

CARIBBEAN REGIONAL OCEAN PARTNERSHIP

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2012



CROP 2012

Background

EO 13547 - July 2010: National Policy for the Stewardship of the Ocean, Coasts, and the Great Lakes.

Establishes the National Ocean Policy ...*to ensure that Ocean and Coasts, and Great Lakes are:*

- *healthy and resilient,*
- *safe and productive,*
- *understood and treasured to promote the well-being, prosperity, and security of present and future generations.*



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Background

To achieve this vision the National Ocean Policy establishes Coastal and Marine Spatial Planning (CMSP) a regionally based planning process:

...a comprehensive, adaptive, integrated, ecosystem-based, and transparent spatial planning process, based on sound science, for analyzing current and anticipated uses of ocean, coastal areas and resources.



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Regional Planning Bodies

...consist of Federal, State, and tribal organizations working under relevant authorities to develop CMS plans for a region (e.g., resource management, coastal zone management or fisheries, transportation, and public health).

EO 13547 (2010)

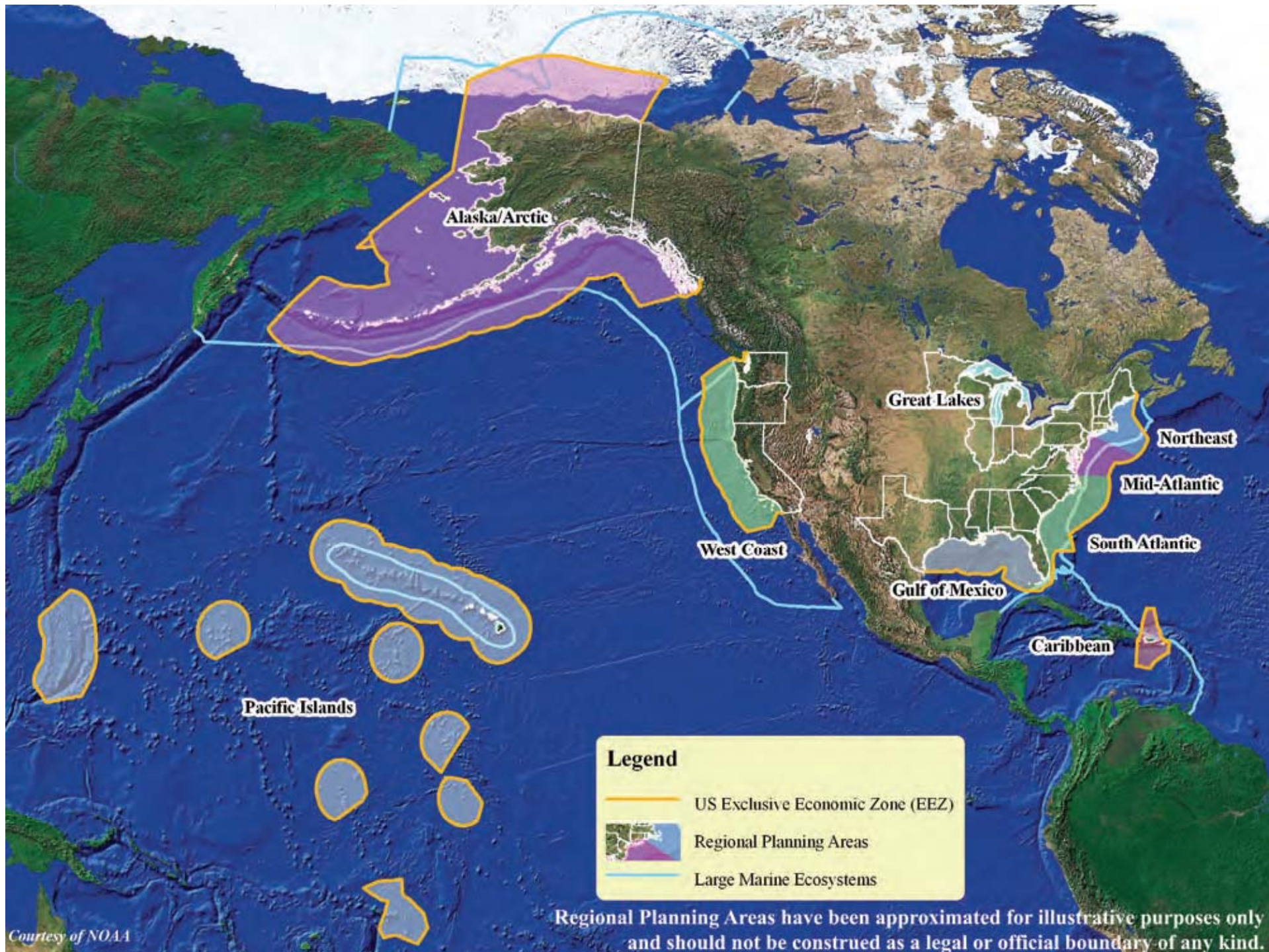


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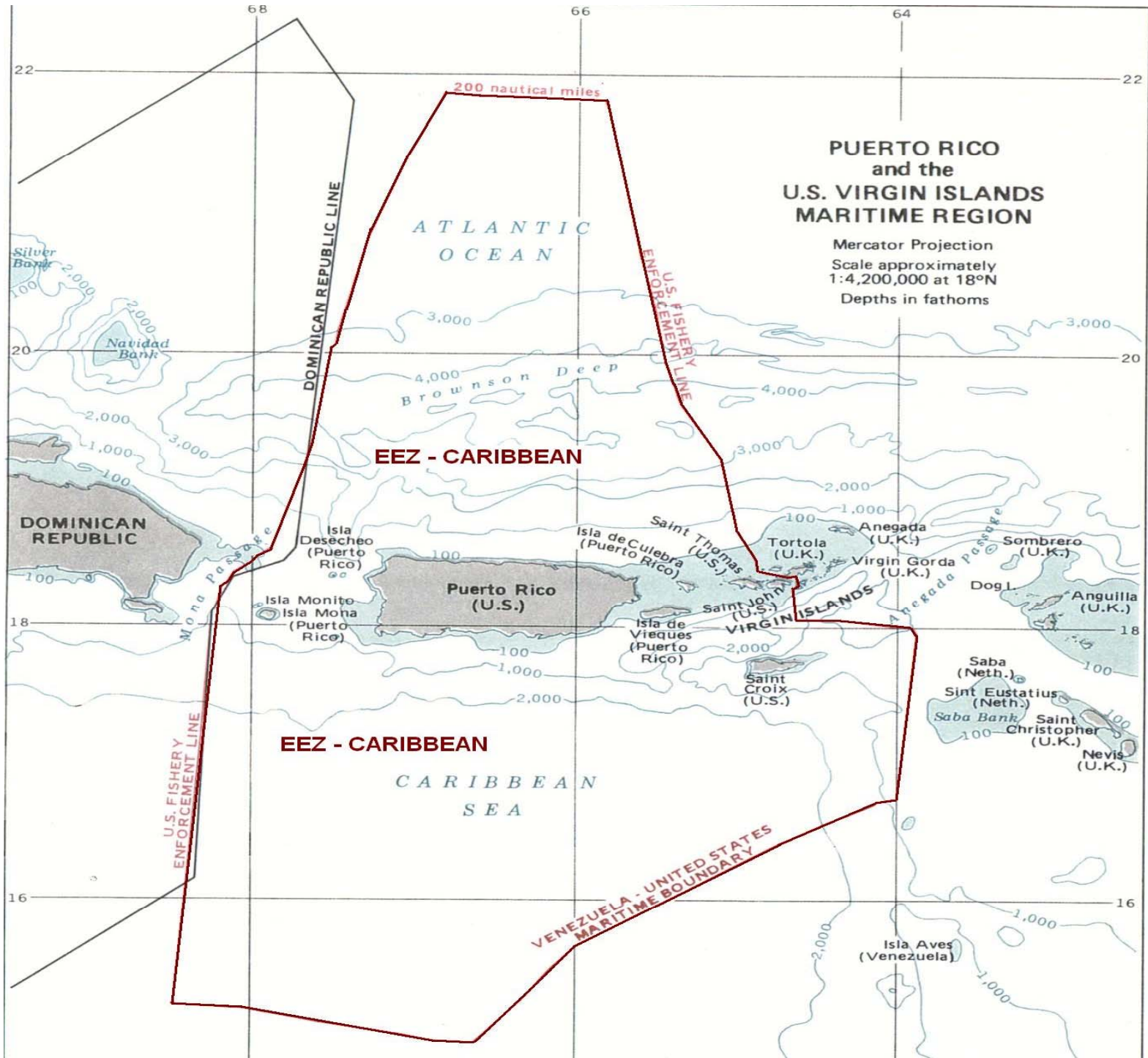
Regional Ocean Partnerships

...established by the states in recognition of the need to address a new generation of opportunities and challenges and to ensure that future generations can enjoy healthy and productive ocean and coastal ecosystems.

