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BUCCOO REEF MARINE PARK

Proposed boundary

Existing boundary



Topics

- History
- Bleaching Event In 1995
- Reef Pressures
- Successes
- Research Activities
- Buccoo Reef Marine Park Management Committee

History

- Type – Fringing reef
- Composition – five reef flats separated by deep channels
- Size – 7 km² (30ml²)
- Main Corals found – star or boulder coral
- Designated as MPA in 1973
- Nylon Pool, No Man's Land, Bon Accord lagoon
- >30 projects have been conducted

Legislation and Guidelines

- Marine Protection Act (1973)
- Environmental Sensitive Areas Act (2005)
- RAMSAR Convention (2006)

Contributors to Reef Growth

- During Wet Season, Orinoco River's nutrients give nourishment to reef.
- Guyana currents which dilute the Orinoco River's nutrient content.



Bleaching Event in 1995

- 88 sites were observed in 2005 for bleaching
- Overall mean bleaching was at 66% with 71% mean at deep sites and 63% mean at shallow sites
- Some coral species exhibited greater tolerance to bleaching such as *M. annularis*
- Elkhorn coral seemed to be impervious to bleaching



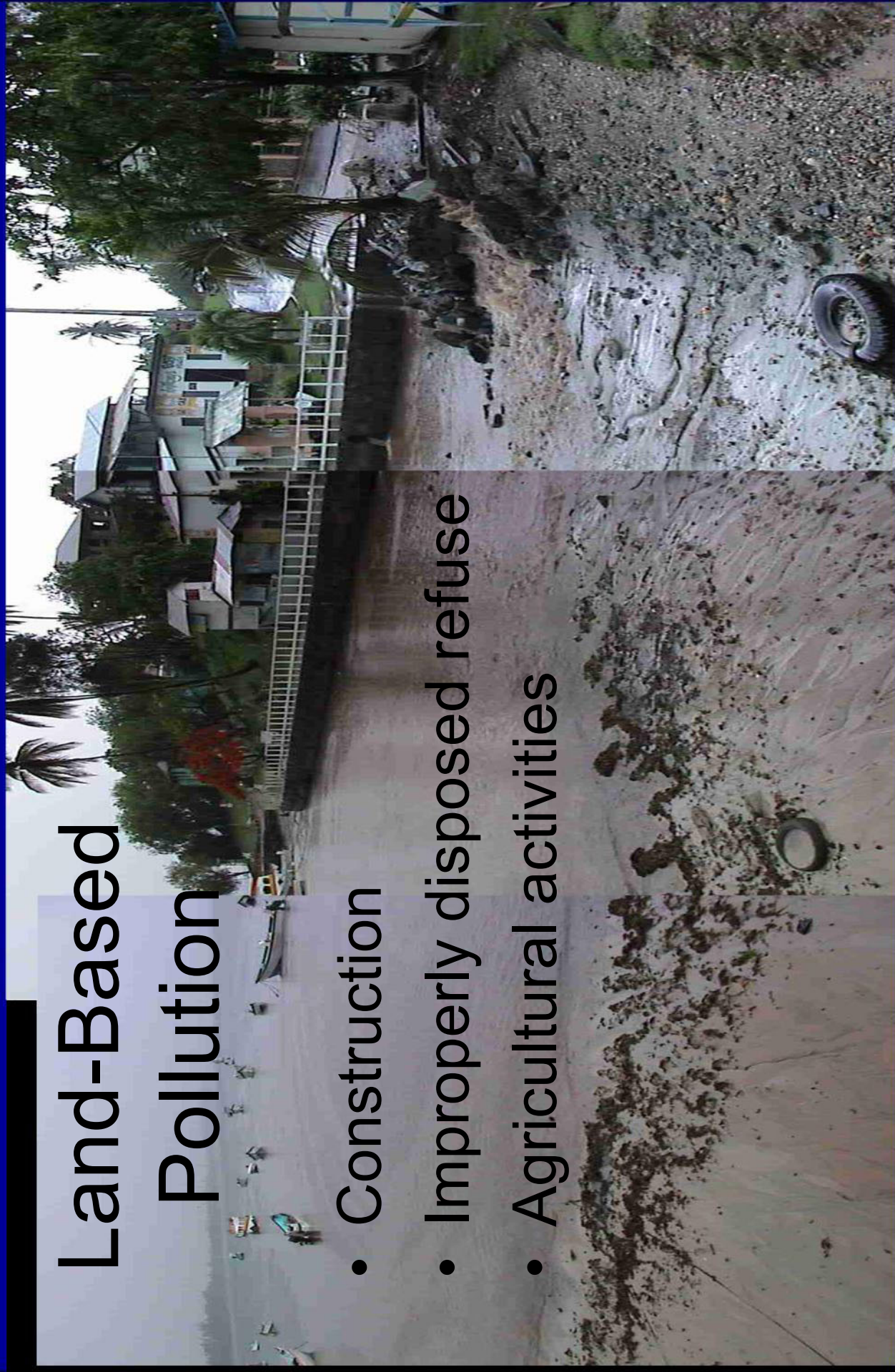
Buccoo Reef Pressures

- Land-Based Pollution
- Fishing Activities
- Physical Damage
- Effects of Climate Change

