

# Integrated Marine & Coastal Zone Management in a Changing Climate

## A Bermudian Perspective



GOVERNMENT OF BERMUDA  
Ministry of Public Works

**Department of Conservation Services**

## **Management Areas**

- Infrastructure
- Housing
- Tourism
- Transport
- Fisheries & Aquaculture
- Heritage sites
- Parks and protected areas
- Health & Safety
- Pollution and waste disposal
- Recreation
- Biodiversity – species and habitats
- Engineering – flooding and erosion

## **Climate Change Impacts**

- Rising Sea Level
- Rising temperatures
- Increasingly intense hurricanes
- Increasing CO<sub>2</sub>
- Greater variability in rainfall

## **Some Goals of ICZM :**

- reducing conflicts between stakeholders
- Respecting nature while protecting human life and assets
- Biodiversity conservation vs. Land and water rights
- Providing sustainable livelihoods
- Equitable access to resources and benefits

# Planning and foreshore development



# Roots of the Problem



# Coastal Infrastructure



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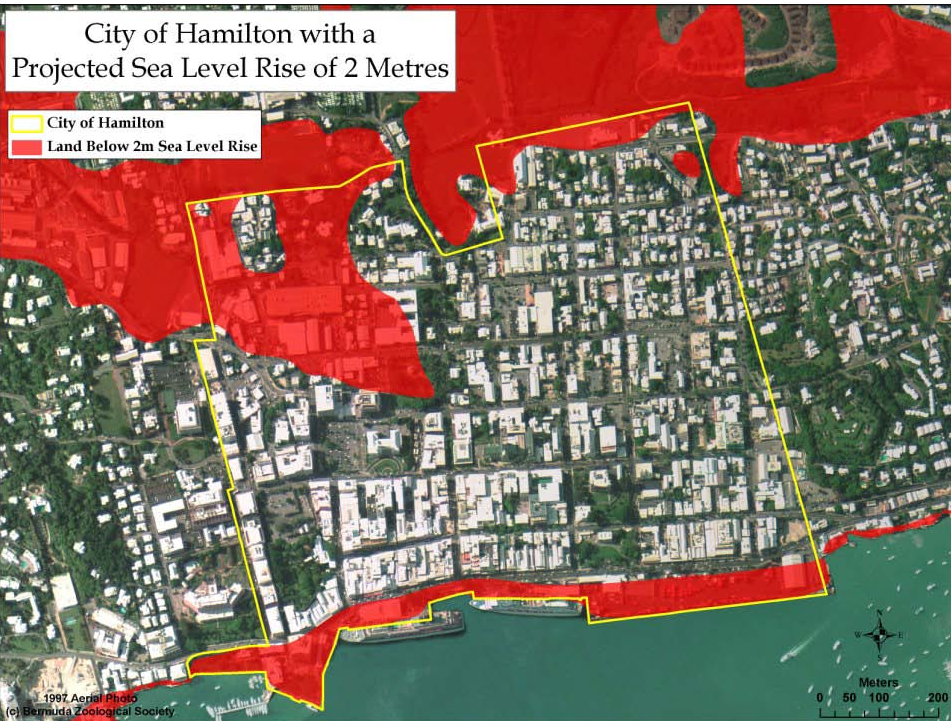
Photo: Akil Simmons, Royal Gazette



