# Ocean Resources

Laura McKay
Virginia Coastal Zone
Management Program

# Phase 1 Assessment

| Status of Virginia Ocean Economy for Coastal Counties (2010) | | | | |
|---|---|---|---|---|
| | **Establishments** (# of Establishments) | **Employment** (# of Jobs) | **Wages** (Millions of Dollars) | **GDP** (Millions of Dollars) |
| **Living Resources (seafood)** | *191* | *2,225* | *73* | *573.7* |
| Marine Construction | *170* | *2,397* | *153.5* | *252.6* |
| Ship and Boat Building | *64* | *32,159* | *2.0 billion* | *1.6 billion* |
| Marine Transportation | *373* | *16,286* | *1.1 billion* | *2.2 billion* |
| Offshore Mineral Extraction (sand & gravel) | *46* | *281* | *20.1* | *106.9* |
| Tourism & Recreation | *3,434* | *63,217* | *961.1* | *2.0 billion* |
| All Ocean Sectors | *4,278* | *116,568* | *4.3 billion* | *6.7 billion* |

# Phase 1 Assessment

| Change in Virginia Ocean Economy for Coastal Counties (2005-2010) | | | | |
|---|---|---|---|---|
| | **Establishments** (% change) | **Employment** (% change) | **Wages** (% change) | **GDP** (% change) |
| Living Resources | *-12.39* | *-9.33* | *10.97* | *58.70* |
| Marine Construction | *-2.86* | *4.86* | *48.06* | *34.21* |
| Ship and Boat Building | *8.47* | *8.67* | *27.66* | *-19.18* |
| Marine Transportation | *5.37* | *-11.00* | *7.48* | *20.49* |
| Offshore Mineral Extraction | *4.55* | *-31.30* | *6.52* | *94.99* |
| Tourism & Recreation | *2.17* | *-1.14* | *12.65* | *10.64* |
| All Ocean Sectors | *1.59* | *-0.36* | *18.84* | *8.01* |

11 Offshore development includes underwater cables and pipelines, although any infrastructure specifically associated with the energy industry should be captured under the "energy production" category.

# Phase 1 Assessment

| Ocean Resource | Change in the Threat to Ocean Resource Since Last Assessment (↑, ↓, –, unknown) |
|---|---|
| *Benthic habitat (including coral reefs)* | ↑ (increasing due to ocean acidification, damage from marine debris, damage from fishing gear?) |
| *Living marine resources (fish, shellfish, marine mammals, birds, etc.)* | ↑ (same as above plus increased ship traffic, offshore energy development ) |
| *Sand/gravel* | ↑ (increasing due to increasing need for sand for beach replenishment) |
| *Cultural/historic* | unknown |
| *Other* | |

11 Offshore development includes underwater cables and pipelines, although any infrastructure specifically associated with the energy industry should be captured under the "energy production" category.

# Phase 1 Assessment

| Use | Change in the Threat to Ocean Use Since Last Assessment (↑, ↓, –, unknown) |
|---|---|
| *Transportation/ navigation* | ↑ offshore energy development and marine mammal concerns may restrict where ships can traverse |
| *Offshore development* | ↑ shipping and military concerns as well as marine animal protection concerns |
| *Energy production* | ↑ same as above |
| *Fishing (commercial and recreational)* | ↑ offshore energy development and shipping traffic could exclude fishers from areas and risk fixed fishing gear |
| *Recreation/tourism* | ↑ ↓ shipping and offshore energy development could affect recreation, but hard structures could attract fish and increase fishing opportunities |
| *Sand/gravel extraction* | ↑ offshore energy development and laying of cables could interfere with extraction of sand and gravel deposits |
| *Dredge disposal* | unknown |
| *Aquaculture* | ↑ as existing and future uses take additional space in the ocean, offshore aquaculture could be precluded |
| *Other* | |

# MARCO

## Mid-Atlantic Regional Council on the Ocean

Established in 2009 as Governors' Agreement to:

1. Promotion of Offshore Renewable Energy
2. Ocean Habitat Protection
3. Ocean Water Quality
4. Regional Climate Adaptation

DAVID A. PATERSON
*New York*

JON S. CORZINE
*New Jersey*

JACK MARKELL
*Delaware*

MARTIN J. O'MALLEY
*Maryland*

TIMOTHY M. KAINE
*Virginia*

**Mid-Atlantic Governors' Agreement on Ocean Conservation**

**A Rising Tide of New Challenges**

The ocean waters of the Mid-Atlantic, stretching from New York to Virginia, provide a wealth of economic and environmental services to local communities, States, and the nation. At the same time, the people of the Mid-Atlantic region are a significant force that influences our ocean and coastal environment. We change the coastline and watershed through our buildings and development, we harvest the ocean's resources through increasingly efficient means, and we rely on offshore waters to support diverse activities such as maritime commerce and recreation. As the intensity of these human influences has increased, they have at times led to significant threats to the health of our ecosystems.

Now our ocean and coastal resources face a new generation of challenges, and these challenges are only growing


Mid-Atlantic Regional Planning Body established April 2013.

Includes 5 MARCO states plus PA, federal agency reps, MAFMC, & Shinnecock tribe.

