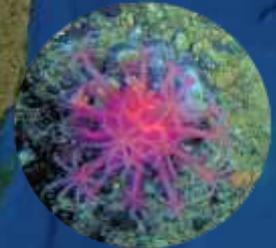


Marine Spatial Planning



*Laura Geselbracht
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Florida Chapter
September 2010*





Topics to be Covered:

- Why Marine Spatial Planning?
Why now?
- What is Marine Spatial Planning?
- Where has MSP been used so far?
- Why is MSP relevant now to Florida?
- Florida and effective Marine Spatial Planning.



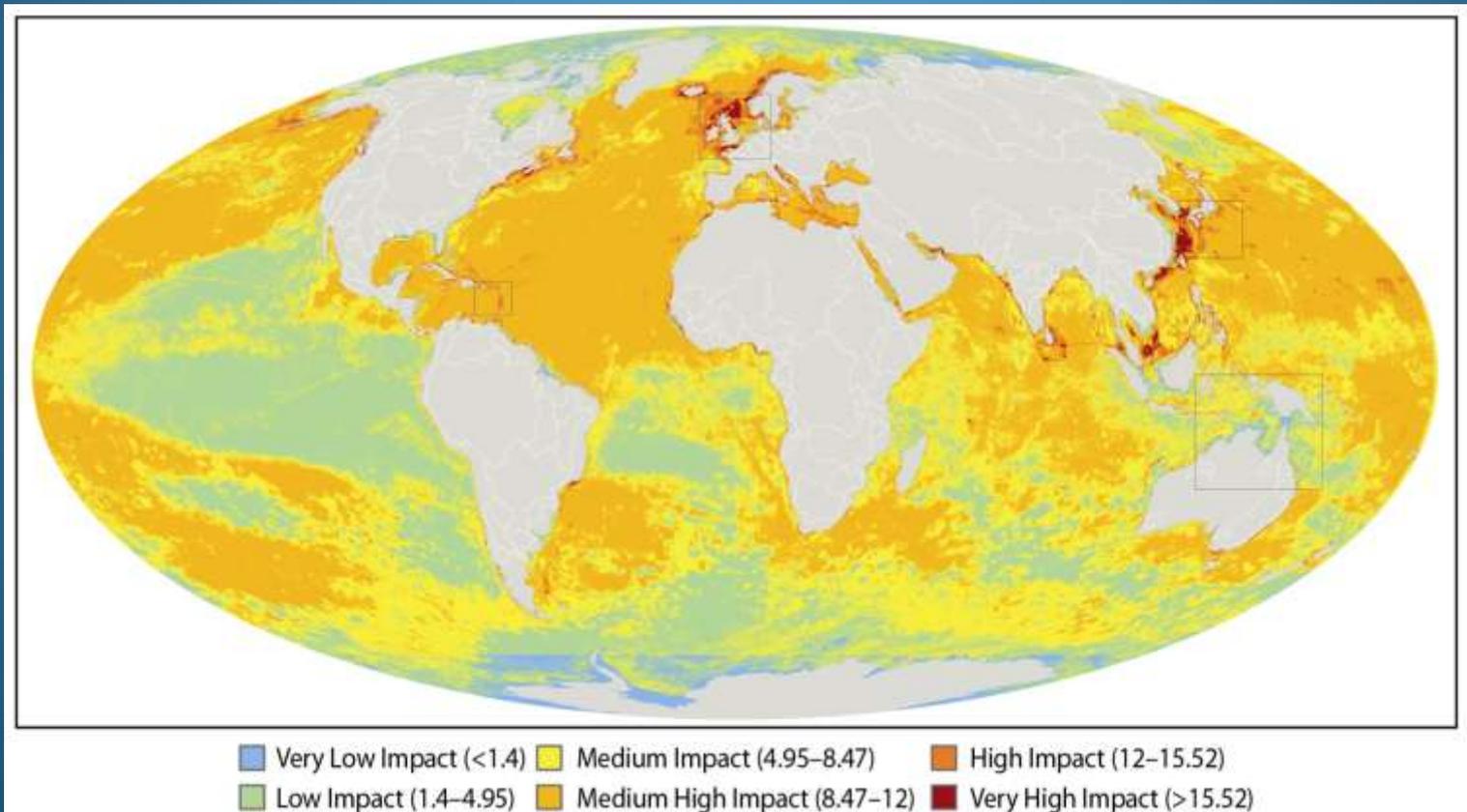


Why the Interest in Marine Spatial Planning?

As on land, when many potentially incompatible uses compete for area it is advantageous to plan in advance the spatial arrangement of uses to maximize the public interest.



