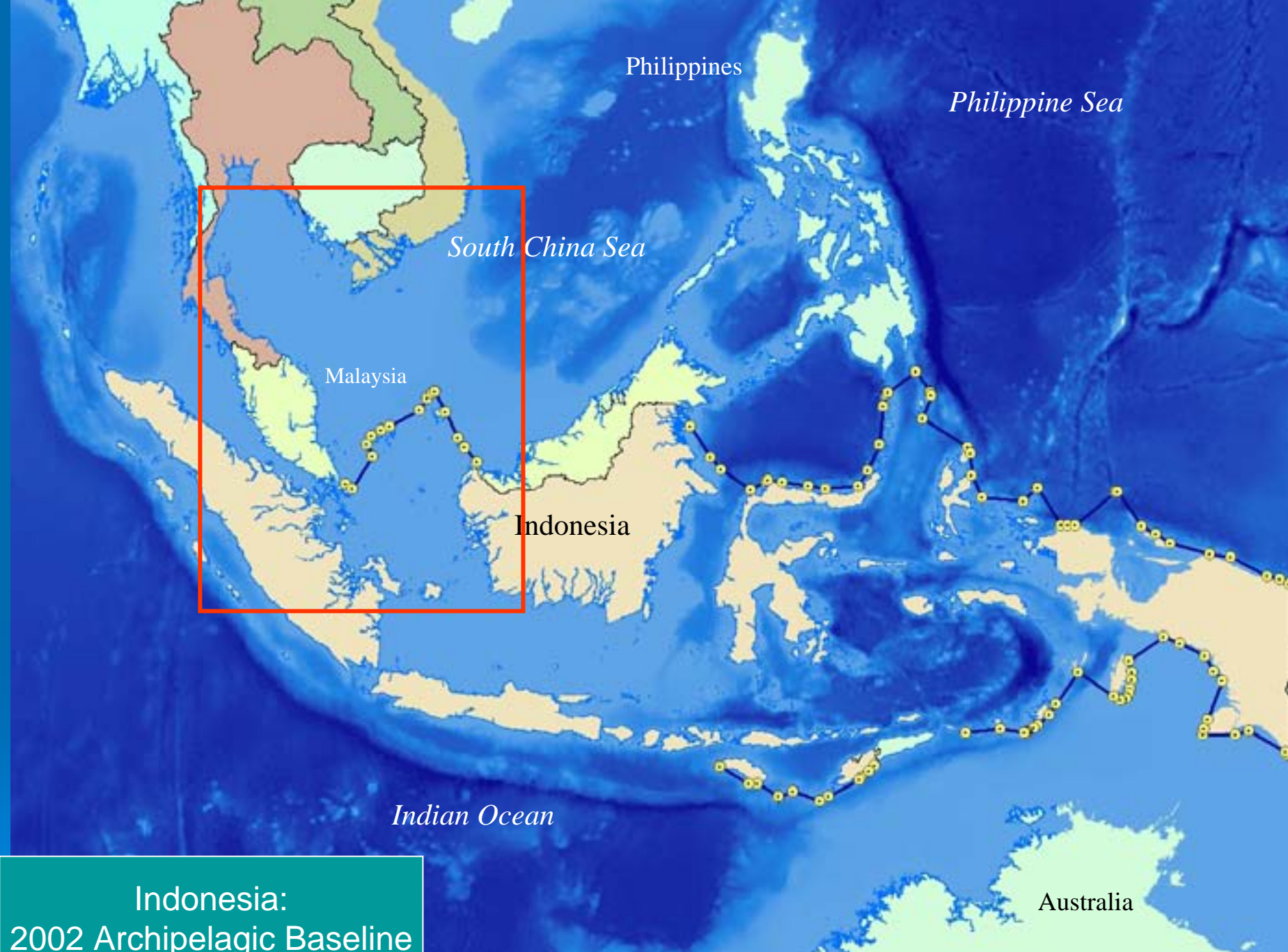
POWERED BY  
Google



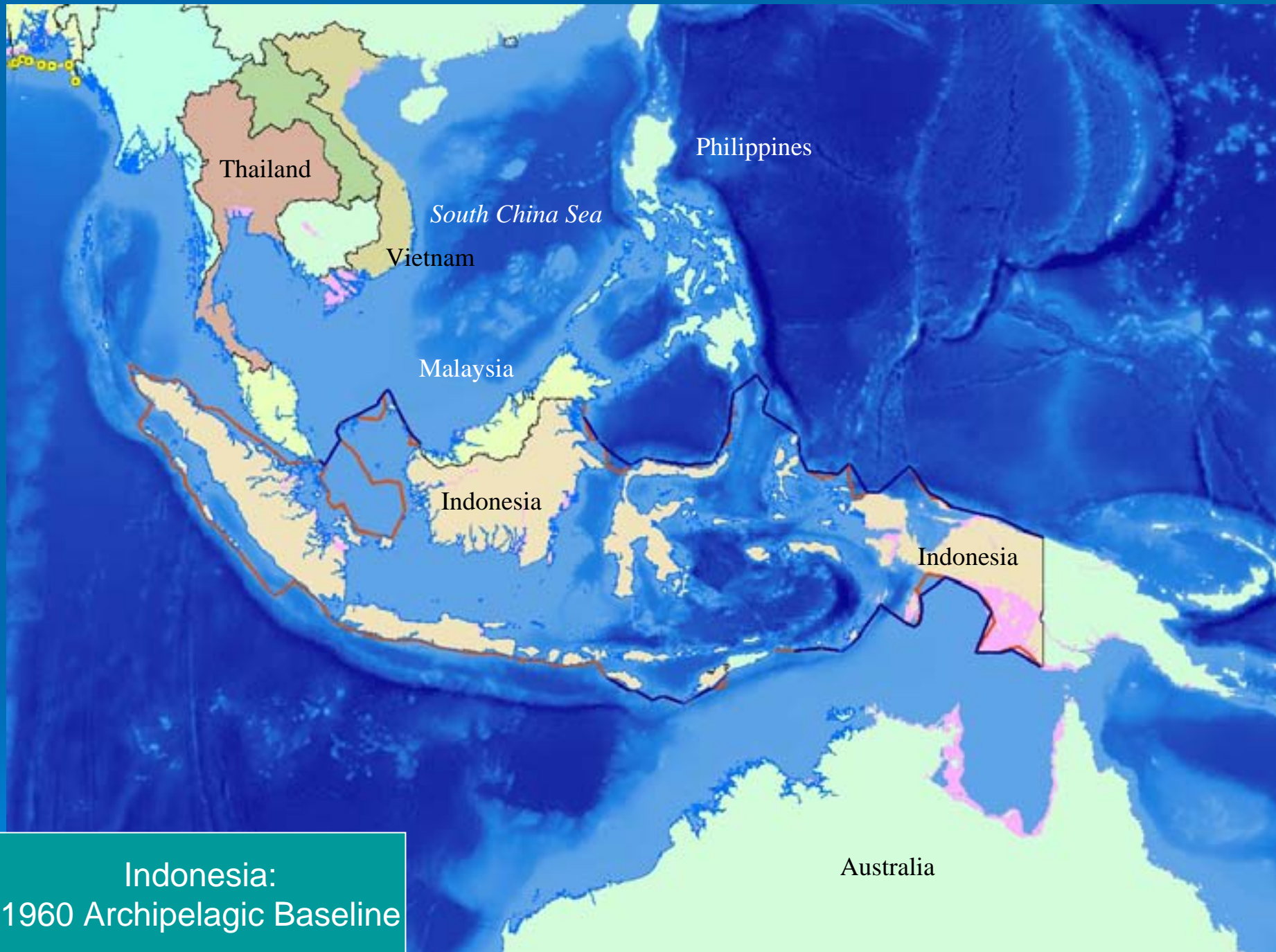
Denmark:

1 meter sea level rise

<http://flood/firetree.net>



Indonesia:  
2002 Archipelagic Baseline



Indonesia:

1960 Archipelagic Baseline





Indonesia:  
Maritime Boundaries

Sea level rise: +2 m

Europe N. America S. America Africa SE Asia China & Japan Australia

[The Nostradamus Code](#)