John Bull (VMRC) and Laura McKay (VA CZM) are Virginia's 2 State RPB Reps

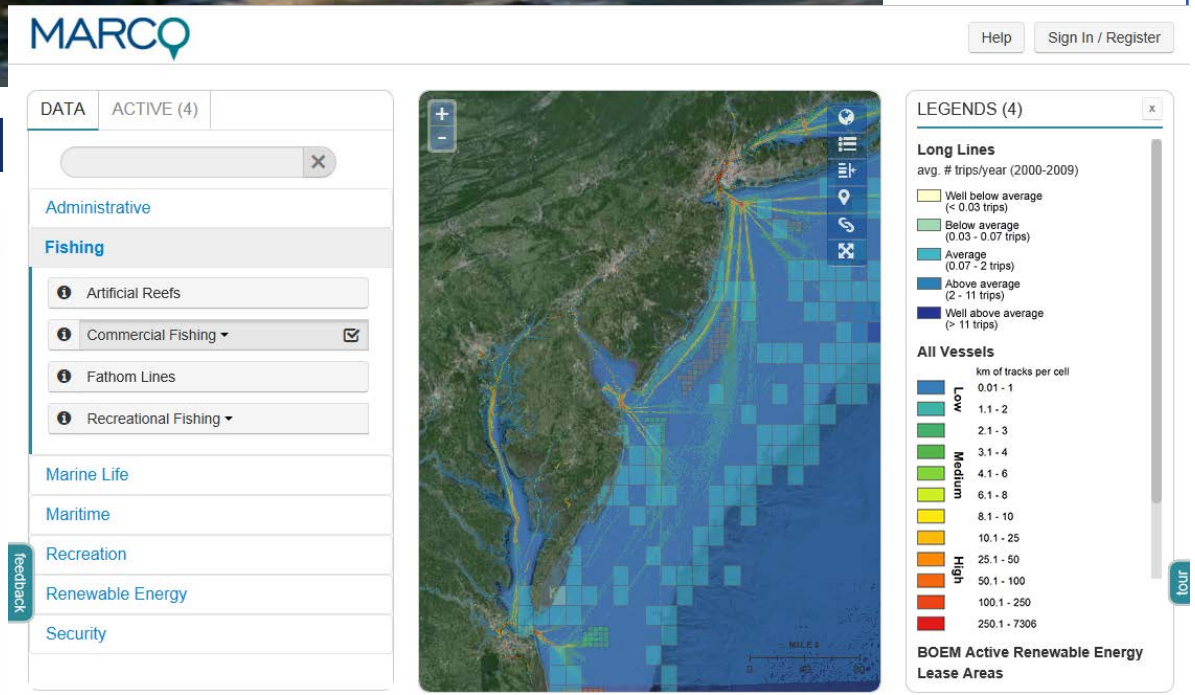
# Ocean Planning (addresses 2 MARCO priorities)

Habitat

Energy

# We built it and they're coming!

MARCO launched its Ocean Data Portal in December 2010 and continues to update it.



# www.midatlanticocean.org

MARCO
Mid-Atlantic Regional Council on the Ocean

New York · New Jersey · Delaware · Maryland · Virginia

ABOUT » | SHARED REGIONAL PRIORITIES » | OCEAN PLANNING | DATA PORTAL | RESOURCES | NEWS & EVENTS


**Climate Change Adaptation**

*Helping coastal towns and cities adapt to impacts of climate change.*

**Marine Habitats**

*Enhancing management of ocean ecosystems that extend across state borders.*

**Renewable Energy**

*Planning for sustainable and compatible wind power in offshore waters.*

**Water Quality**

*Advancing regional-scale efforts for healthy, clean ocean waters.*

## Sustaining the Long-term Health of the Mid-Atlantic's Ocean Resources

Established by the Governors of the five coastal Mid-Atlantic states in 2009, the Mid-Atlantic Regional Council on the Ocean (MARCO) is a partnership of Delaware, Maryland, New Jersey, New York, and Virginia to enhance the vitality of the