No area of the ocean is untouched by human activity



Halpern et al., 2008, *Science* (Feb 14)

Many marine places are under increasing development pressures....





Some areas are more
ecologically important
than others

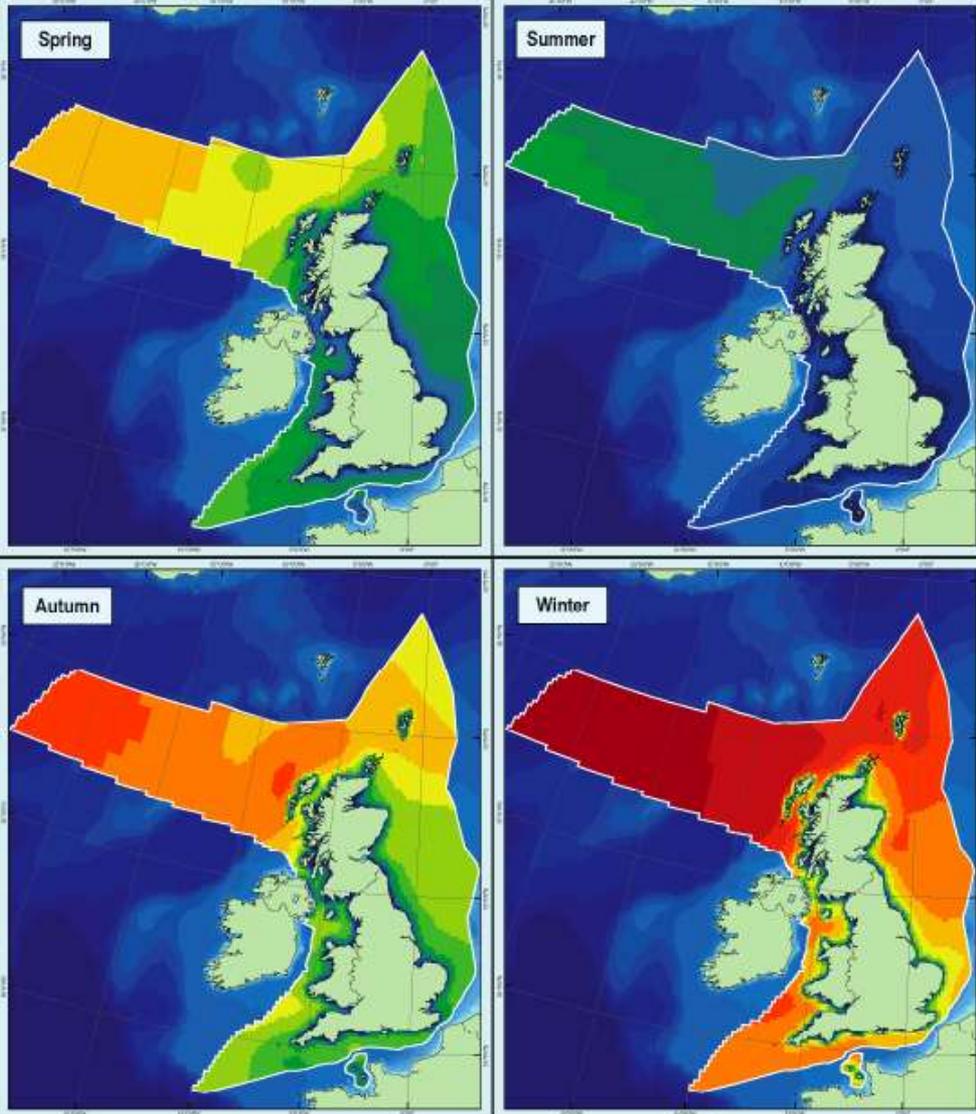
Areas of High Biodiversity
Areas of High Endemism
Areas of High Productivity
Spawning Areas
Nursery Areas
Migration Stopover Points





Some areas are more economically important than others

- Oil & Gas Deposits
- Sand & Gravel Deposits
- Fishing Grounds
- Transportation Routes
- Areas of Sustained Winds
- Areas of Sustained Waves