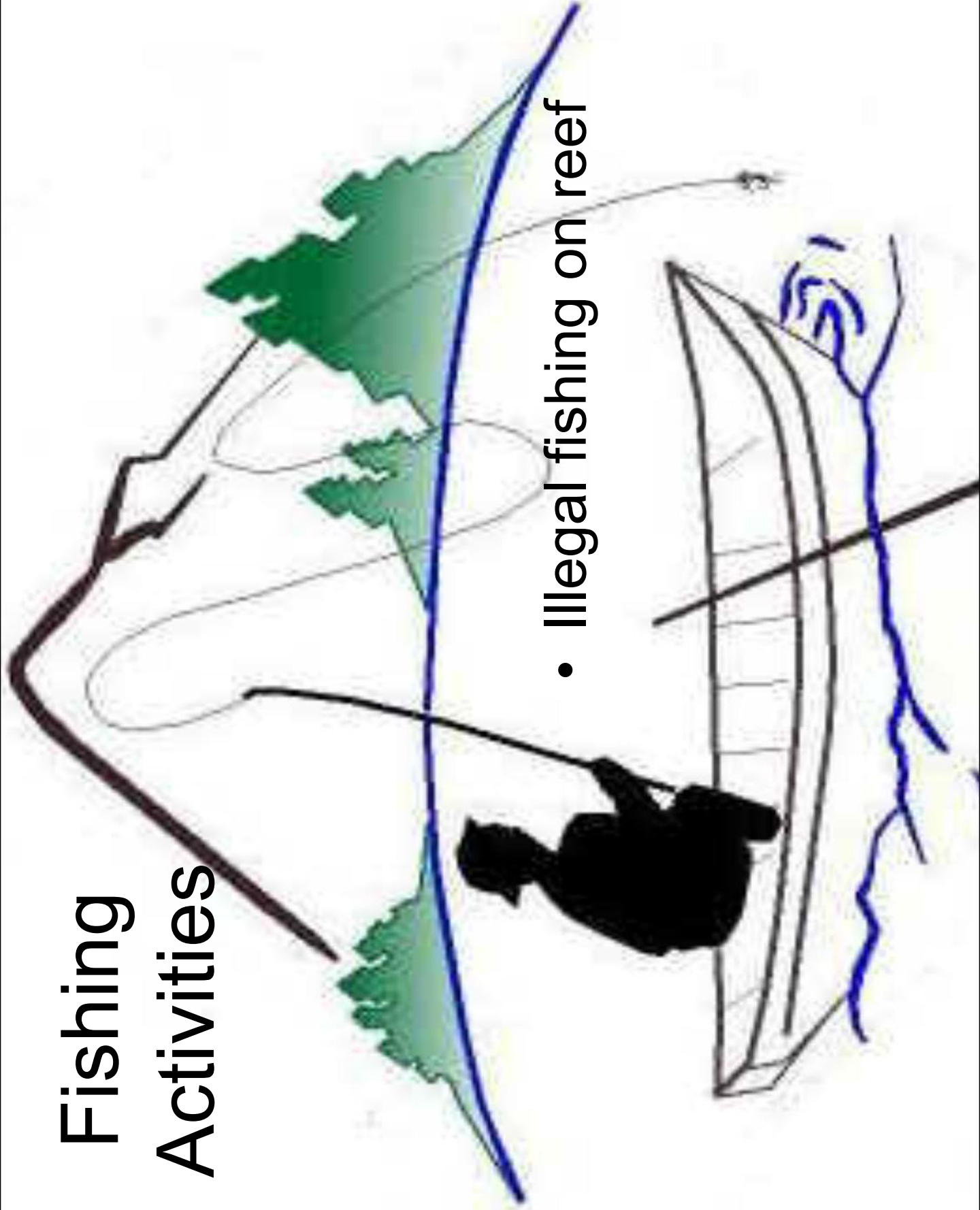


Land-Based Pollution

- Construction
- Improperly disposed refuse
- Agricultural activities



Fishing Activities



- Illegal fishing on reef

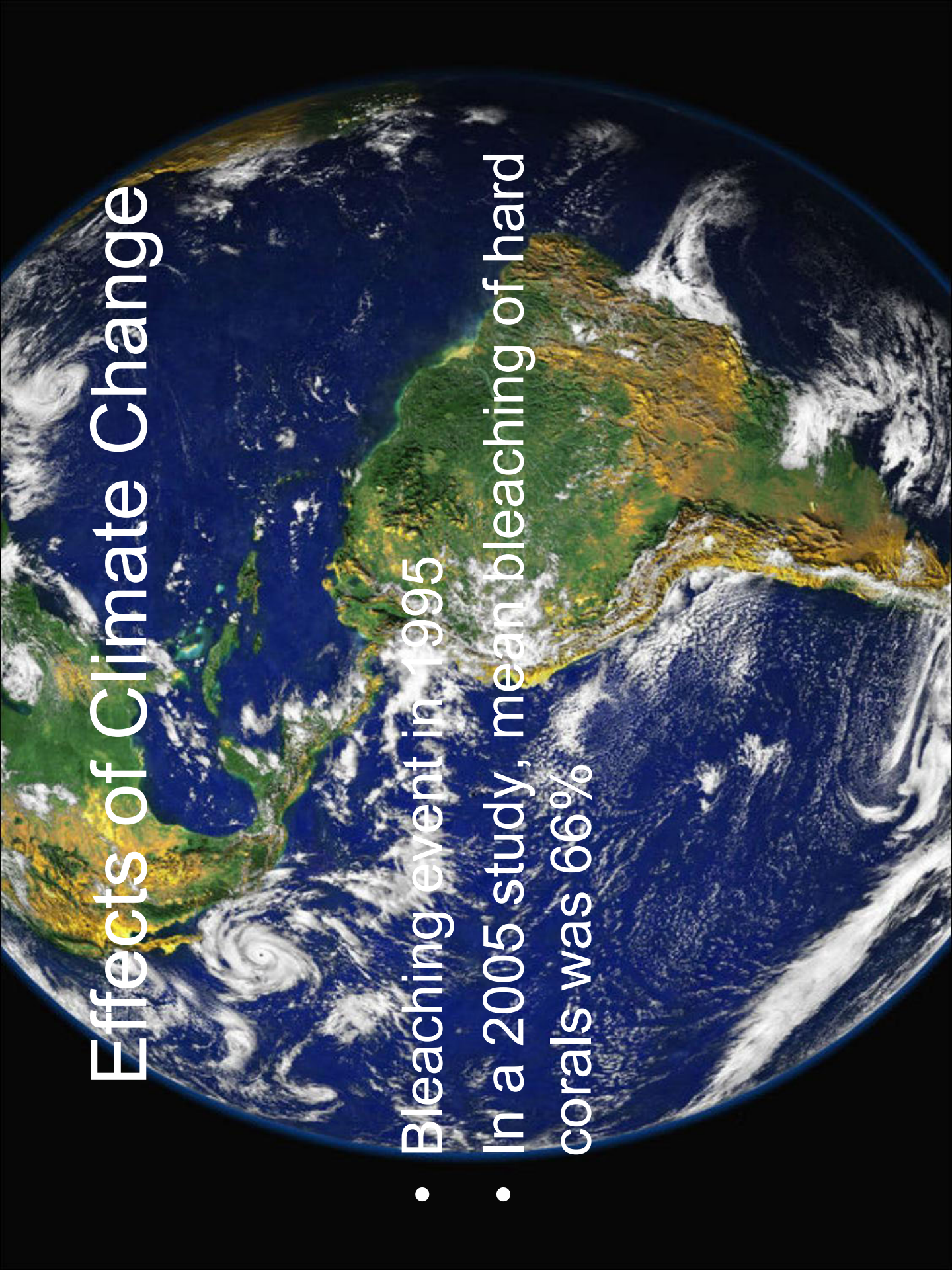
Physical Damage

- Walking on reef
- Anchoring on reef
- Theft



Effects of Climate Change

- Bleaching event in 1995
- In a 2005 study, mean bleaching of hard corals was 66%



Successes

- Installation of moorings and buoys
- Educating RTO's and general public
- Water Quality Monitoring
- Reef Checks and Monitoring
- Sustainable Seafood
- Buccoo Reef Marine Park Management Committee

Mooring and Buoy Installation

- Protects reef from boat anchors
- Demarcates reef

Education

- Increases awareness
- Reduces destruction of reef
- Increases community involvement and action
- Increases funding