## Regional Ocean Planning

MARCO uses regional ocean planning as

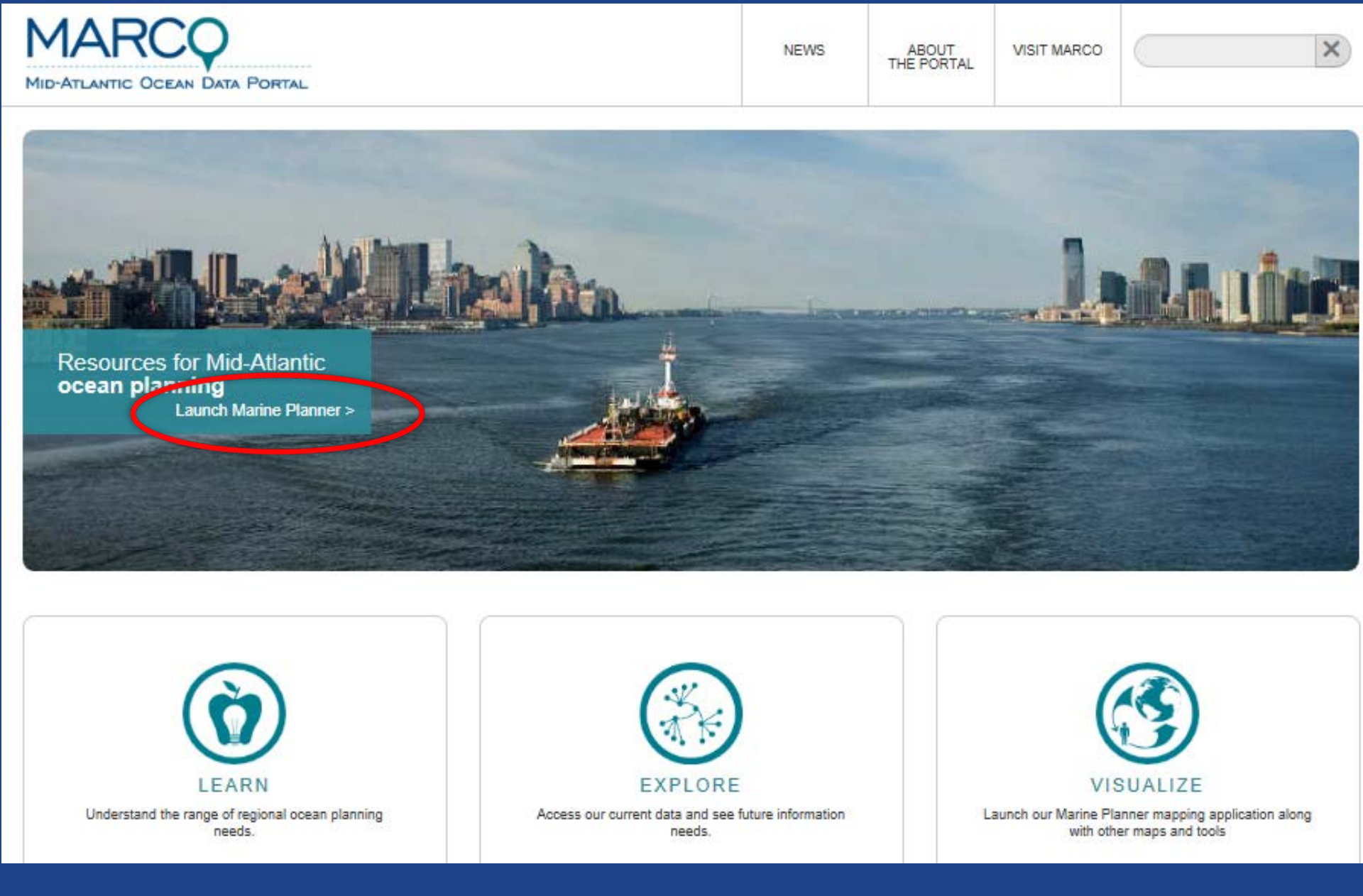
## News & Events

Comment Period Open for Mid-Atlantic Ocean Planning Framework

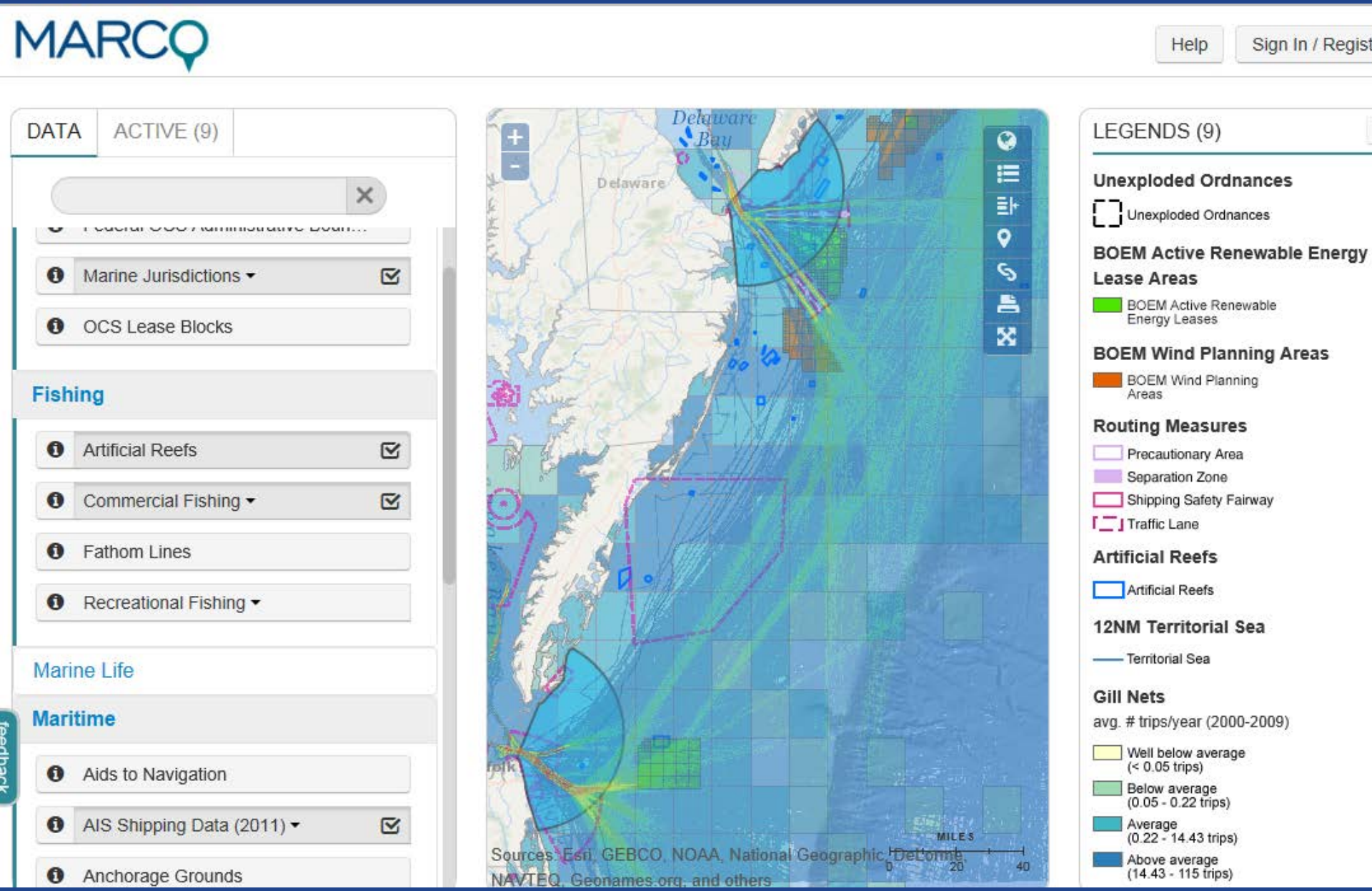
Summary of the Mid-Atlantic Regional Ocean Planning Workshop

