

# 18th

## SESSION IOCARIBE



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Intergovernmental  
Oceanographic  
Commission

Sub-Commission for the Caribbean  
and Adjacent Regions

Subcomisión para el Caribe y  
Regiones Adyacentes

### NATIONAL IMPACTS AND SOLUTIONS - GAPS IN OCEAN SCIENCE

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**Brasilia, Brazil  
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# Introduction

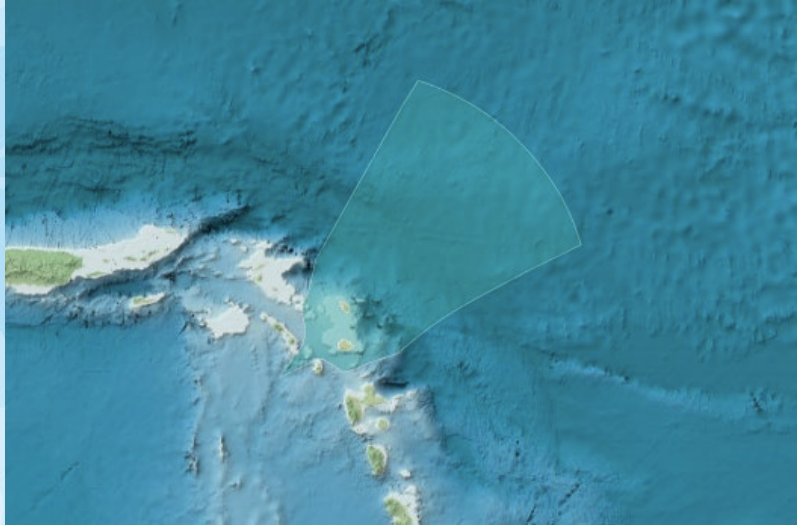


# A Small Island, A Vast Ocean



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**ANTIGUA  
AND  
BARBUDA**





# Impacts of Ocean Warming on A&B



Over 90% of our population lives within 5 kilometers of the coast, placing communities at direct risk from coastal erosion, storm surges, and sea-level rise.



Our coral reefs are projected to face annual bleaching events by 2035 under current emission trajectories. These are already occurring



Saltwater intrusion is already degrading freshwater aquifers on both Antigua and Barbuda.



Barbuda's low-lying topography makes it especially vulnerable, with hurricane Irma in 2017 displacing its entire population for over a year.



# National Impacts of Ocean Warming: Coral Reefs & Biodiversity

- Coral damage: +47% to +270%
- Acidification affects reproduction
- Turtle nesting failure due to high sand temperatures



# National Impacts: Fisheries & Food Security

Fish size reduction

Altered breeding cycles

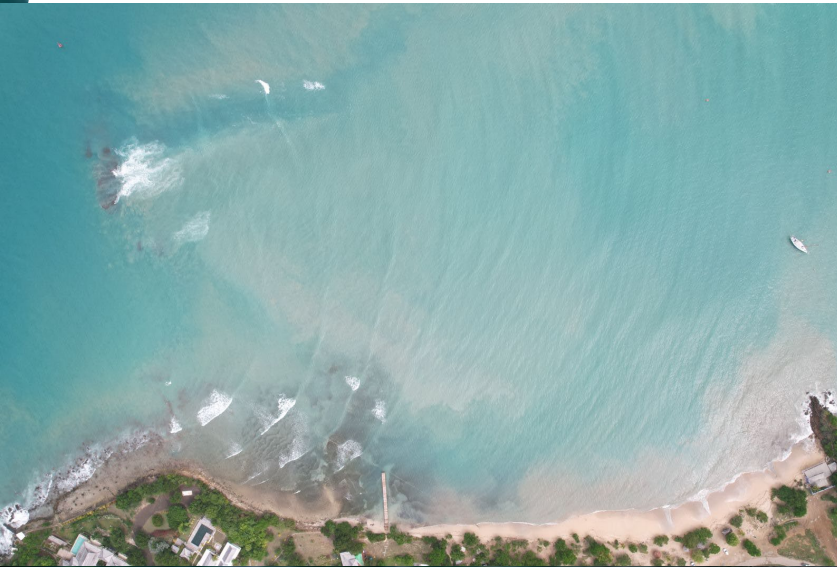
Shifting stock distributions

Pressure on lobster & red hind





# National Impacts: Coastal Infrastructure & Tourism



SLR threatens infrastructure  
(Barbuda)