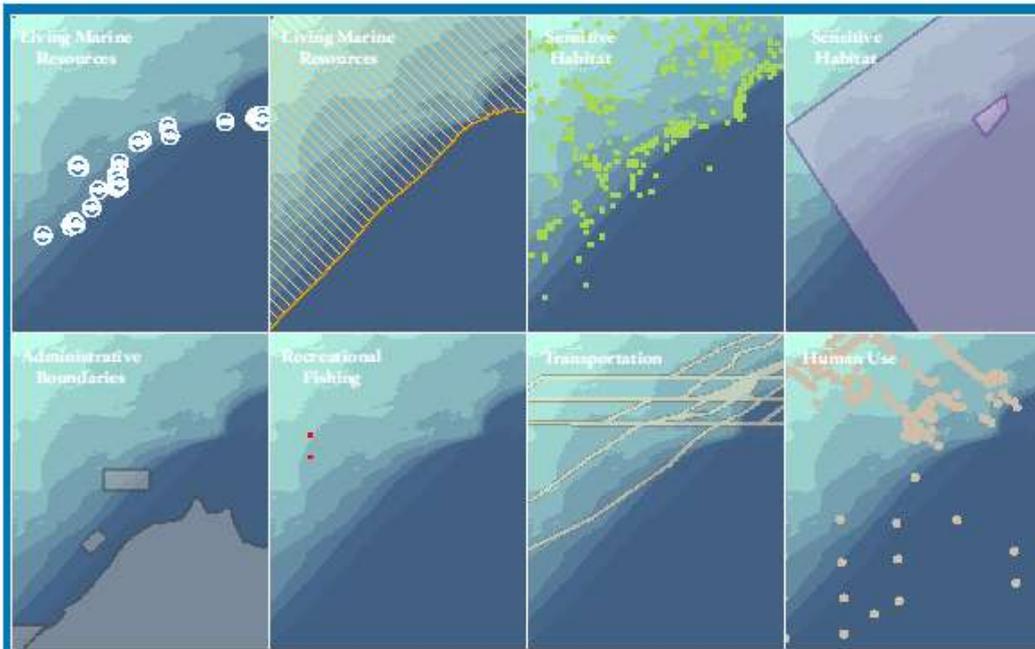
Seasonal Mean Wind Speed at 100m



Projection	Transverse Mercator WGS 1984 UTM Zone 31 N
Scale	1:12,800,000 when printed A3
Map Designed and Produced by ABPmer	

Atlas of UK Marine Renewable Energy Resources

- Notes:
- North of 63° N and West of 12° W, model cell size approximately 60km. Model cell size approximately 10km in all other areas.
 - Modelled wind data will be less robust at land-sea boundary points.
 - Wind data are based on hourly model hindcast unless over 7 years.
 - Wind speed at 100 metres above sea level.
 - March 2008, Version 2.0.
 - © Crown copyright. All rights reserved.



Current Marine Management:

- One economic sector at a time
- Allocation of uses without regard to other uses
- Allocation of uses with limited regard to nature

Marine Spatial Planning Elements for the South Atlantic - Example Only

- Snowy Grouper, Non-Commercial Trawl Locations (MARMAP)
- Whale Migratory Route (US Navy)
- Hardbottom Habitat (TNC)
- Habitat Areas of Particular Concern (SAFMC)
- Type 2 Deepwater Marine Protected Areas (SAFMC)
- Artificial Reefs (SC DNR)
- Commercial Shipping Routes (UCSB & TNC)
- Sand Resources (SAFMC)



Integrated Marine Spatial Management:

- Across economic sectors
- Across agencies
- Among levels of government
- Allocation of uses considering other uses
- Allocation of uses considering the needs of nature for certain places



Why Is MSP Being Considered Now?

“ocean, coastal ...ecosystems are experiencing an unprecedented rate of change due to human activities. We are only now beginning to understand the full extent of the direct and indirect consequences of our actions on these systems.”

Interagency Ocean Policy Task Force, 2009

Moving Ahead:

The Next Step in
Ocean Management
for Florida



FLORIDA OCEAN ALLIANCE

2009 Report



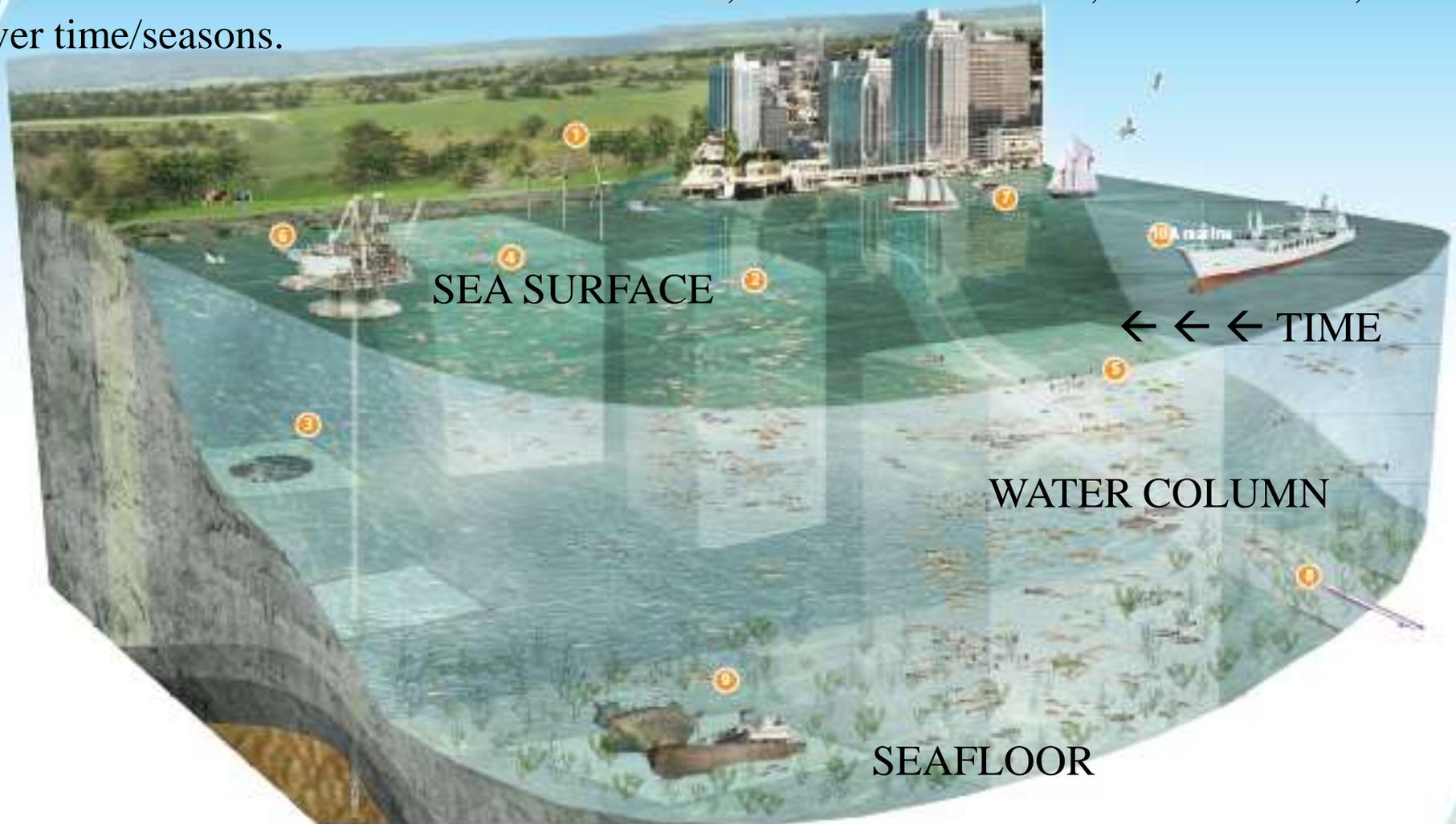
What is Marine Spatial Planning?

“a public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that are usually specified through a political process.”¹

¹Ehler, Charles, and Fanny Douvère. Marine Spatial Planning: a step-by-step approach toward ecosystem-based management. Intergovernmental Oceanographic Commission and Man and the Biosphere Programme. IOC Manual and Guides No. 53, ICAM Dossier No. 6. Paris: UNESCO. 2009

Oceans Uses

MSP deals with oceans uses— at the seafloor, in the water column, on the surface, and over time/seasons.



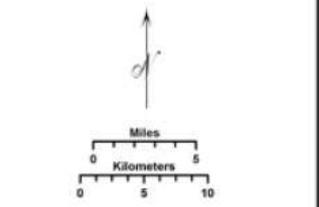


For more information:
<http://seagrant.gso.uri.edu/oceansamp/index.html>

Rhode Island Ocean Special Area Management Plan (SAMP)

- Map Key**
- Proposed Ocean Study Area
 - State/Federal Waters Separation
 - Fishing Areas: Mobile Gear
 - Fishing Areas: Fixed Gear
 - Fishing Areas: Recreational