# Transport



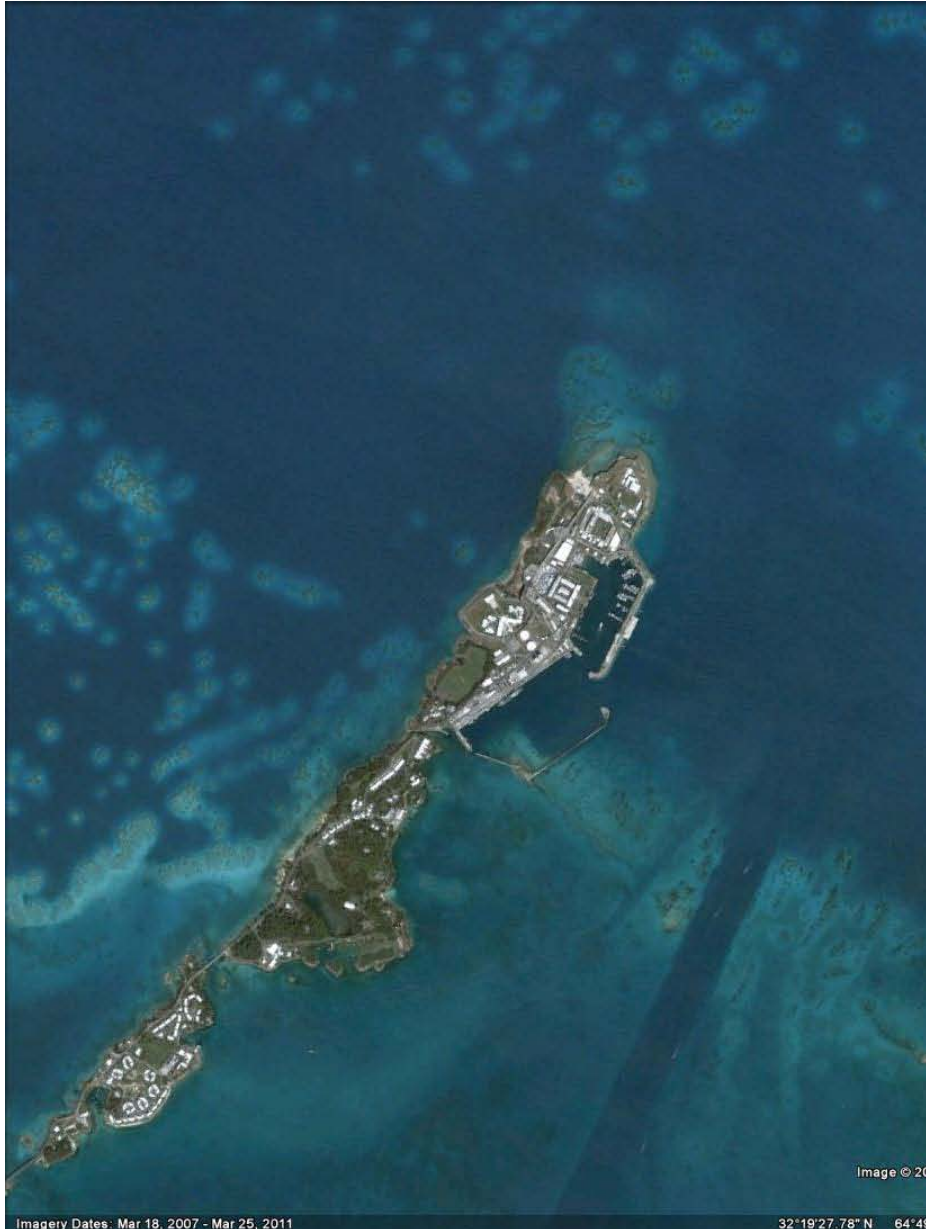
(c) 2008 Bermuda Government, Dept. of Conservation Services