MARCO Releases Guide to State Management of Offshore Wind Energy

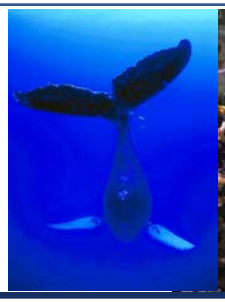
# www.midatlanticocean.org

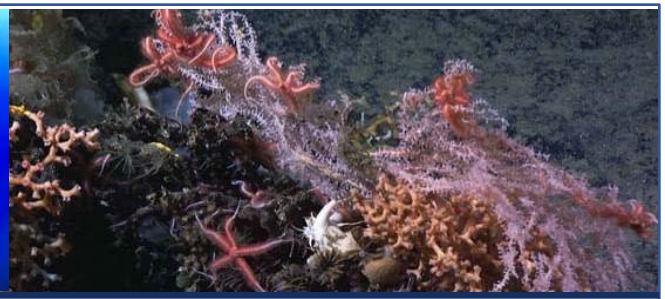


# Visualize: Launch Marine Planner



# Filling Data Gaps





MARCO
MID-ATLANTIC OCEAN DATA PORTAL

NEWS | ABOUT THE PORTAL | VISIT MARCO


Explore
Data Catalog
Data Priorities
External Resources
Data Criteria

Visualize
Marine Planner
Cartography
Collaboration
Interactivity

Watch Our Videos

## Data Catalog

The Data Catalog gathers available data and recruits new data about ocean resources and human use information such as fishing grounds, recreational areas, shipping lanes, habitat areas, and energy sites. Data falls into one of eight themes. You can explore the data available under each theme, and you can also see the Mid-Atlantic Ocean Data Portal's key new data needs under Data Priorities.

Explore Data Catalog

## Data Priorities

The Mid-Atlantic Ocean Data Por
planning process. The list highligl
could use or would like to partner
regularly for new requests.

**Source:** NOAA-NMFS, developed in consultation with Portal Team's commercial fishery advis
**Status:** Data under development
**Contact:** Rick Lathrop, Rutgers CRSSA
**Expected Date of Upload to Portal:** September, 2014
**Notes:** Data developed using "Communities at Sea" mapping approach. Draft maps produced
review by fishing industry contacts. Development of additional map layers to address key gaps
fisheries will begin July 2014. Additional potential data sources include NOAA's Vessel Monito
agency collected data and participatory mapping projects with fishermen.