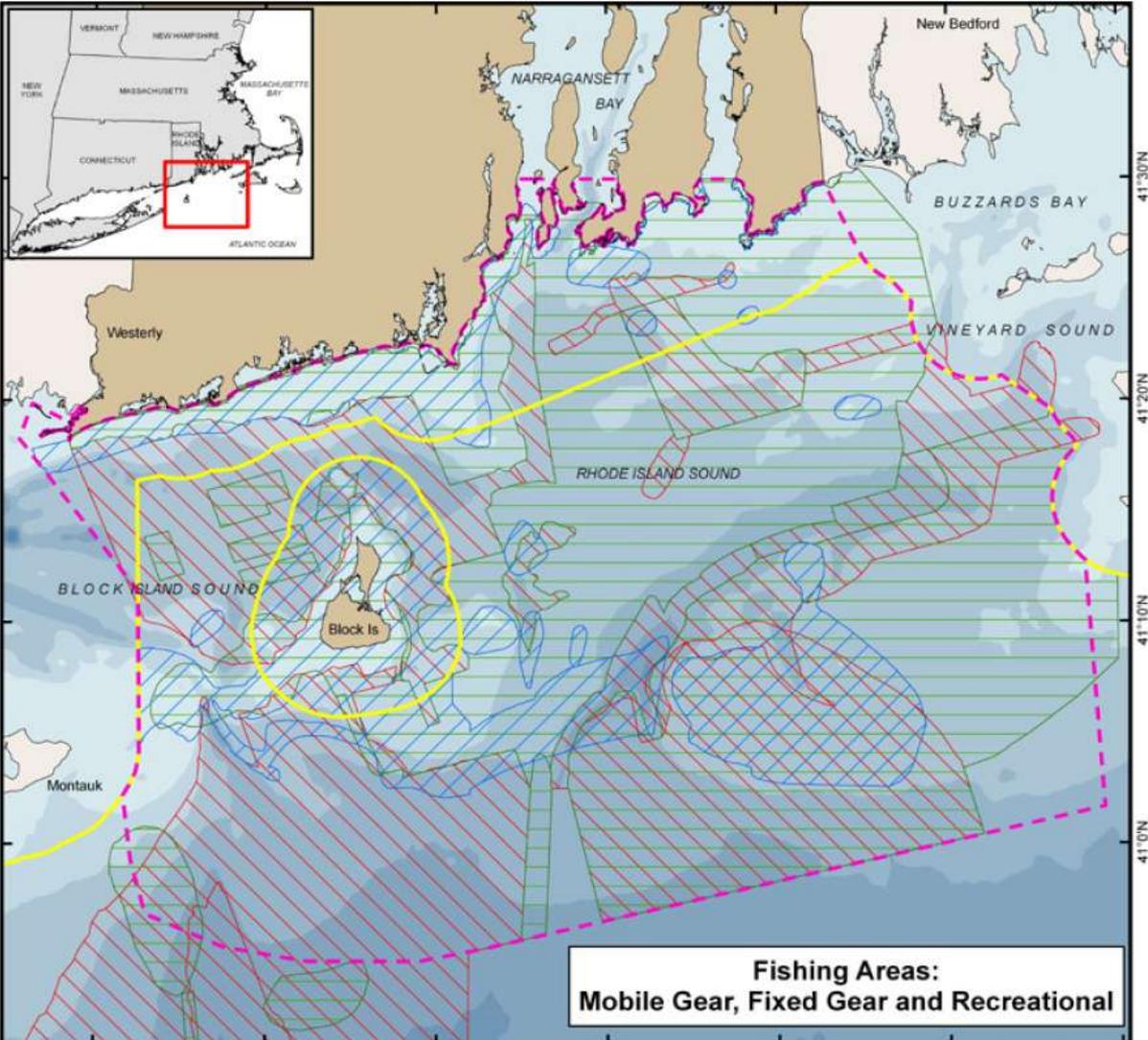
- Bathymetry (m)**
- 20
 - 30
 - 40
 - 50
 - 60
 - 70
 - 80



Coordinate System:
Projection: RI Stateplane
Units: Feet
FIPS Zone: 3800
Datum: NAD83

For Project Background Information:
<http://seagrant.gso.uri.edu/oceansamp>

For Project Map and Data Products:
http://www.narrbay.org/0_projects/oceansamp



**Fishing Areas:
Mobile Gear, Fixed Gear and Recreational**

A multi-sector approach that fosters a properly functioning ecosystem that is both ecologically sound and economically beneficial