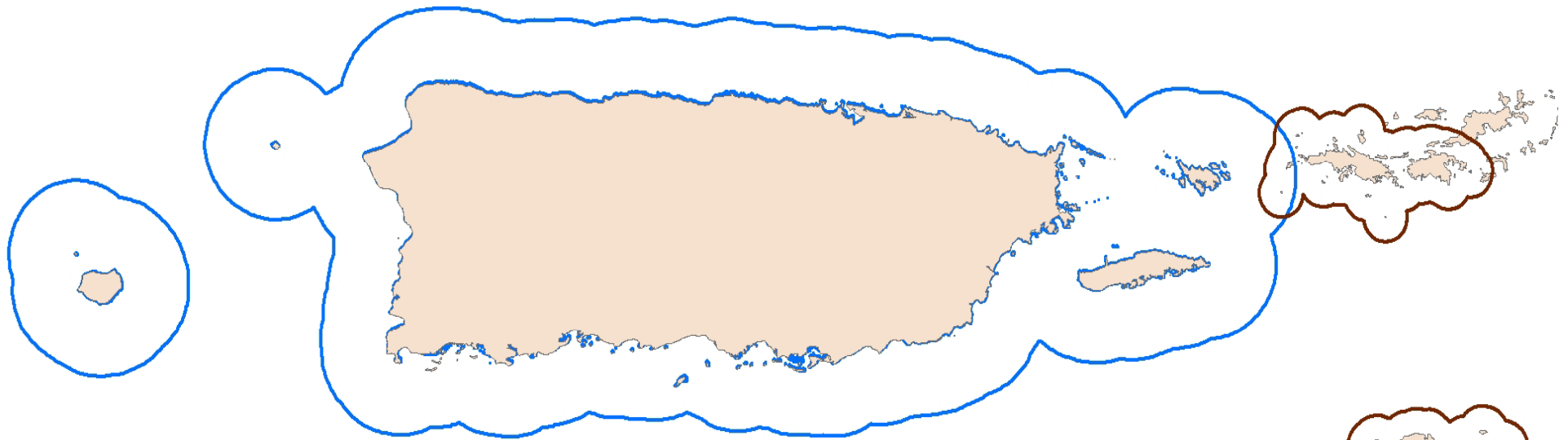
- Regional approach
- Potential to leverage existing relationships and resources
- Generate greater efficiency in regulatory processes.





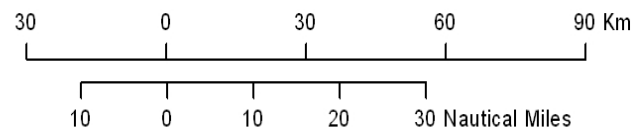
Courtesy of NOAA

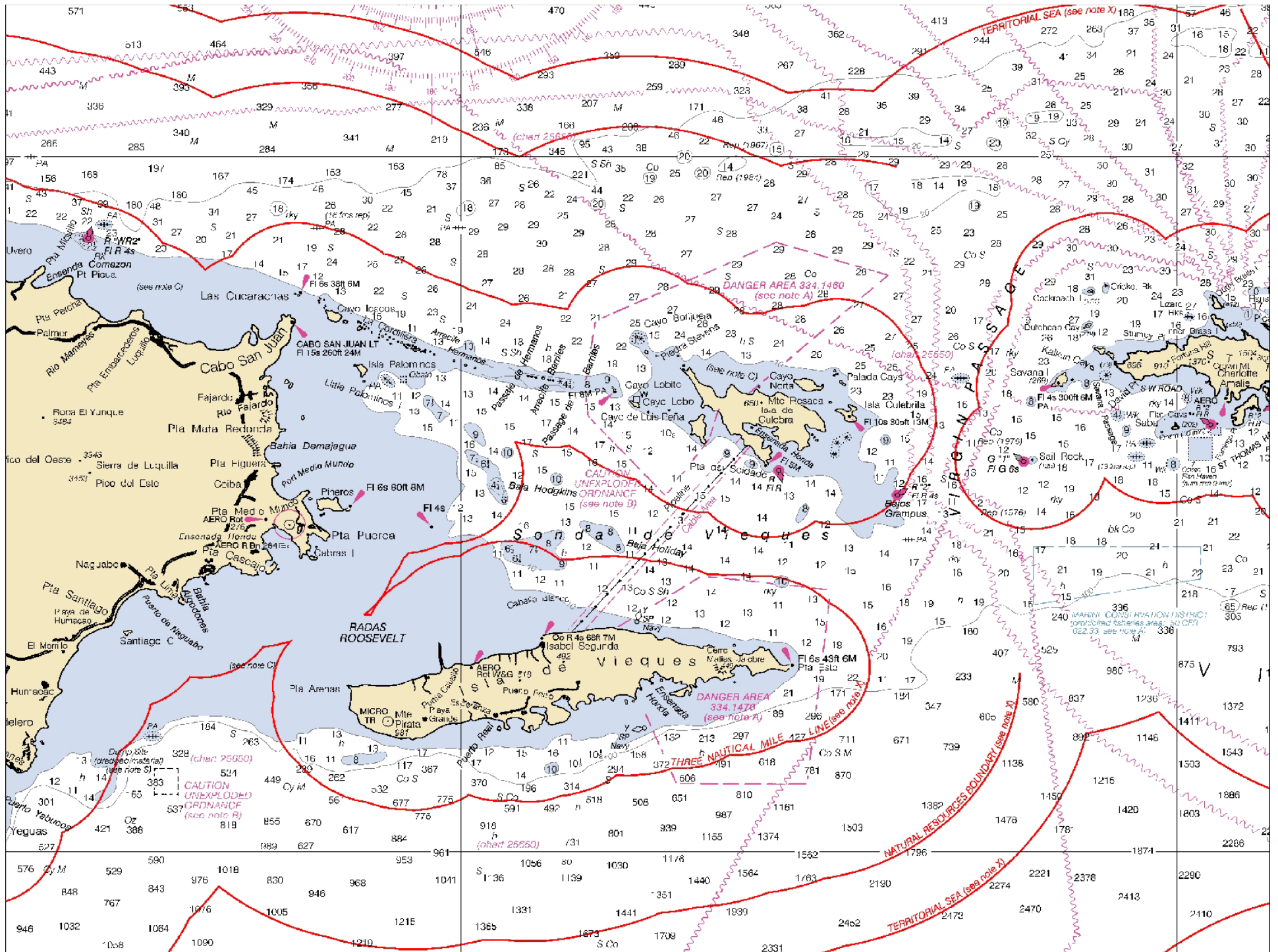


Territorial waters Puerto Rico - U.S. Virgin Islands



-  USVI (3 mn)
-  Puerto Rico (9 mn)