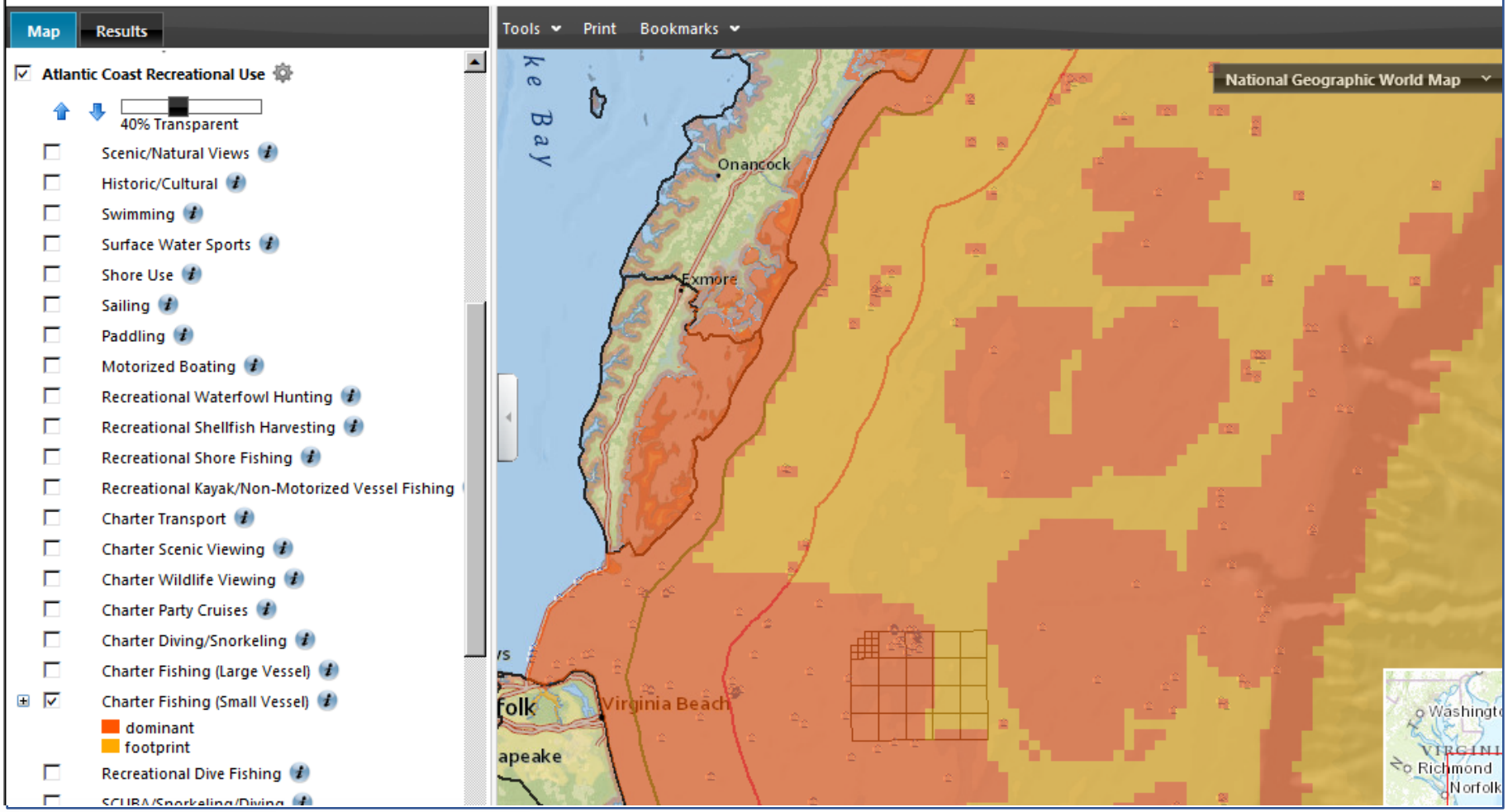
External Resources

# Recreational Uses

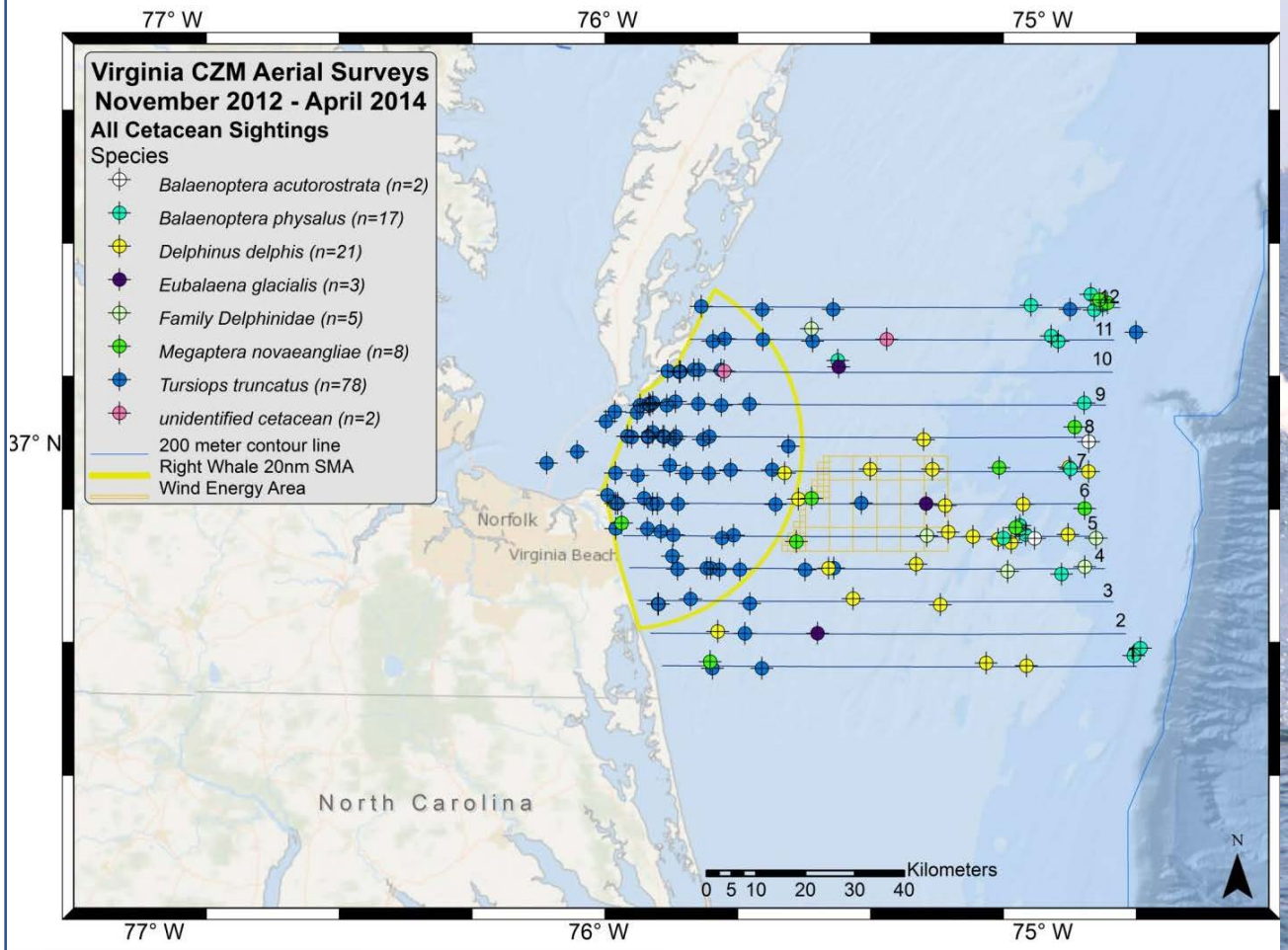