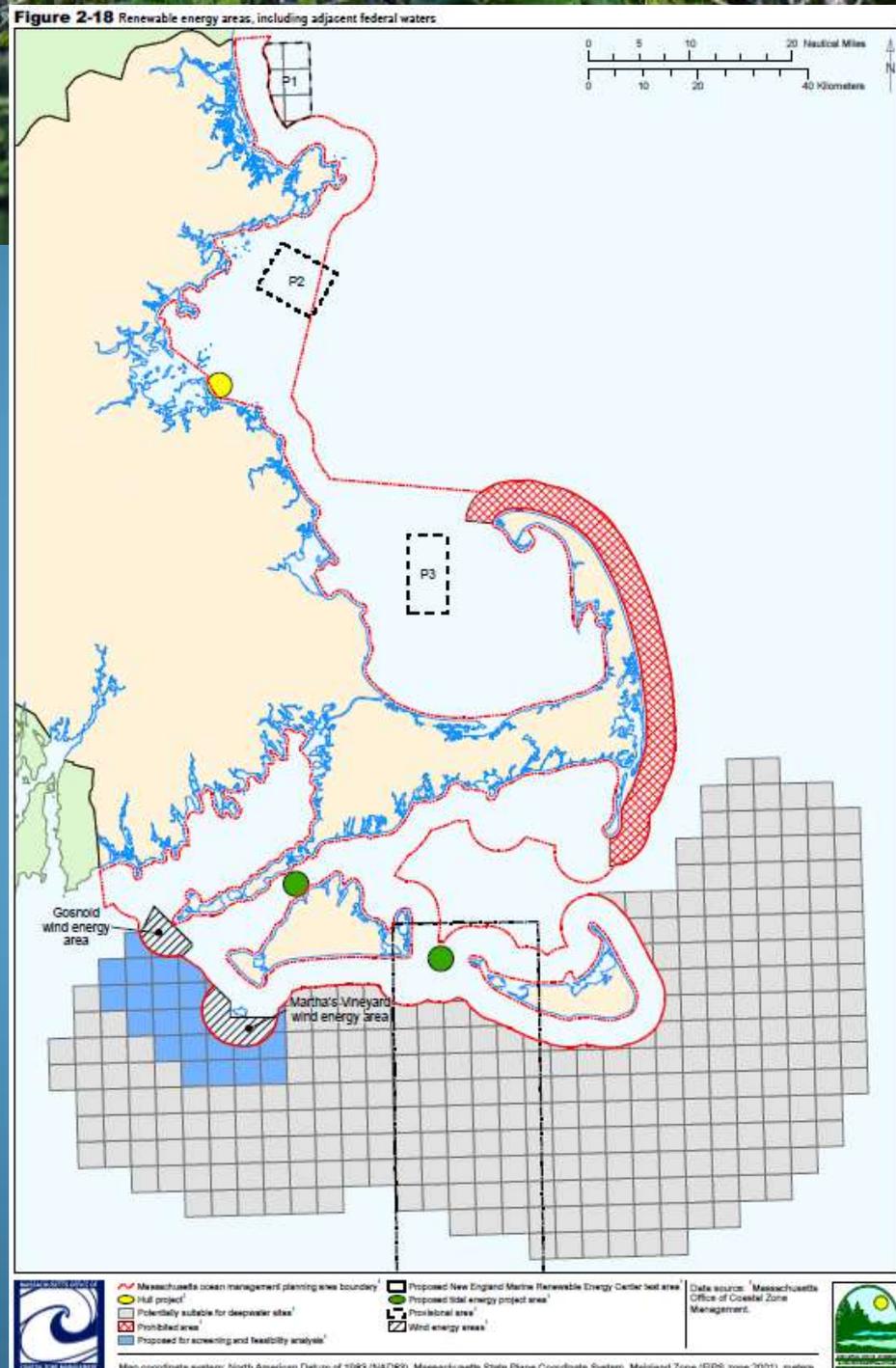
Massachusetts Ocean Management Plan

Uses included:

- Habitat
- Commercial and recreational fishing;
- Renewable energy;
- Navigation and infrastructure;
- Sediment management; and
- Social, cultural, historic.

Renewable Energy Areas

<http://www.mass.gov/czm/oceanmanagement/index.htm>





New National Plans for MSP

June 12, 2009 - President created the Interagency Ocean Policy Task Force (OPTF) to develop a national ocean policy and a framework for CMSP.

September 2009 - OPTF identified CMSP as one of nine priority objectives in its Interim Report.

December 14, 2009 - CEQ released Interim Framework for Effective CMSP

July 19, 2010 - OPTF released final recommendations and President's Executive Order is released calling for CMSP.

www.whitehouse.gov/administration/eop/ceq/initiatives/oceans/interim-framework



Ocean Policy Task Force Final Recommendations on CMSP

- *Multi-Objective Planning*
- *Goals and Priorities (ecosystem resilience and functioning/biodiversity)*
- *Science-Based and Data-Driven*
- *Regional Approach*
- *Climate and Other Changes*
- *Long-term and Adaptive*
- *Transparency and Participation*



Characteristics of Good Marine Spatial Planning

- **Ecosystem-based**, balancing ecological, economic, and social goals and objectives toward sustainable development;
- **Integrated**, across sectors and agencies, and among levels of government;
- **Place-based** or area-based;
- **Adaptive**, capable of learning from experience;
- **Strategic and anticipatory**, focused on the long-term;
- **Participatory**, stakeholders actively involved in the process.