Memorandum of Understandingo

- **Creates the CROP**
- **The Parties recognize the importance of continuing cooperation and participation with Federal, PR, and USVI governmental, non-governmental organizations, and academic institutions in programs of mutual interest .**
- **Coordination with existing regional organizations such as the Caribbean Fisheries Management Council (CFMC), the Caribbean Coastal and Ocean Observing System (CARICOOS), and the Coral Reef Conservation and Management Programs, USCRTF, CCRI, PR and USVI goverment agencies.**
- **Collaboration with BVI, Dominican Republic, CCI 20/20 and Wider Caribbean Region.**



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CARIBBEAN REGIONAL OCEAN PARTNERSHIP

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE GOVERNMENT OF PUERTO RICO
AND
THE GOVERNMENT OF THE U.S. VIRGIN ISLANDS

This MEMORANDUM OF UNDERSTANDING (hereinafter referred to as "the Memorandum") is made this _____ day of _____, 2011 BY AND BETWEEN GOVERNMENT OF PUERTO RICO, represented by Luis Fortuño, Governor, whose address is La Fortaleza P.O. Box 9020082, San Juan, PR, 00902-0082 (hereinafter referred to as "PR") of THE FIRST PART and the GOVERNMENT OF THE US VIRGIN ISLANDS, represented by John P. DeJongh, Jr., Governor, whose address is 21-22 Kongens Gade, Charlotte Amalie, St. Thomas, VI 00802 (hereinafter referred to as "USVI") of THE SECOND PART (all of whom are hereinafter collectively referred to as "the Parties" and individually the "Party").

ARTICLE I

WHEREAS the Commonwealth of Puerto Rico and the Territory of the United States Virgin Islands are the only inhabited jurisdictions of the United States of America in the Caribbean Sea.

WHEREAS these jurisdictions are neighbouring and share many similar cultural and natural histories as well as common threats and risks to their island communities and natural resources.

WHEREAS the submerged lands and waters of the Caribbean Sea and Atlantic Ocean that divide these jurisdictions contain many important resources for these jurisdictions.

WHEREAS no overall initiative to jointly manage the resources of the submerged lands and waters between these jurisdictions have been developed.

WHEREAS this initiative shall recognize and foster coordination with existing organizations and agencies.

WHEREAS this initiative will seek to address relevant aspects of climate change, conservation of natural resources, energy development, fisheries, navigation, pollution abatement, tourism, and interstate commerce.

WHEREAS an agreement will promote the integration and increased collaboration with neighbour island states and territories to address topics concerning regional ocean resources.

WHEREAS The Nature Conservancy has the experience, expertise and capacity to develop and advance a regional ocean partnership between these jurisdictions and others.

- Future climate scenarios adaptation
- Conservation of coastal and marine resources
- Data and information management
- Energy development
- Fisheries
- Navigation
- Pollution abatement
- Tourism
- Interstate commerce.



CROP seeks to:

- **Enhance transparency and accountability**
- **Balance marine uses providing access for: navigation, tourism, recreation, conservation, fishing, renewable energy facilities siting and electrical transmission and grids establishment.**
- **Mediation of coastal and marine resource conflicts.**
- **Protect coral reef systems, essential fish habitat and large marine ecosystems and corridors.**
- **Strengthen regional ocean governance**



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PR and USVI agree to:

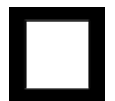
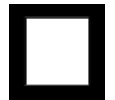
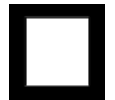
- **Facilitate communication among participating jurisdictions;**
- **Oversee project financial management**
- **Work together to identify, prioritize, and provide technical assistance and funding to implement activities arising from the Caribbean Regional Ocean Partnership.**



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During Phase I PR , USVI and TNC agree to:

- **Task 1: Formalize and launch the Caribbean Regional Ocean Partnership**
- **Develop a Regional Work Plan**
- **Task 2 : Conduct a Policy Analysis**
- **Task 3 : Coordinate Regional Spatial Data Efforts and develop Regional Data Management and Sharing Mechanisms to Support Future Planning Activities**





RELEVANT STATISTICS

Ernesto L. Díaz
2012

Emerged land area:	3,508 mi ² (9,497 km ²)
Territorial waters:	9 mn (10.35 mi)
Population:	~3.8 millions (27 th U.S.)
Coastal Population:	2.52 millions (70%)
Urban areas at CZ:	40%
Urban/coastline ratio:	24%

GDP: ~\$ 95.7 BILLION / YR

ECONOMY (2010):

- Manufacture: 45.5%
- Finances, Insurance and Real Estate: 19%
- Services: 12.8% (Turismo: 7%)
- Government: 9.7%
- Commerce: 7.8%
- Transportation and Services: 3.2%
- Construcction: 1.9%
- Agriculture: 0.7



Critical Infraestructure within 1 Km (coast)



- Eight ports
- Eight airports



- Six Power Plants
- 1,080 miles of sanitary infrastructure



- 14 waste water treatment plants
- 81 industrial parks
- 114 miles of primary roads