# Charter Fishing Small Vessels

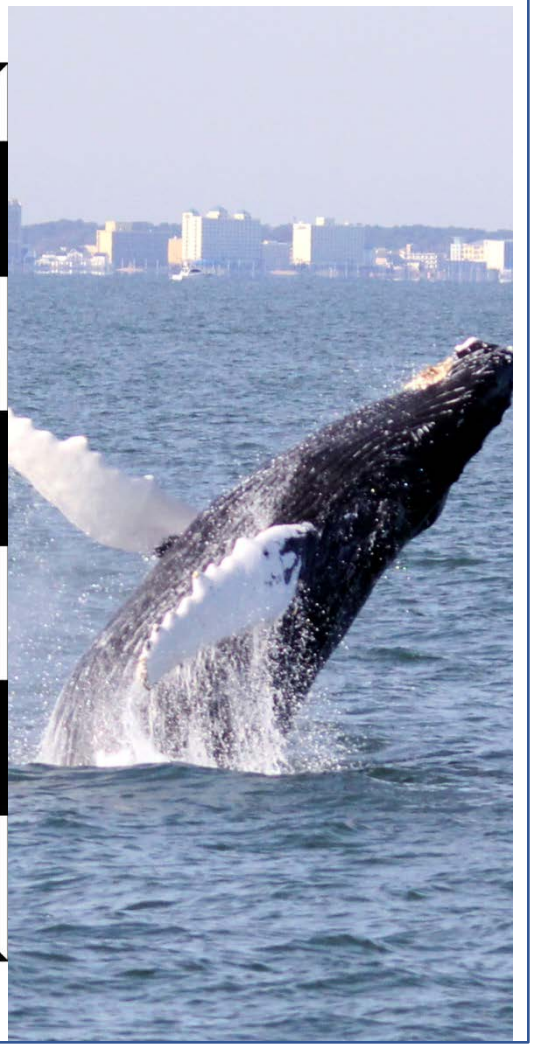
Virginia Coastal Zone MANAGEMENT PROGRAM VCU