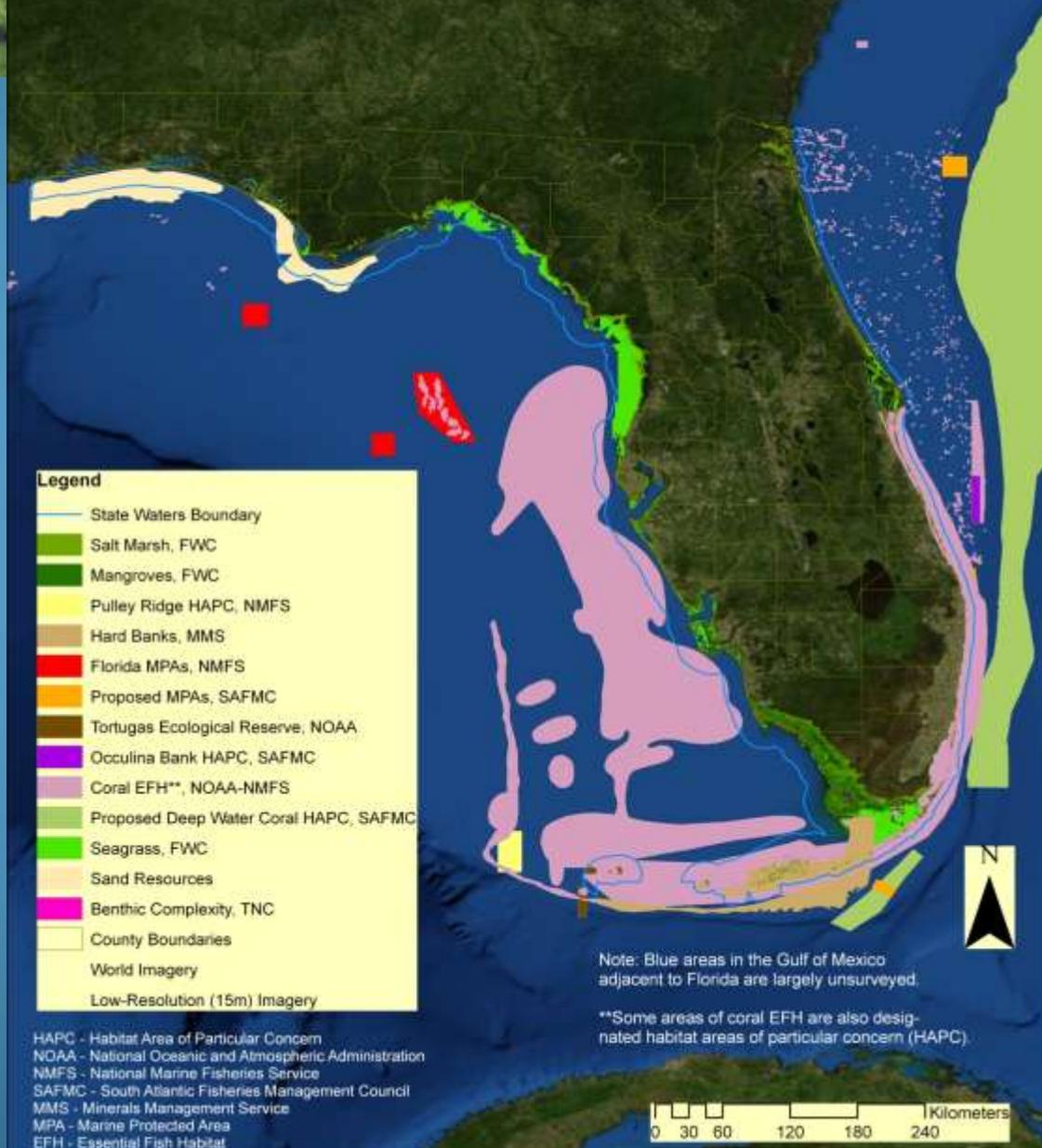
Florida & Effective Marine Spatial Planning

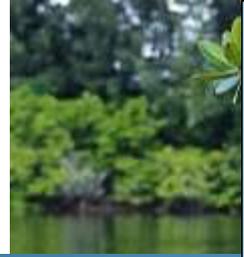
- Regional Governors Alliances - South Atlantic and Gulf of Mexico;
- Good spatial data on natural resources and current/anticipated human uses assembled;
- Availability and application of good science/social science to inform MSP.