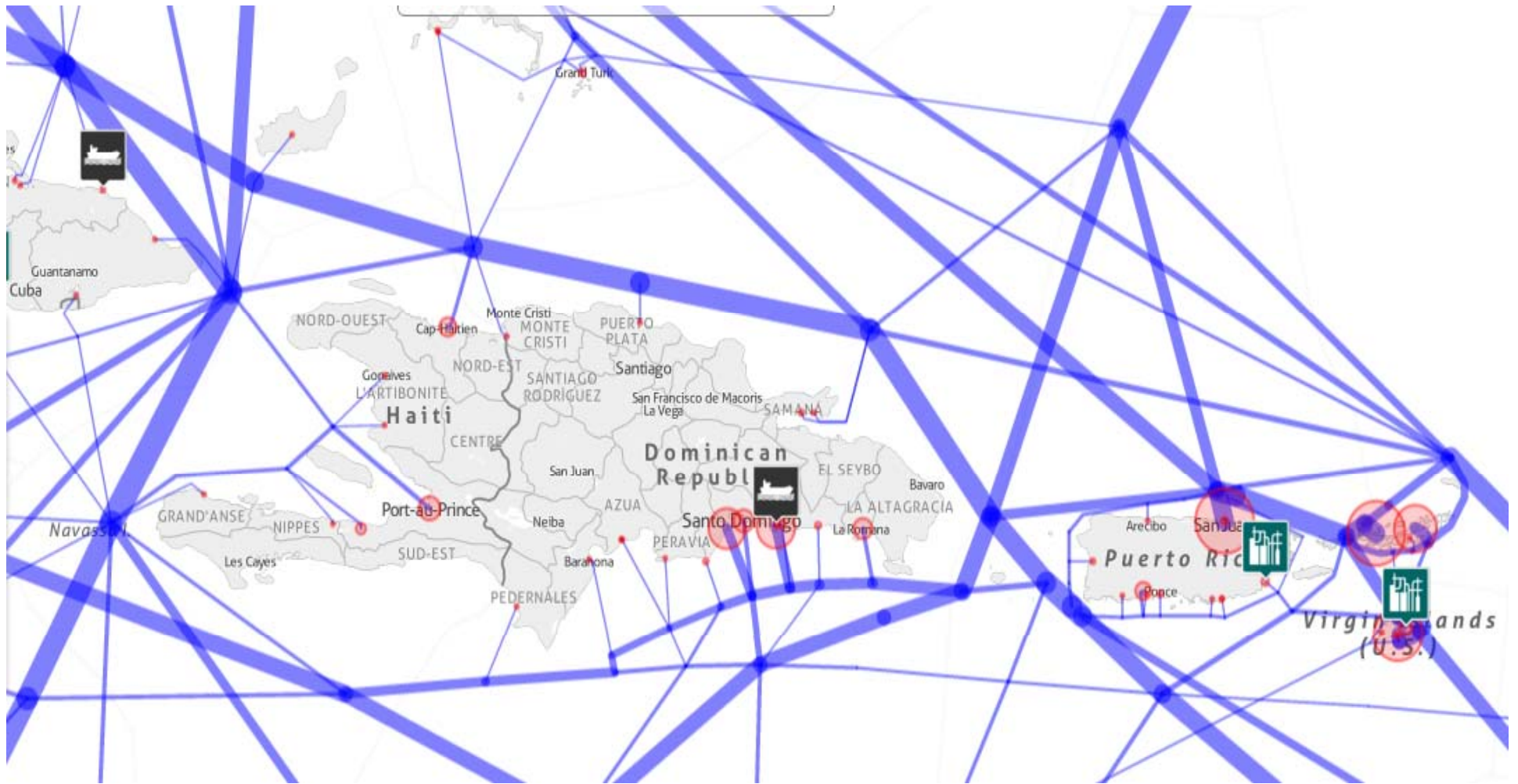


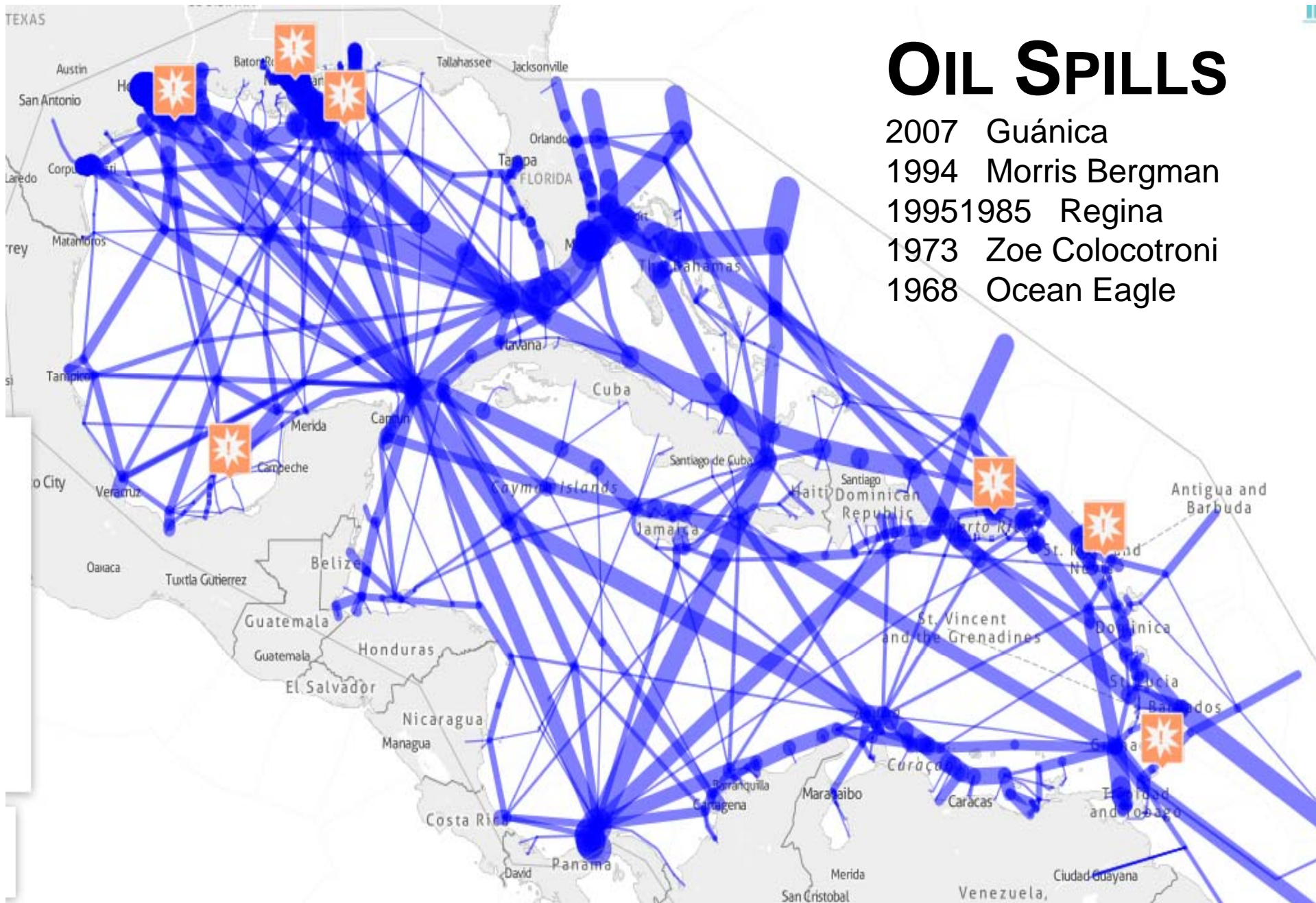
COASTAL AND MARINE USES



HUMAN USES: NAVIGATION







OIL SPILLS

- 2007 Guánica
- 1994 Morris Bergman
- 1995/1985 Regina
- 1973 Zoe Colocotroni
- 1968 Ocean Eagle



HUMAN USES: TOURISM AND RECREATION





HUMAN USES: FISHERIES AND AQUACULTURE





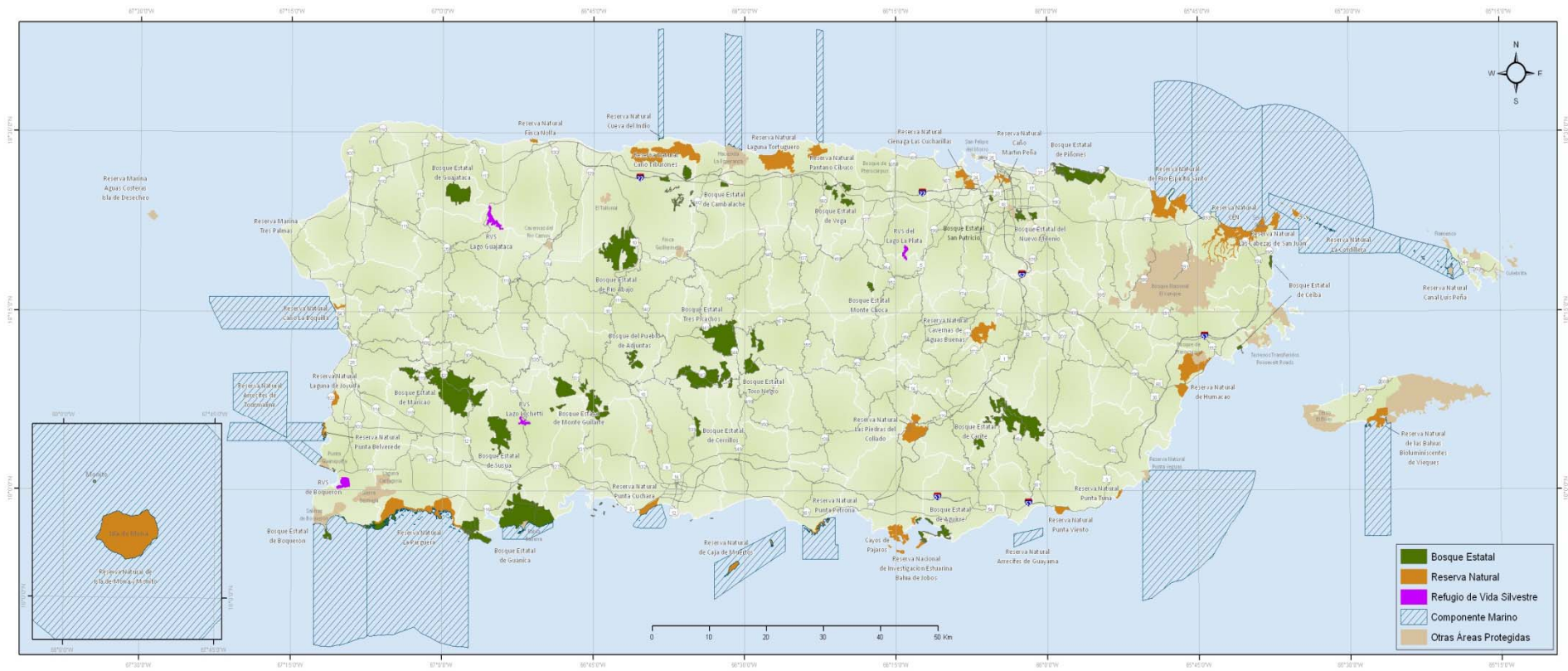
HUMAN USES: NATIONAL SECURITY





HUMAN USES: NATURAL RESOURCES CONSERVATION





2012



HUMAN USES: ENERGY





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Mayor granja eólica 'offshore' del mundo abastecerá Londres