www.coastalgems.org



# Mapping Whale Activity

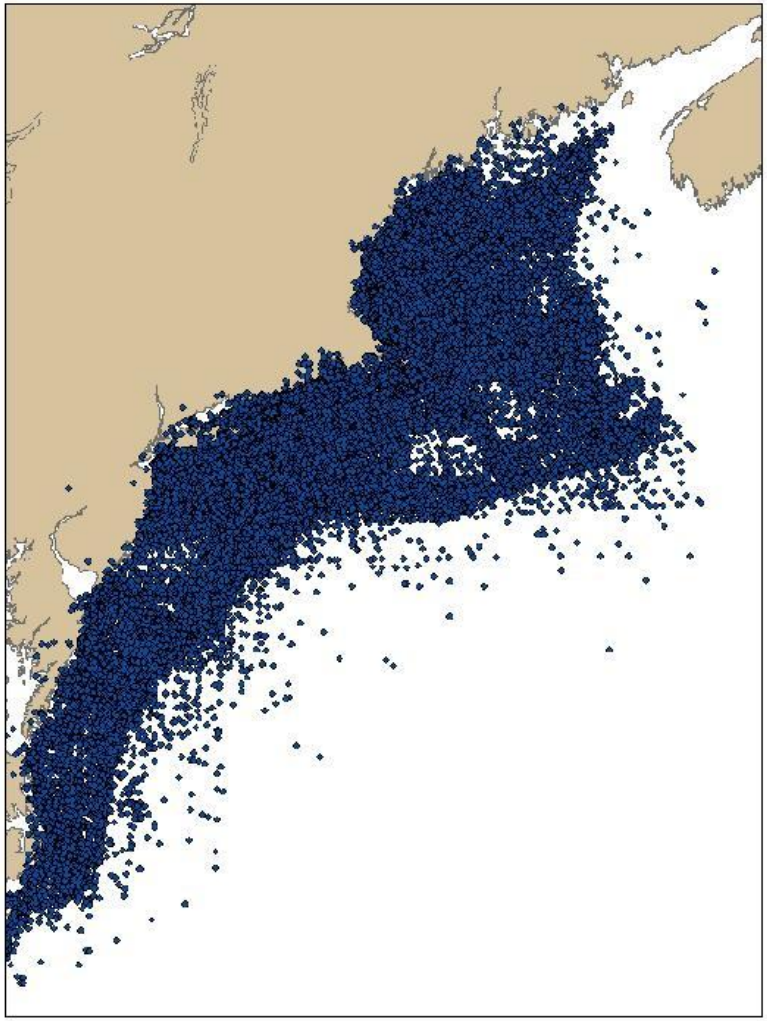


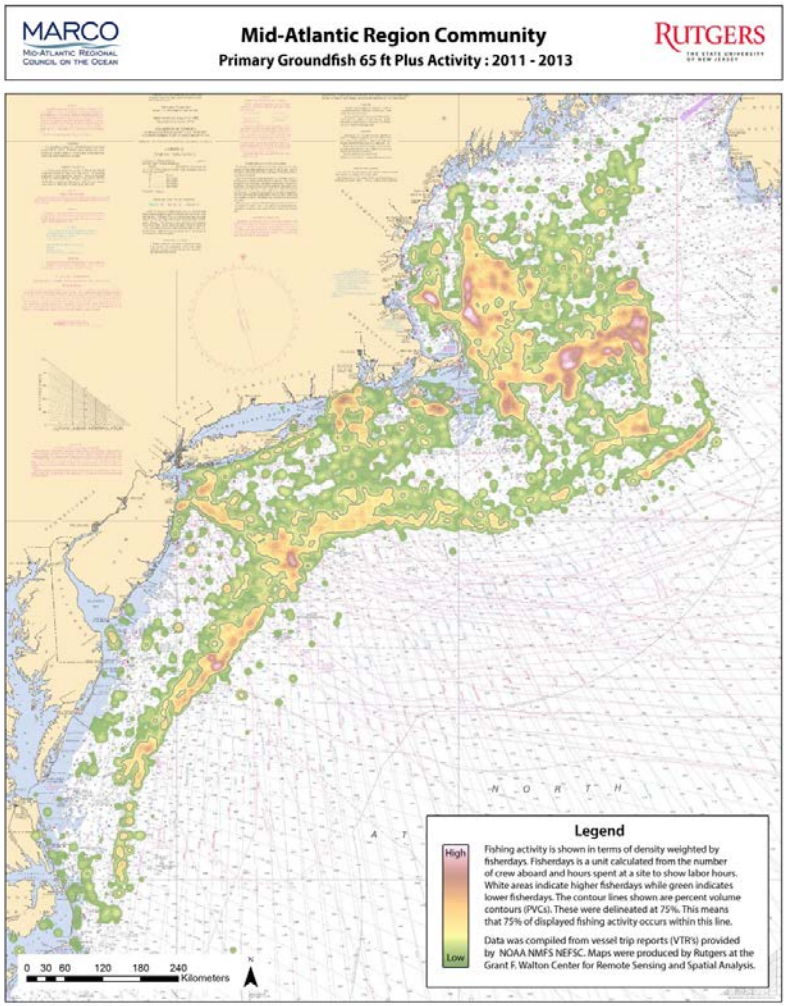



# Mapping Commercial Fishing

Combining NOAA Vessel Trip Report data with vessel permit data and working with commercial fishermen to verify where most “fisher days” are spent– the “Communities at Sea” approach.