Water Quality Monitoring

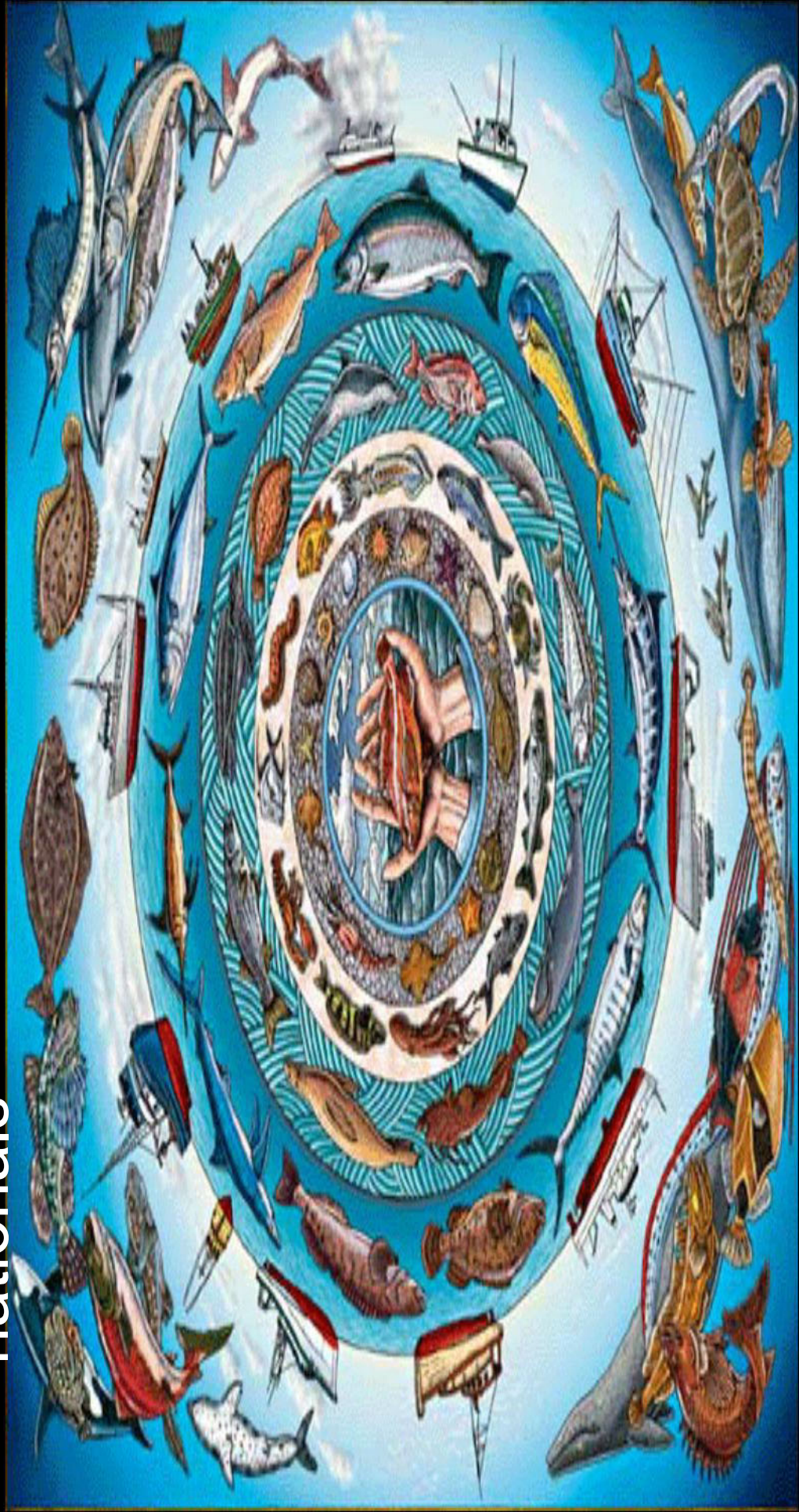
- Keeps water within acceptable limits
- Reef stress may be identified easier
- Advise on management of land uses

Reef Checks

- Checks health of reef, benthic coverage, etc.
- Comparisons can be made between reefs to better understand the growth pattern, why some corals are dominant in one area, etc

Sustainable Seafood

- Creates more food for export and nationals



Buccoo Reef Marine Park Management Committee

- Blending many Departments of the THA and organizations within Tobago to assist in the development of the marine park.

BRMPMC Activities

- Water quality management
- Establishing park boundaries
- Education and Empowerment
- Reef Patrol
- Maintenance and Installation of Buoys
- Stakeholder Updates
- Coordinating research projects
- User fees implementation
- Beach profiling
- Bird count

Research Activities

- GIS
- USGS
- IWCAM
- Economic Valuation
- Ecosystem Mapping
- Sustainable Seafood