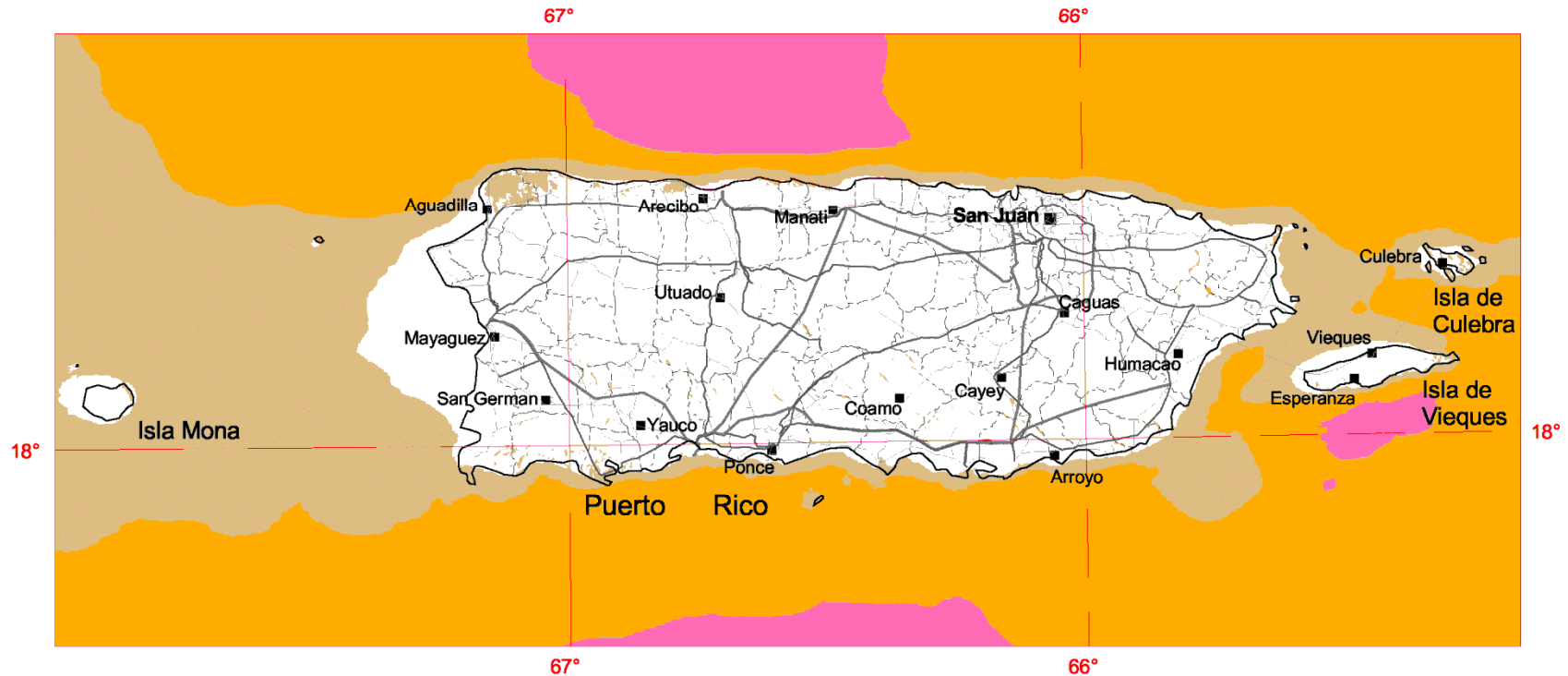
El Mundo España el Dom, 07/10/2012



“341 turbinas y una potencia de 1.000 megavatios, capaz de abastecer el 25% de los hogares de Londres.” (Población: 8,174,100)

“El auge de las turbinas en la costas británicas contrasta sin embargo con el patrón que se ha producido en tierra, donde se enfrentan a una férrea oposición por motivos 'paisajísticos, ambientales y oposición de las comunidades’”

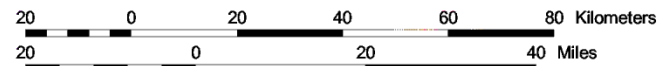
Puerto Rico - 50 m Wind Power



Wind Power Classification				
Wind Power Class	Resource Potential	Wind Power Density at 50 m W/m^2	Wind Speed ^a at 50 m m/s	Wind Speed ^a at 50 m mph
1	Poor	0 - 200	0.0 - 5.9	0.0 - 13.2
2	Marginal	200 - 300	5.9 - 6.8	13.2 - 15.2
3	Fair	300 - 400	6.8 - 7.5	15.2 - 16.8
4	Good	400 - 500	7.5 - 8.0	16.8 - 17.9
5	Excellent	500 - 600	8.0 - 8.5	17.9 - 19.0

^aWind speeds are based on a Weibull k of 2.5 at sea level.

Transmission Line	
Voltage (kV)	
—	38
—	115
—	230

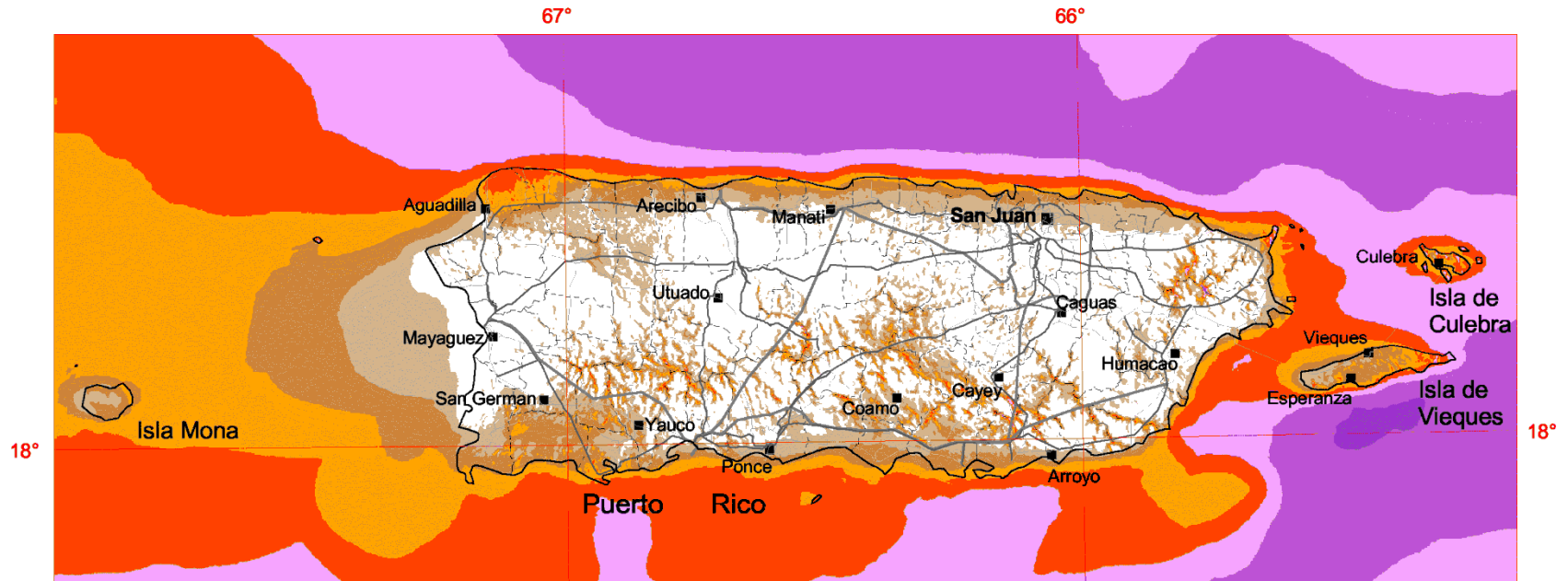


The annual wind power estimates for this map were produced by AWS Truewind using their Mesomap system and historical weather data.