# Mapping Commercial Fishing





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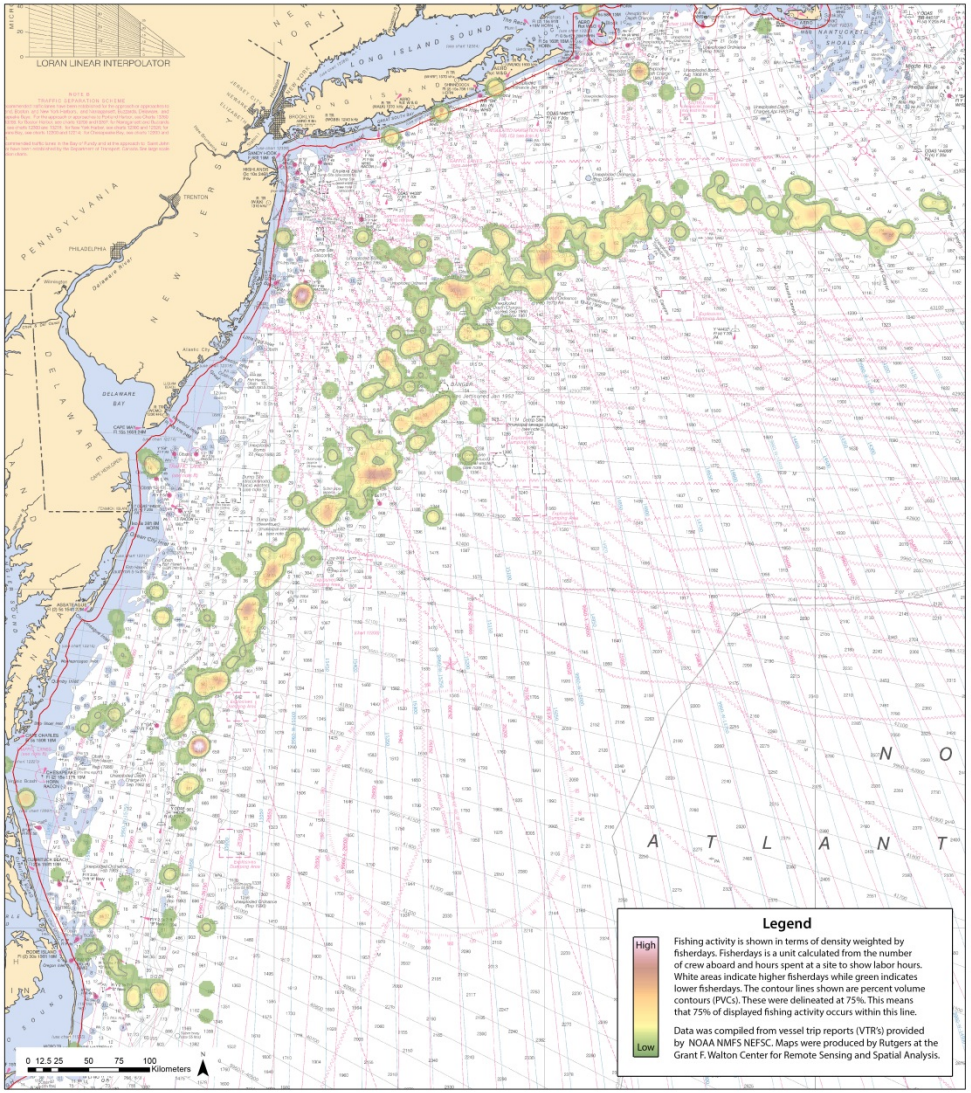
# Hampton, VA Community

## Primary Groundfish 65 Plus Activity : 2011 - 2013

RUTGERS
The State University of New Jersey

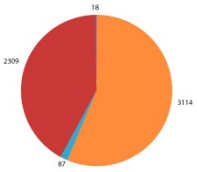



## Fishing Activity Associated with Hampton, VA 2011 - 2013

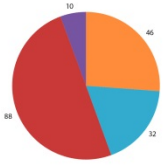
**Gear Type**

- Dredge
- Gillnet
- Groundfish 65 plus
- Other

Average number of Fisherdays

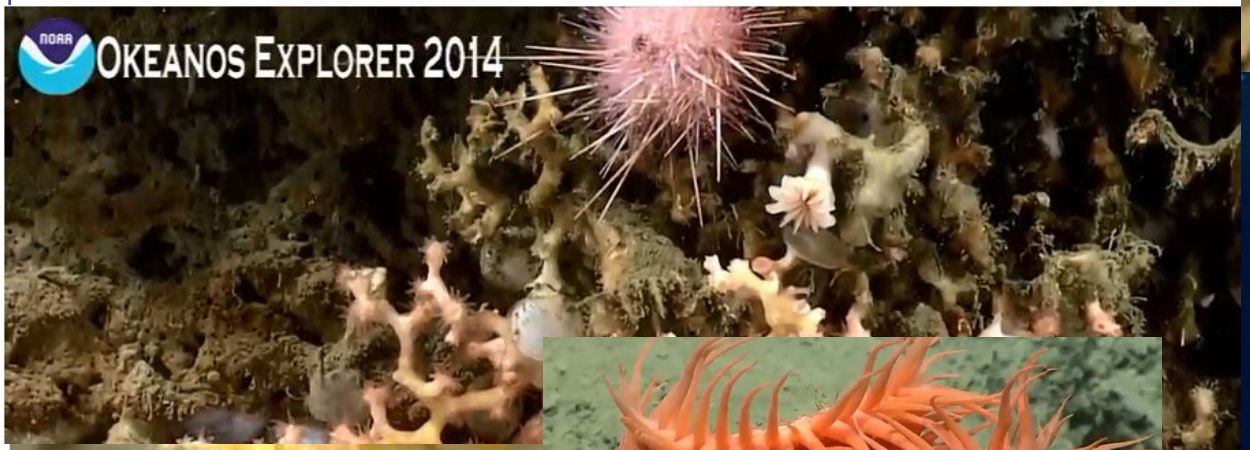



Average Number of Trips Landed




Average Number of Active Vessels

# Exploring Canyons






# What's Next?

- Mid-A Ocean Assessment by 2016
- Mid-A Ocean Action Plan by 2016
  - documentation of ecosystem services
  - documentation of criteria and process for choosing to focus on specific high ecological value and high user conflict geographic areas
  - identification of limited # high value ecological areas and High use conflict areas
  - identification of limited # of region-wide issues
  - compatibility analyses
- Implementation of Plan