National Ocean Service Priorities: Coastal Intelligence and Resilience in the Southeast U.S.

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## NOS Priorities and Outcomes

<table>
<thead>
<tr>
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<th>Place-based Conservation</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
</tr>
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**Coastal Resilience**
- Better capacity to respond
- Improved community preparedness and response
- Natural-based infrastructure utilized in coastal communities

**Coastal Intelligence**
- Integrated support tools for port communities
- Regional prediction of total water inundation
- Early warnings for ecological hazards

**Place-based Conservation**
- More protection for special places
- Better management for special places
NOS Provides Coastal Intelligence

National Plan for Civil Earth Observations
Released: July 2014

Observation System (Ranked Order) | Agency
--- | ---
1. Global Positioning System (GPS) satellites | DOD/USAF
2. Next Generation Weather Radar (NEXRAD) | DOC/NOAA
3. Landsat satellite | DOI/USGS, NASA
4. Geostationary Operational Environmental Satellite System (GOES-NOP) | DOC/NOAA
5. National Agriculture Imagery Program (NAIP) | USDA/FSA
6. Airborne LIDAR | DOC/NOAA, DOD/USACE, DOI/USGS, NSF
7. Forest Inventory and Analysis (FIA) | USDA/USFS
8. Aircraft Meteorological Observations (e.g., MDCRS, AMDAR) | DOC/NOAA, Non-USG
9. National Water Level Observation Network (NWLO) | DOC/NOAA
10. Terra satellite | NASA
Why Does it Matter?

- **1970 – 1980**: 2,300 TEU, 10 - 11 Containers Wide
- **1985**: 3,220 TEU, 11 - 13 Containers Wide
- **1986 – 2000**: 4,848 TEU, 13 - 17 Containers Wide
- **2000 – 2005**: 8,600+ TEU, 17 - 22 Containers Wide
- **2005 – 2012**: 9,600+ TEU, 17 - 22 Containers Wide

**Sea Level**
- 3m
- 6m
- 9m
- 12m
- 15m

**2012 – 2020**
- 14,000+ TEU
- 22 - 23 Containers Wide

- **> 16m**
Value of Coastal Intelligence

Jacksonville PORTS

Charleston PORTS

The Value of PORTS® to the Nation

How real-time observations improve safety and economic efficiency of maritime commerce

NOAA's National Ocean Service

Positioning America for the Future
Coastal Intelligence → Resilience

Before

After (5 ft. SLR)

Storm Surge Forecasts

Potential Storm Surge Flooding*
Through 2 AM Friday August 24th - Advisory #X

- Blue: Up to 3 feet above ground
- Yellow: Greater than 3 feet above ground
- Orange: Greater than 6 feet above ground
- Red: Greater than 9 feet above ground

* Displayed flooding values indicate the water depth that has about a one-in-thirty (10%) chance of being exceeded.

NOAA's National Ocean Service
Positioning America for the Future
Future of Coastal Intelligence

- Lower costs & more efficiency
- Increased accuracy
- Capacity for multi-use
Future of Coastal Intelligence

- Collect once, use many times
- Crowdsourcing
- Diverse platforms that integrate new and existing technologies

Gliders

Gulper
Slocum
Wave
Spray
Seaglider
Future of Coastal Intelligence

• Geographically tailored
• Coordination & integration across products
• Improve data access, management, and interoperability
• Industry opportunities
What Can the HSRP Do?

• Advise NOAA on strategic issues:
  – Where’s the science going?
  – What cutting edge technology should NOAA explore?
  – What opportunities might exist for new business models (e.g. PORTS)?
  – Are there opportunities for new partnerships?
  – What coastal issues should NOAA be tackling? How?

• Advise NOAA on regional, national stakeholder needs:
  – Where are the gaps in NOAA’s products and services?
  – What stakeholder needs are not being met?
  – Are there better ways to meet stakeholder needs?
  – How can NOAA better connect to and strengthen relationships with its stakeholders?