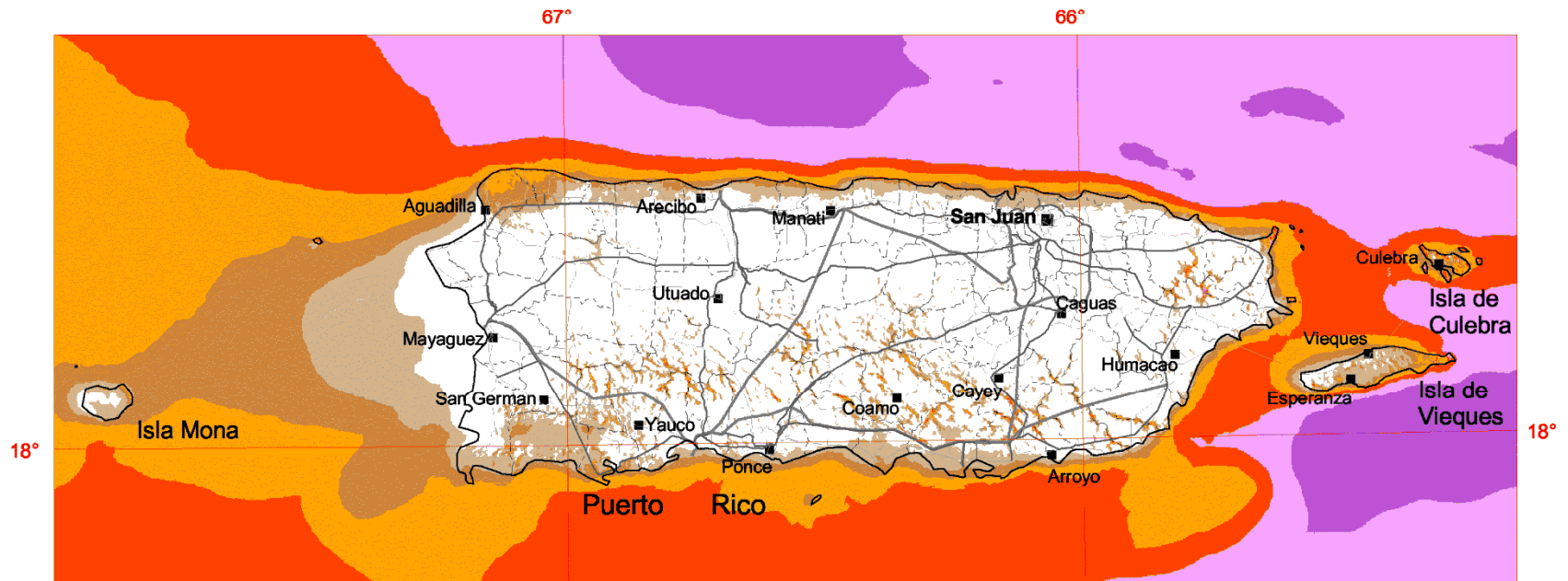


U.S. Department of Energy
National Renewable Energy Laboratory

Puerto Rico - 100 m Wind Speed



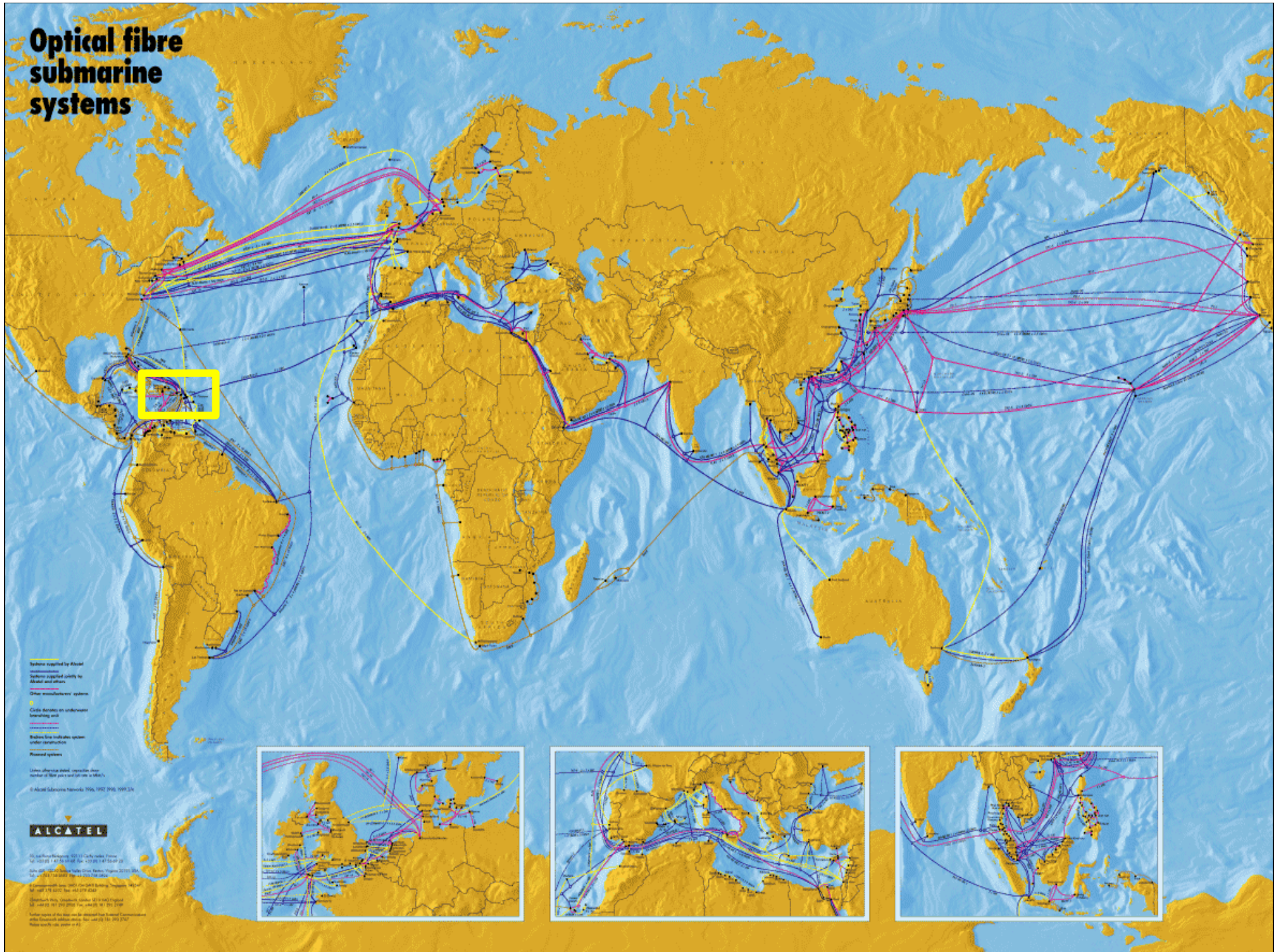
Puerto Rico - 70 m Wind Speed