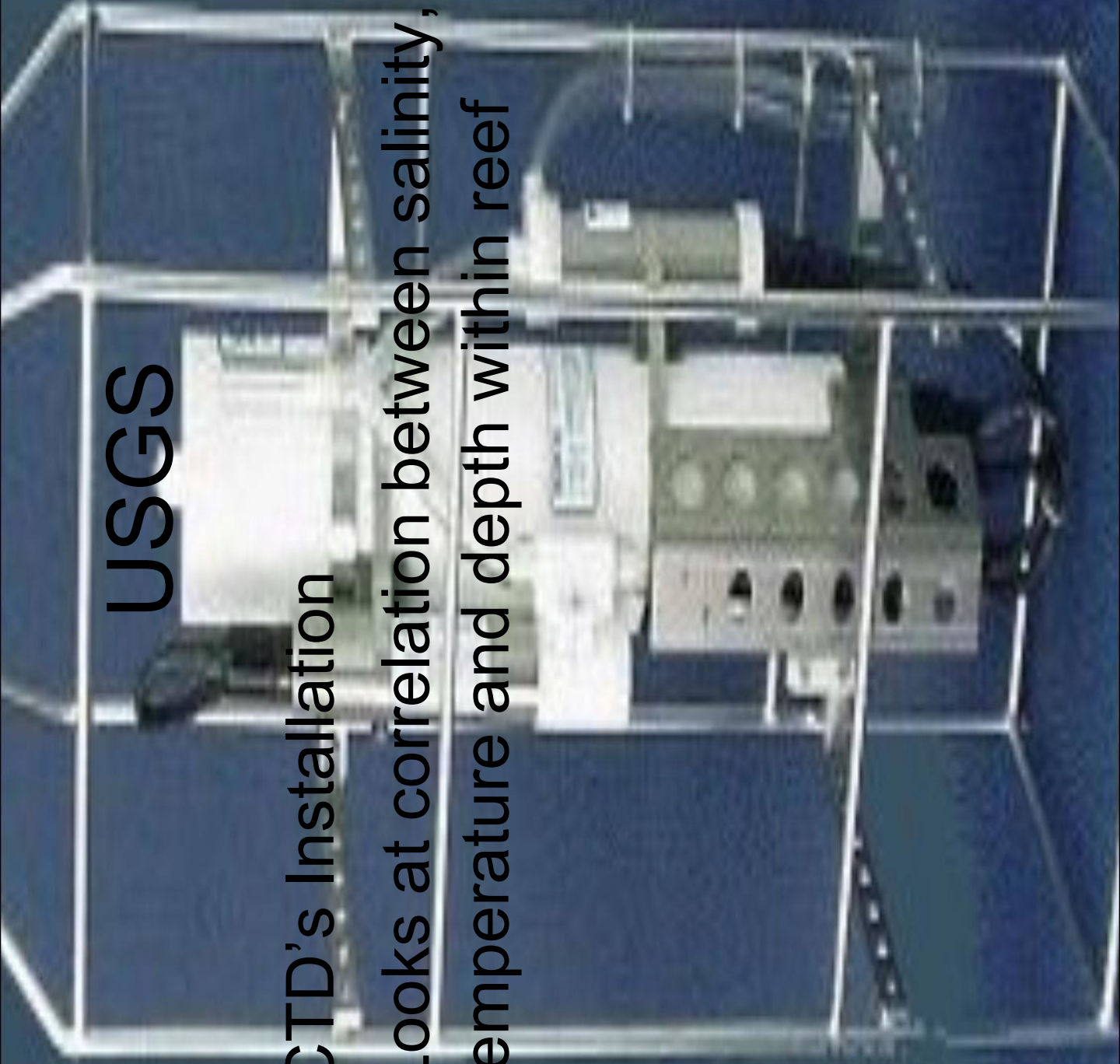
GIS



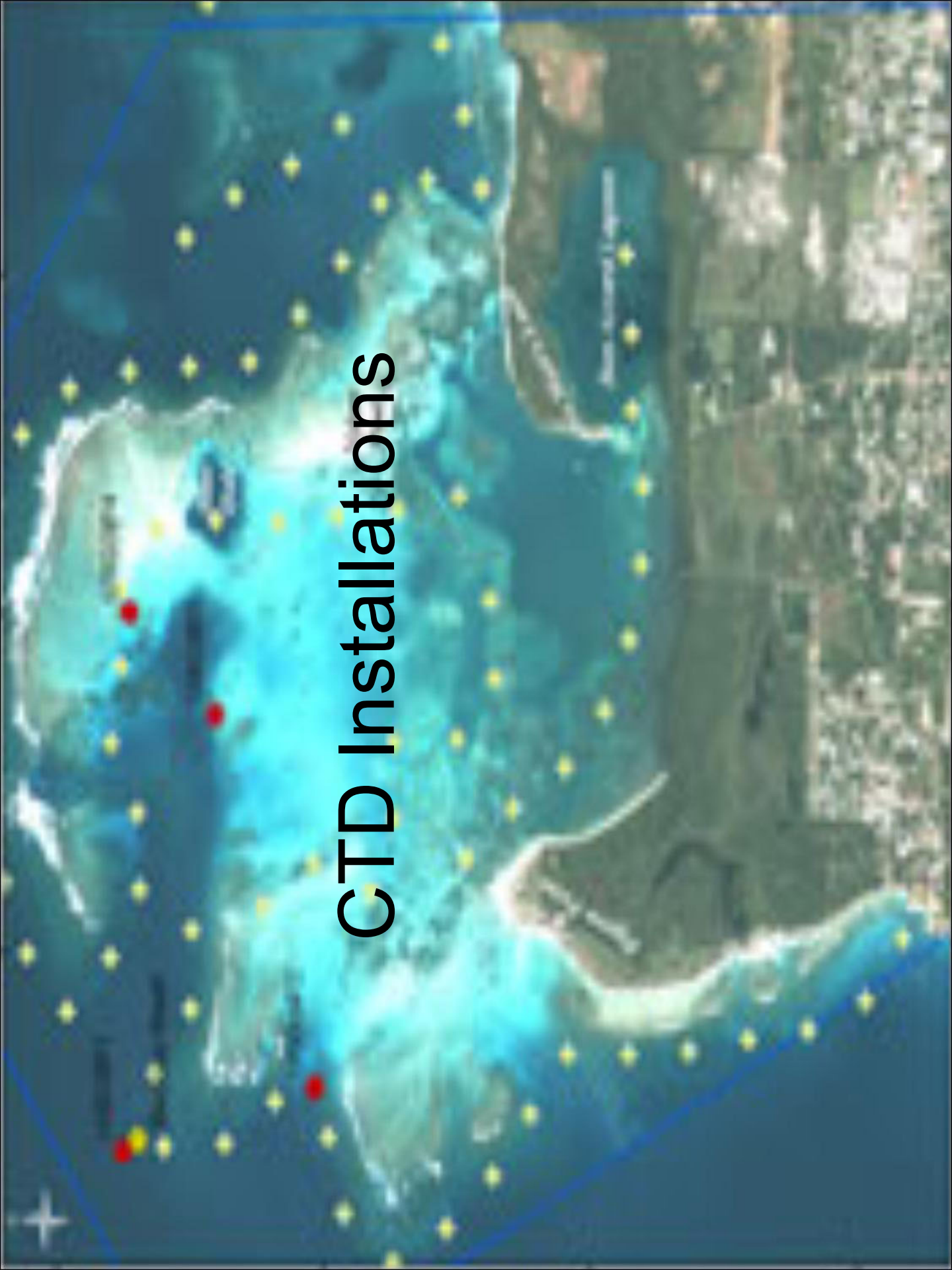
- Geographical Information Systems
- Used to deliver spatial information

USGS

- CTD's Installation
- Looks at correlation between salinity, temperature and depth within reef