(c) 2008 Bermuda Government, Dept. of Conservation Services



# Cruise ships and dredging



# Sewage and Marine Pollution



Photo: the Royal Gazette

# Tourism - beaches



Fabian 2003



Bill 2009





# Coastal & Marine Heritage Sites

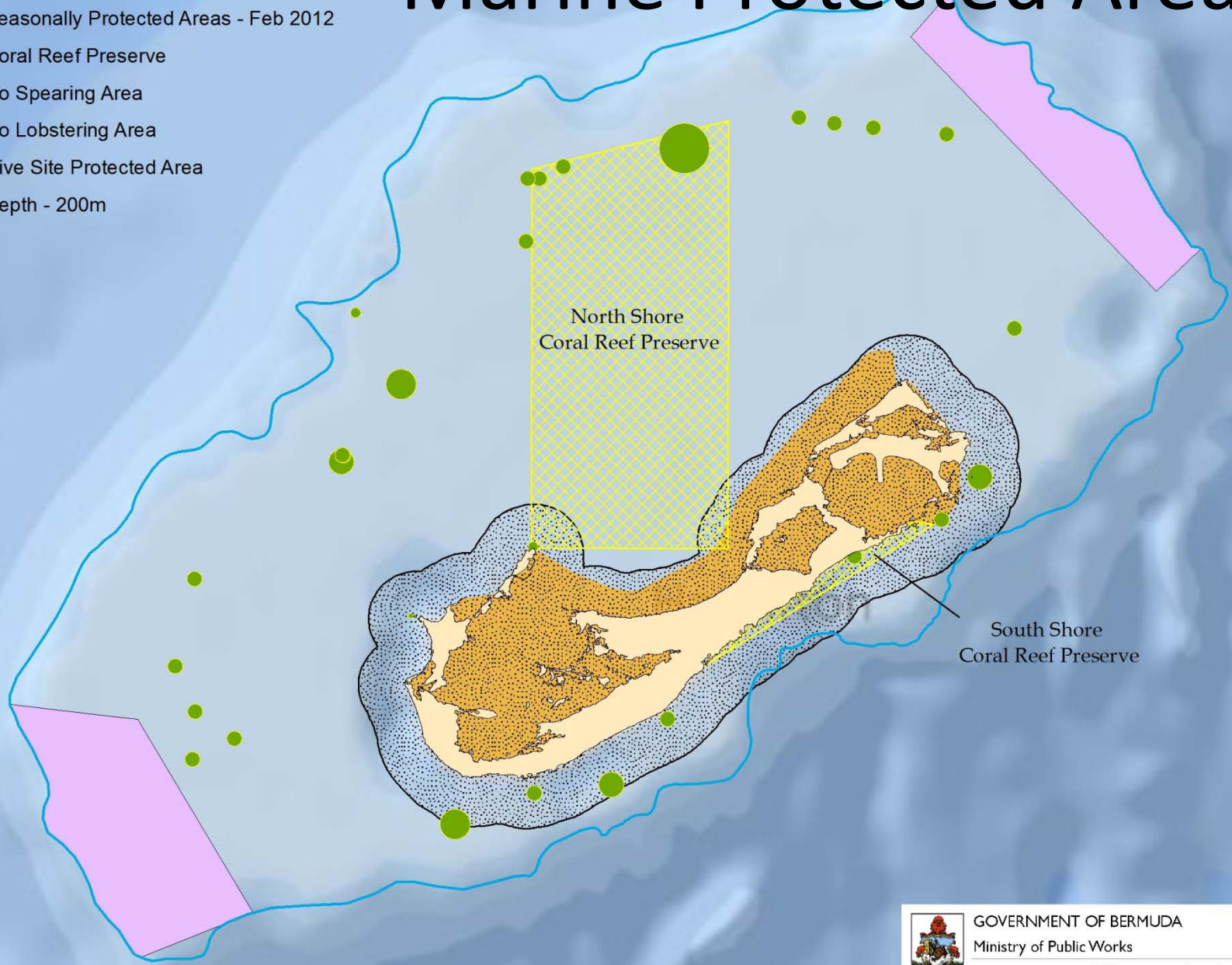


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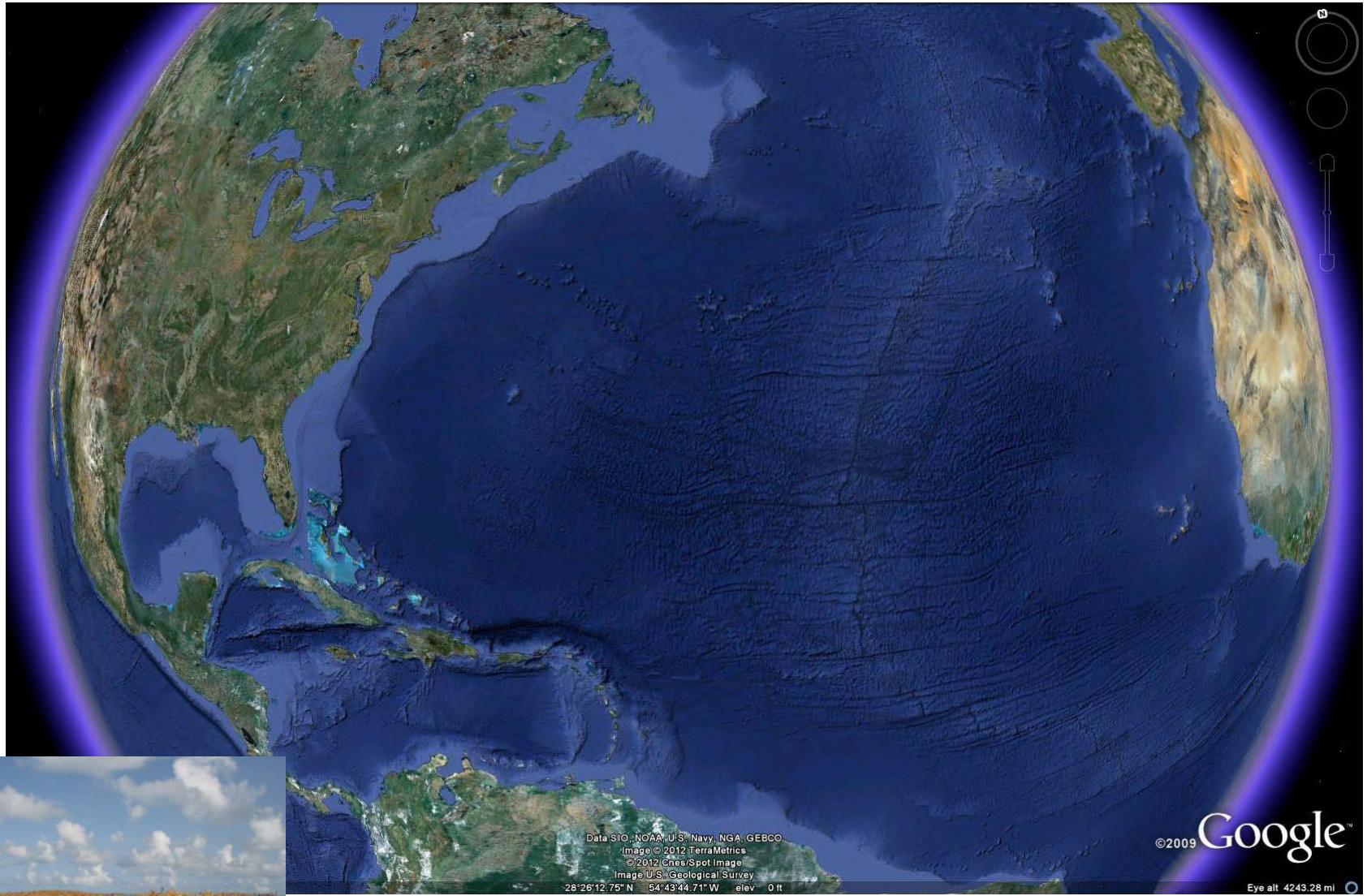
# Marine Protected Areas

## Map Key

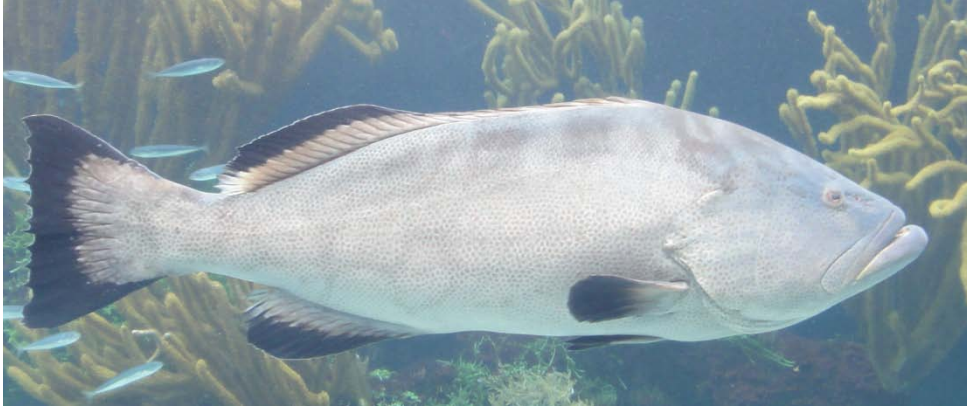
- Seasonally Protected Areas - Feb 2012
- Coral Reef Preserve
- No Spearing Area
- No Lobstering Area
- Dive Site Protected Area
- Depth - 200m



# Blue Halo and Sargasso Sea Alliance



# Fisheries & Aquaculture



# Recreation: Local Boat Traffic & Moorings



# Marine Habitats - Seagrass



© Alison Copeland

# Coral Reefs



# Mangroves



# Coastal and Marine Invasive Species



Australian Whistling Pine (*Casuarina equisetifolia*)



Lionfish (*Pterois volitans*)