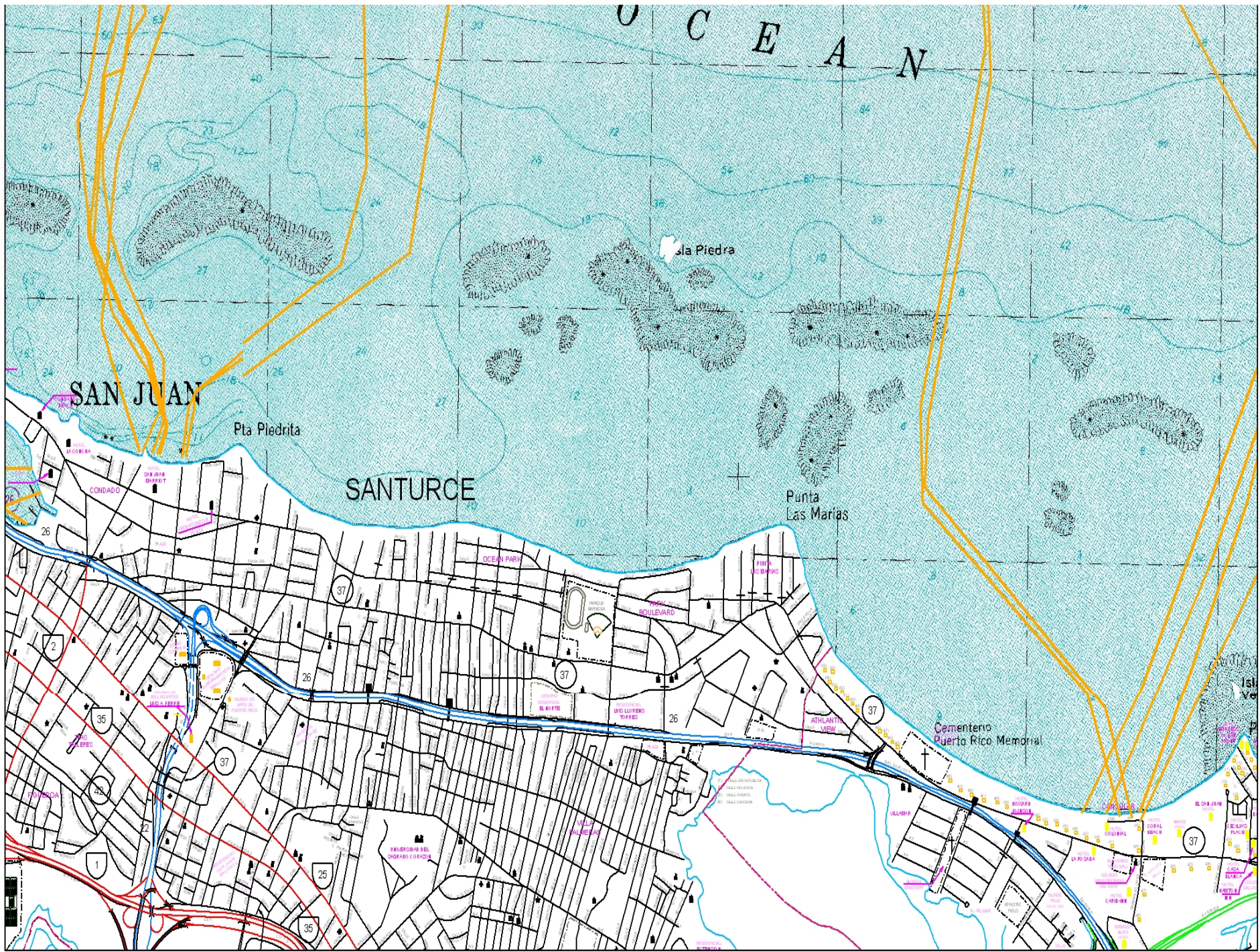




HUMAN USES: COMMUNICATIONS

Optical fibre submarine systems





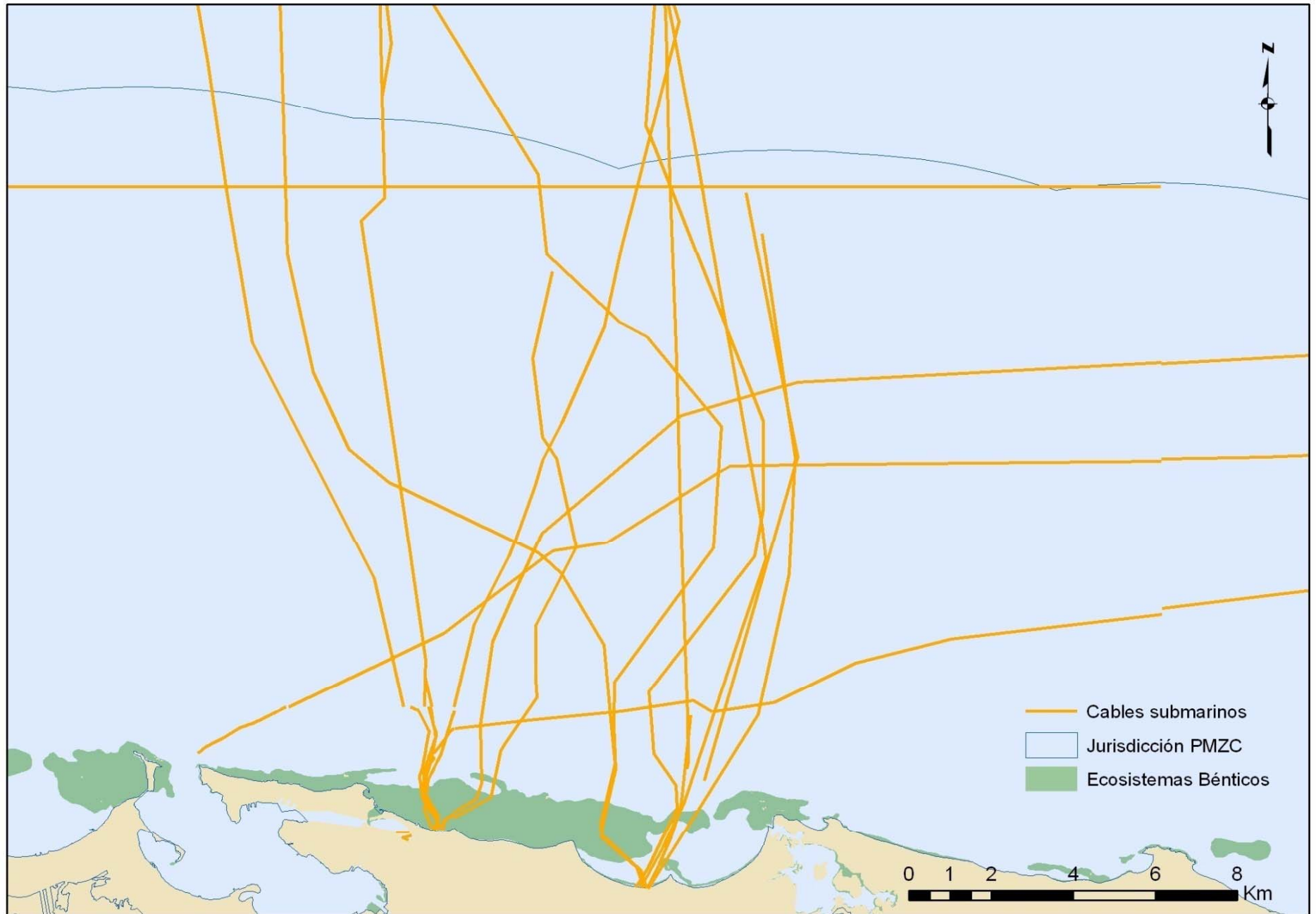
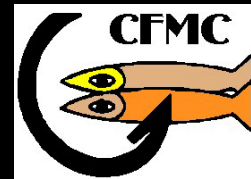
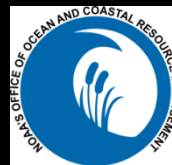