Some of the existing spatial data on natural resources that will be useful for MSP.

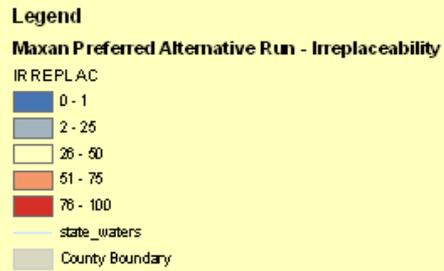
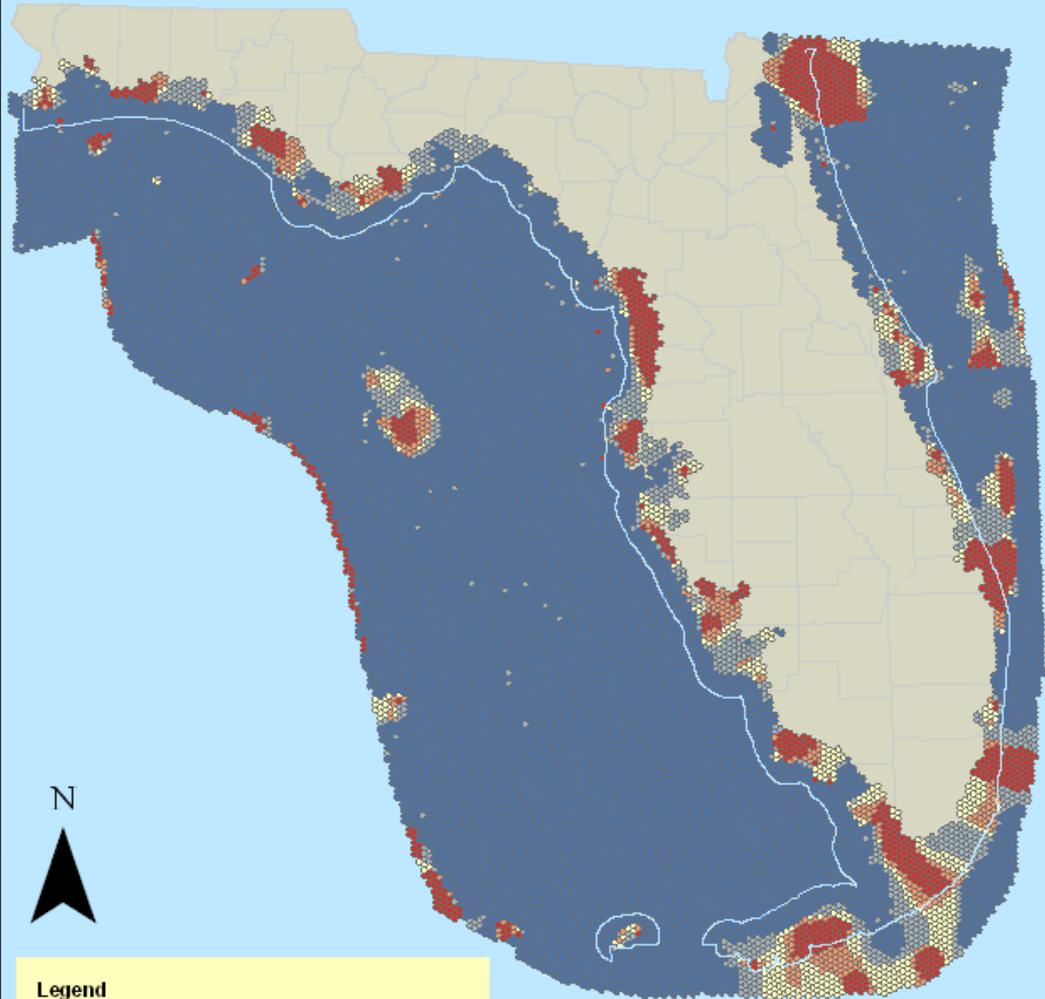
Figure 1. Marine Habitats Sensitive to Offshore Oil & Gas Development, Florida and Adjacent Areas*
 (*Other locations may exist)





Optimization algorithms such as Marxan (<http://www.uq.edu.au/marxan/>) can help to identify areas of particular ecological sensitivity.

Geselbracht, et al. 2008. Identification of a spatially efficient portfolio of priority conservation sites in marine and estuarine areas of Florida. Aquatic Conserv. Mar. Freshw. Ecosyst DOI: 10.1002/aqc.992.



Irreplaceability is the number of times any particular planning unit was selected in 100 runs





Questions?

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