CTD Installations



IWCAM

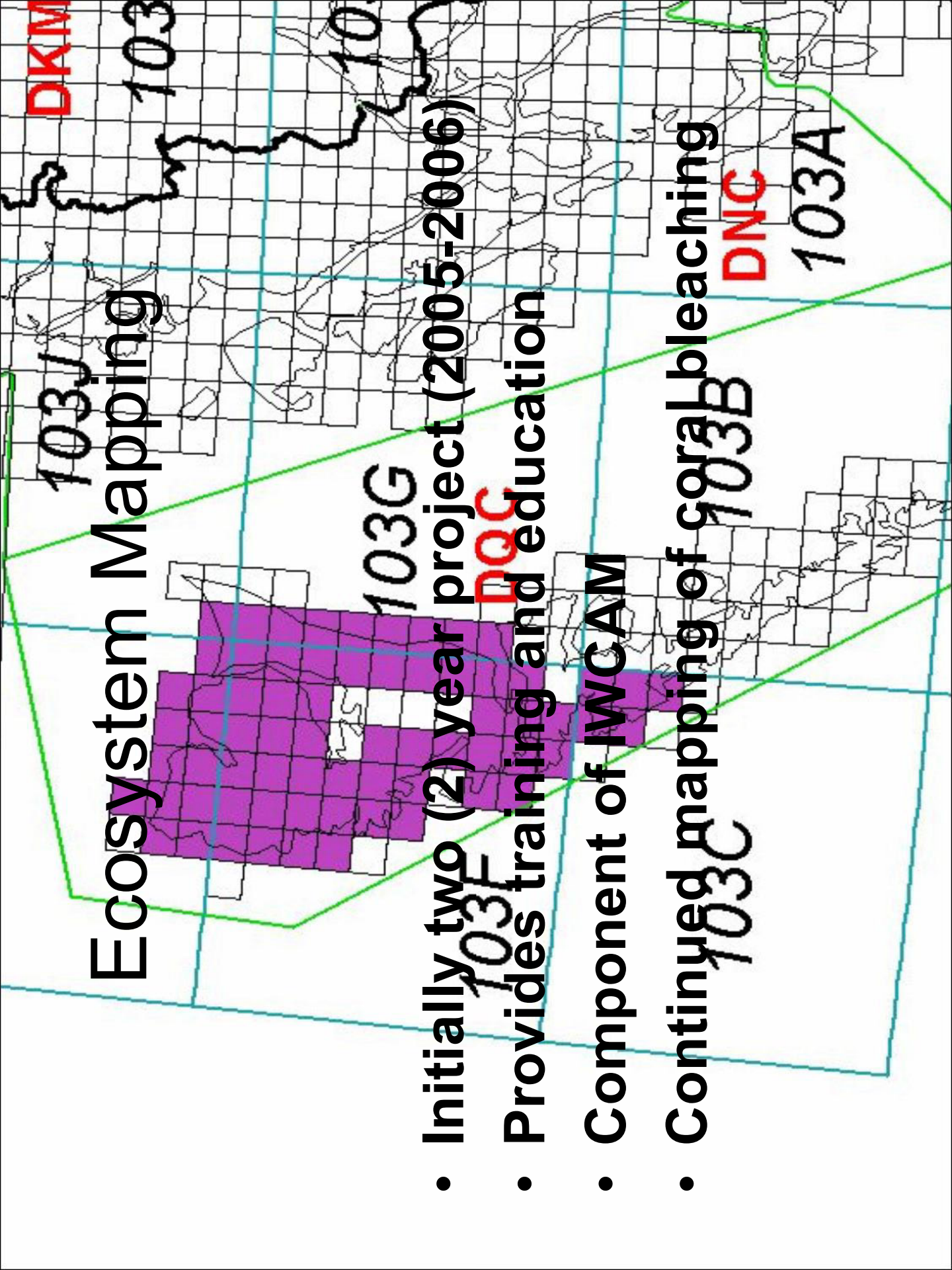
- One of nine demonstration projects
- Currently coordinated by NGO, THA is the chair
- Concentrates on Land-use Planning and Watershed Restoration

Economic Valuation

- WRI
- Sustainable Tourism Zone of the Caribbean. (Grant out of the EU) University of East Anglia.
- IMA – willingness to pay entry to park

Ecosystem Mapping

- Initially two (2) year project (2005-2006)
- Provides training and education
- Component of IWCAM
- Continued mapping of coral bleaching



Sustainable Seafood

- Conch, Grouper and Snapper cultivation



**Thank you from the
“Capital of Paradise”**