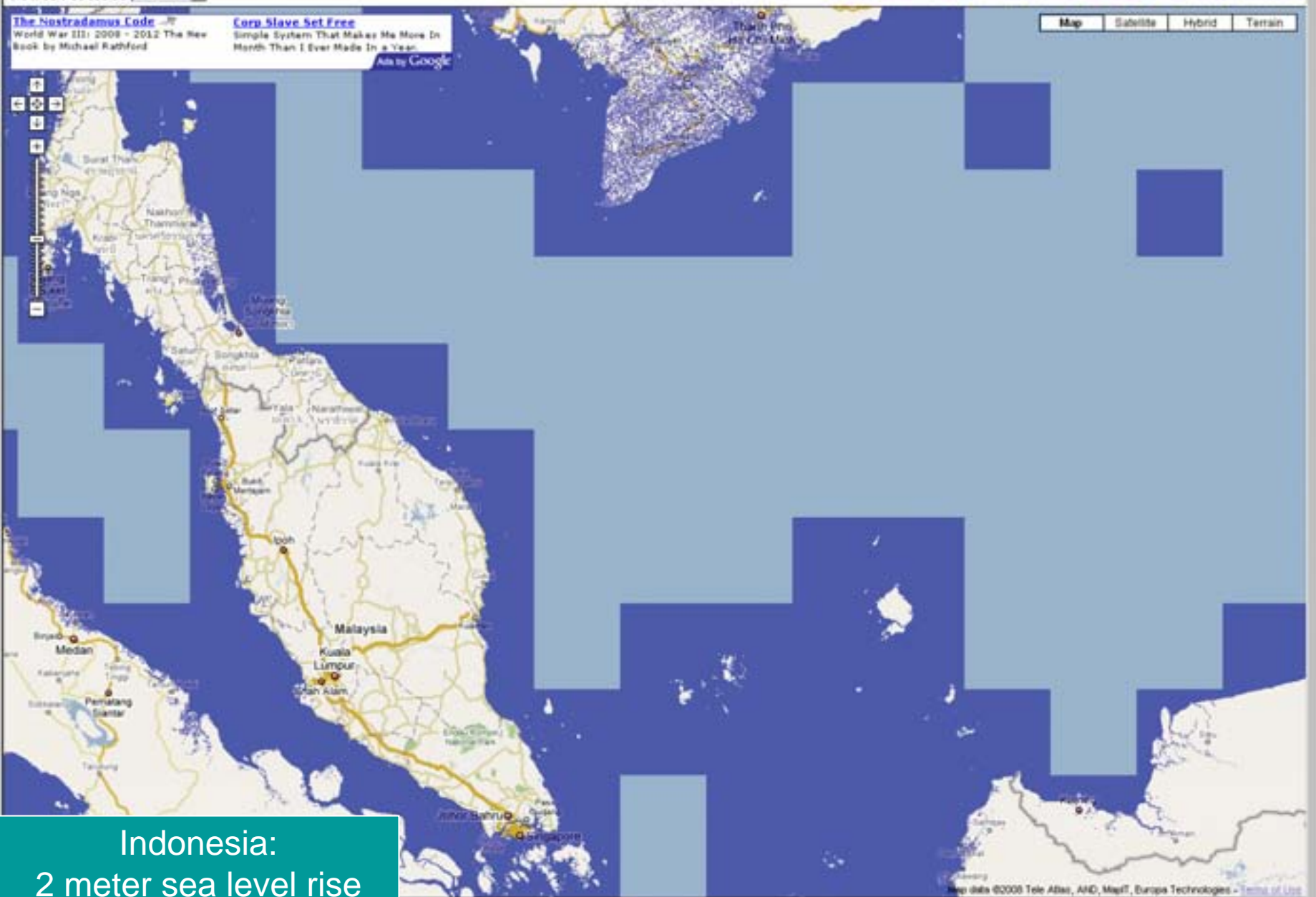
World War III: 2008 - 2012 The New Book by Michael Rathford

[Corp Slave Set Free](#)

Simple System That Makes Me More In Month Than I Ever Made In a Year.

Ads by Google

Map Satellite Hybrid Terrain



Indonesia:  
2 meter sea level rise  
<http://flood/firetree.net>

# Discussion

- What is the response to the potential acceleration of coastline change?
  - Are better definitions needed?
  - Baseline Enforcement (a la CLCS)
  - State Parties agreement

# Conclusions

- Further Discussion is Needed
- Legal Case Review
- Consensus

# Bonus Information

- Podesta, J and Ogden, P. 2007. “The Security Implications of Climate Change.” *Washington Quarterly* 31:1, pp. 115-138.
- “Coastlines: How Mapmakers Frame the Worlds and Chart Environmental Change”: by Mark Monmonier due out this month
- International Marine Conservation Congress (20-24 May, Fairfax, VA)

# Questions?

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