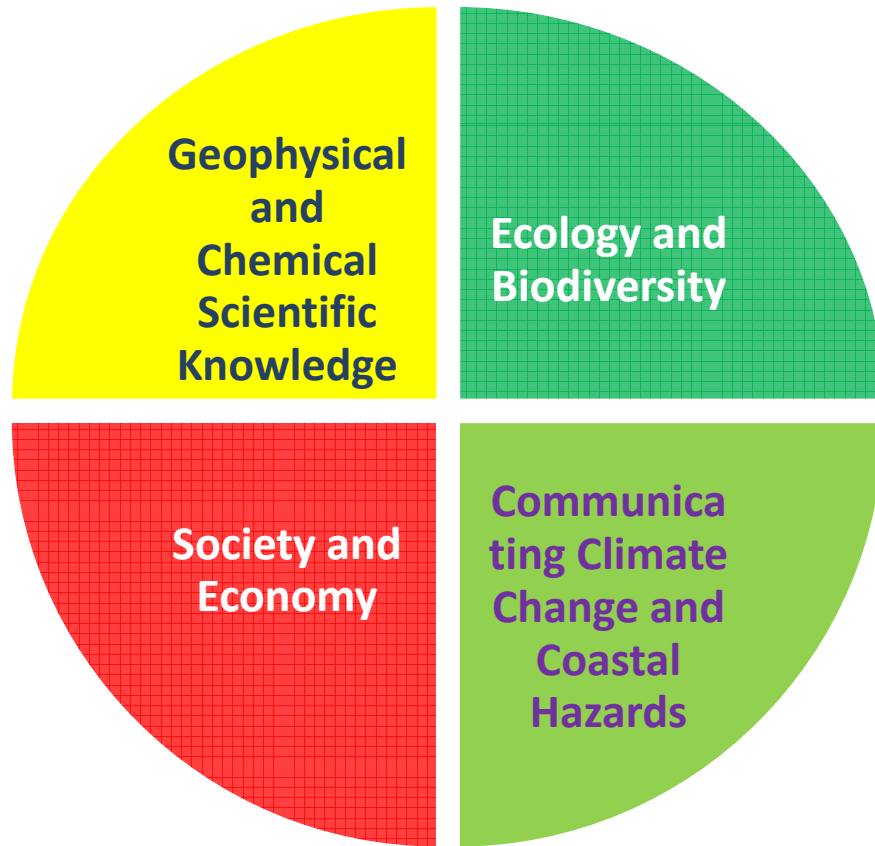
Imagen: Cables submarinos de fibra óptica en la costa norte de PR

Data and Information



- Planning decisions should be based on the best data about ocean resources .
- Need for robust and coordinated data collection, management, and dissemination.
- Several Federal agencies and regional ocean partnerships are currently developing data portals that will serve as clearinghouses for information central to planning.







Coastal Features and Ecosystems Update

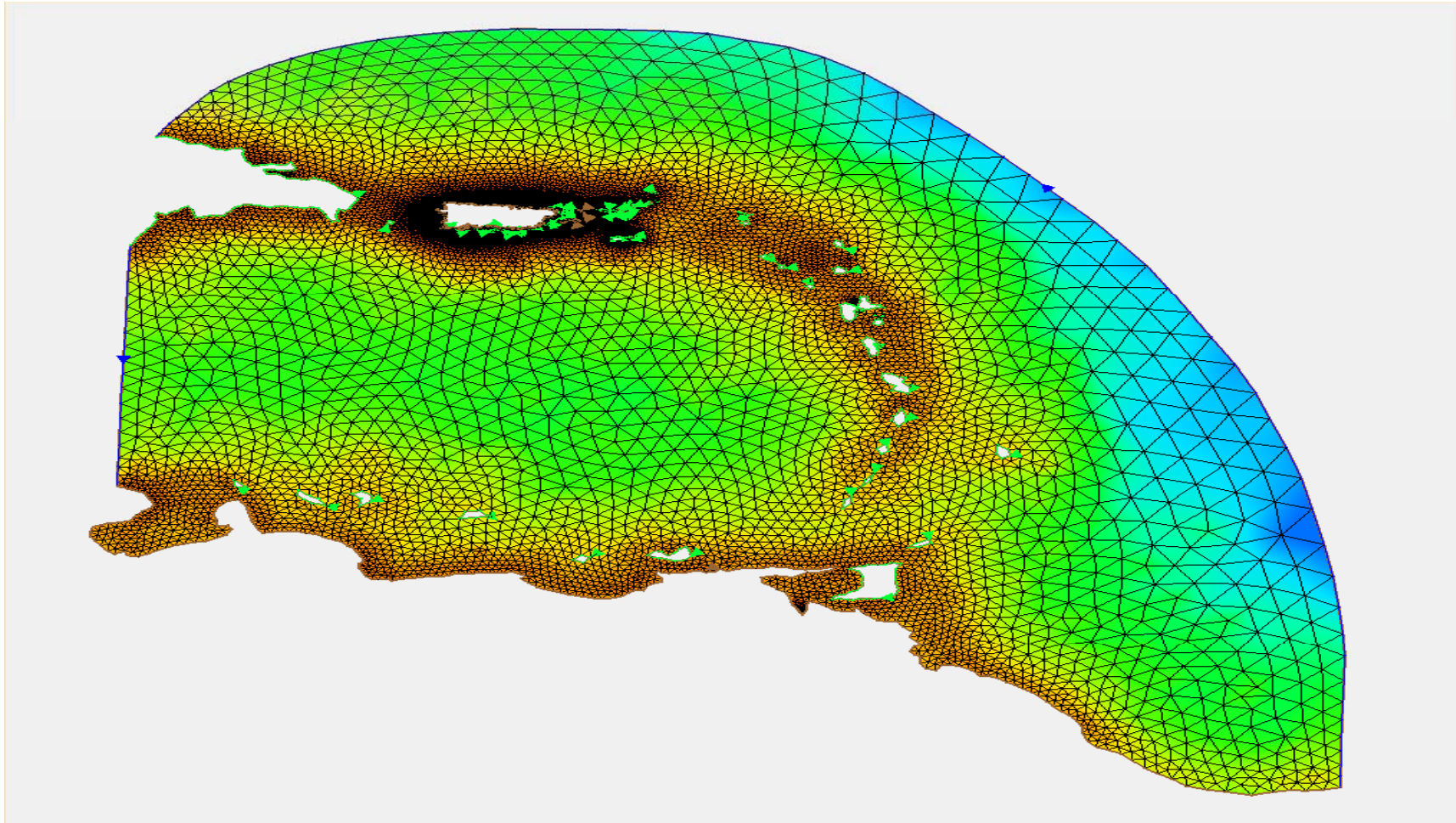
Ecotone Identification



Lidar Coastal Profiling



National Wetland Inventory Update and Review (Lidar, Aerial photography, IR and field validation)



**Storm Surge Modeling in Puerto Rico in Support of Emergency Response,
Risk Assessment, Coastal Planning and Climate Change Analysis**



FEDERAL

EXPORTS

PUERTO RICO

COMMUNICATIONS

IMPORTS

TOURISM

FISHERIES

FOOD SECURITY

CMSP GOVERNANCE

CLIMA

ENERGY

NAVIGATION

RECREATION

CONSERVATION

PORTS

NGO

MARINE
ENVIRONMENT

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