Beach erosion impacts turtle  
habitats

Tourism aesthetics declining



# National Impacts: Storms & Weather

More Cat 4 & 5 hurricanes

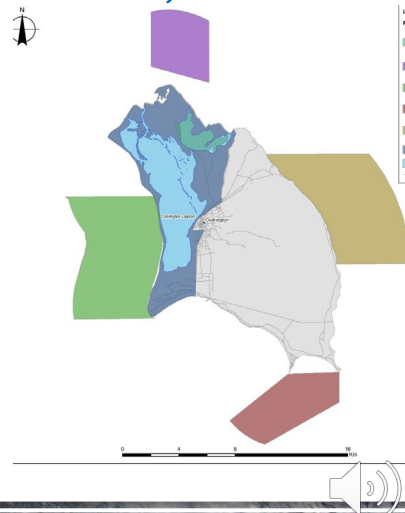
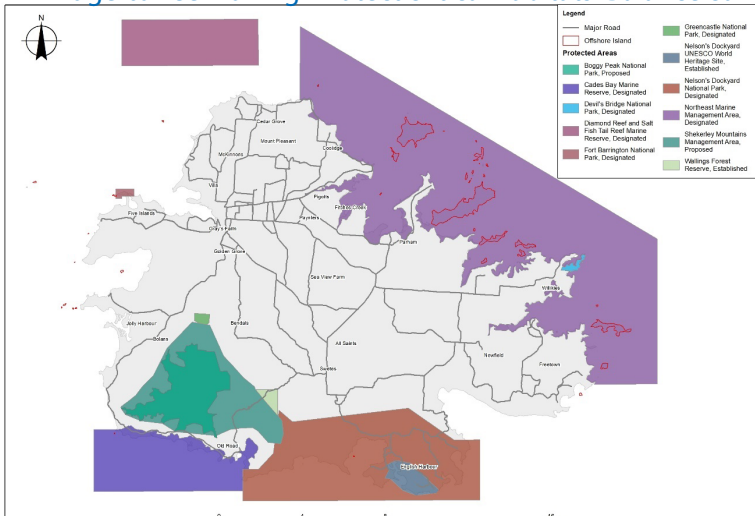
Infrastructure & reef damage increasing





# National Solutions: Marine Spatial Planning

## Ridge-to-reef zoning Protect critical habitats Balance conservation & economy





# National Solutions: Adaptation & Blue Economy



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Wetland & reef management, Watershed rehabilitation, Sargassum Management





# Science-Policy Tools and Gaps

EIMAS platform

Data integration for planning

Support for development policy

- No real-time SST, pH, salinity
- Lack of impact models
- Fragmented marine databases





Capacity building



Infrastructure (buoys, gauges)



Data access (GOOS)



Technical partnerships





# Requests from Antigua and Barbuda to IOC



Ocean observing system upgrade



Valuation protocols with SIDS



MSP support



SIDS engagement in Ocean Decade





# Closing



ANTIGUA AND BARBUDA IS  
READY TO LEAD IN BLUE  
ECONOMY INNOVATION  
AND RESILIENT PLANNING.  
BUT WE CANNOT DO IT  
ALONE.



IOCARIBE'S SUPPORT WILL  
ENABLE SCALABLE,  
SCIENCE-BASED  
SOLUTIONS FOR ALL SIDS.



THANK YOU.





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**THANK YOU  
MUCHAS GRACIAS  
MERCI BEAUCOUP**

