



PLANNING FOR CLIMATE VARIABILITY AND CHANGE

VULNERABILITY OF THE NORTH COAST OF TRINIDAD AGAINST NATURAL AND MAN-MADE THREATS



STUDY AREA IN TRINIDAD



(Source: UWI, 2010)

PROJECT VALIDATION

- ▶ **ACTION ON CLIMATE CHANGE;**
- ▶ **POOR PLANNING DECISIONS;**
- ▶ **LACK OF EMPIRICAL DATA;**
- ▶ **LACK OF PUBLIC KNOWLEDGE.**

CHARACTERISTICS OF SIDS

- ▶ **REMOTENESS**
- ▶ **INSULARITY**
- ▶ **FRAGILE ENVIRONMENTS & ECONOMIES**



VULNERABLE TO NATURAL AND MAN-MADE THREATS

VULNERABILITY OF THE NORTH COAST

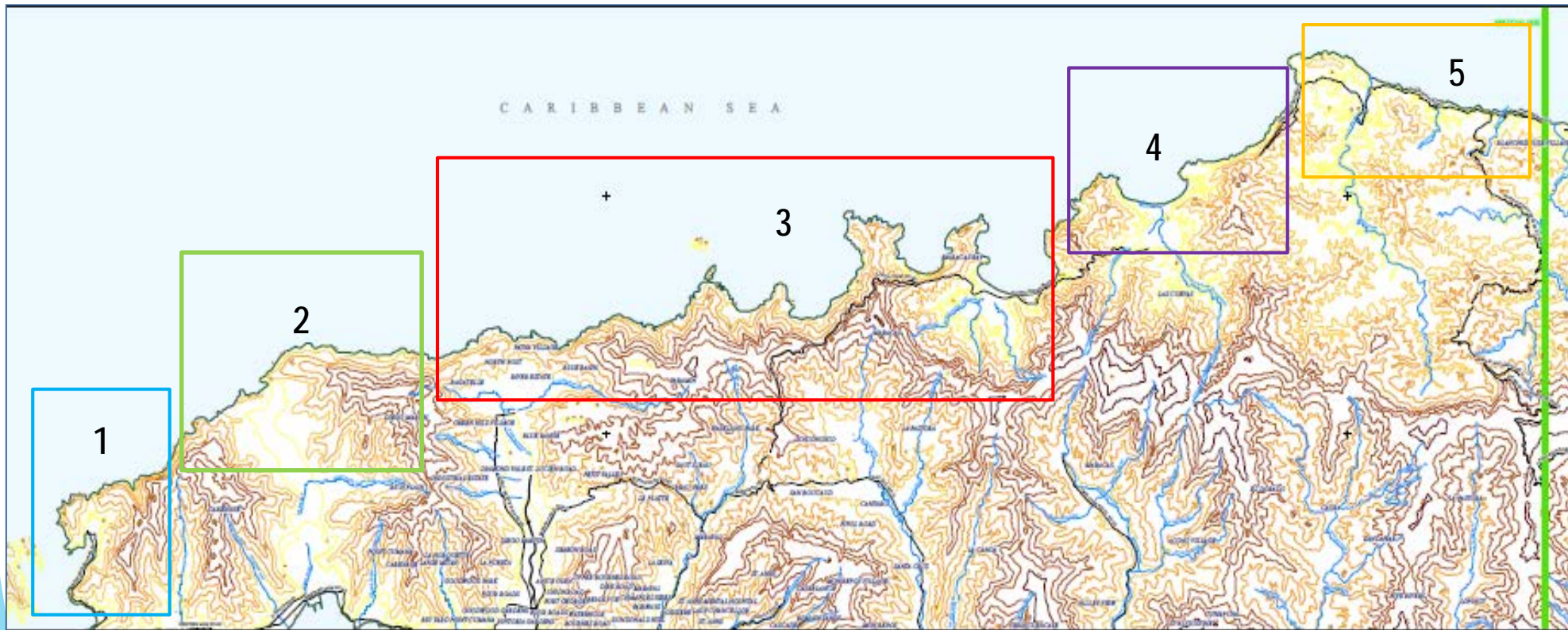
THREATS:

- ▶ **FLOODS;**
- ▶ **EARTHQUAKES;**
- ▶ **HURRICANES;**
- ▶ **STORM SURGES;**
- ▶ **COASTAL EROSION.**

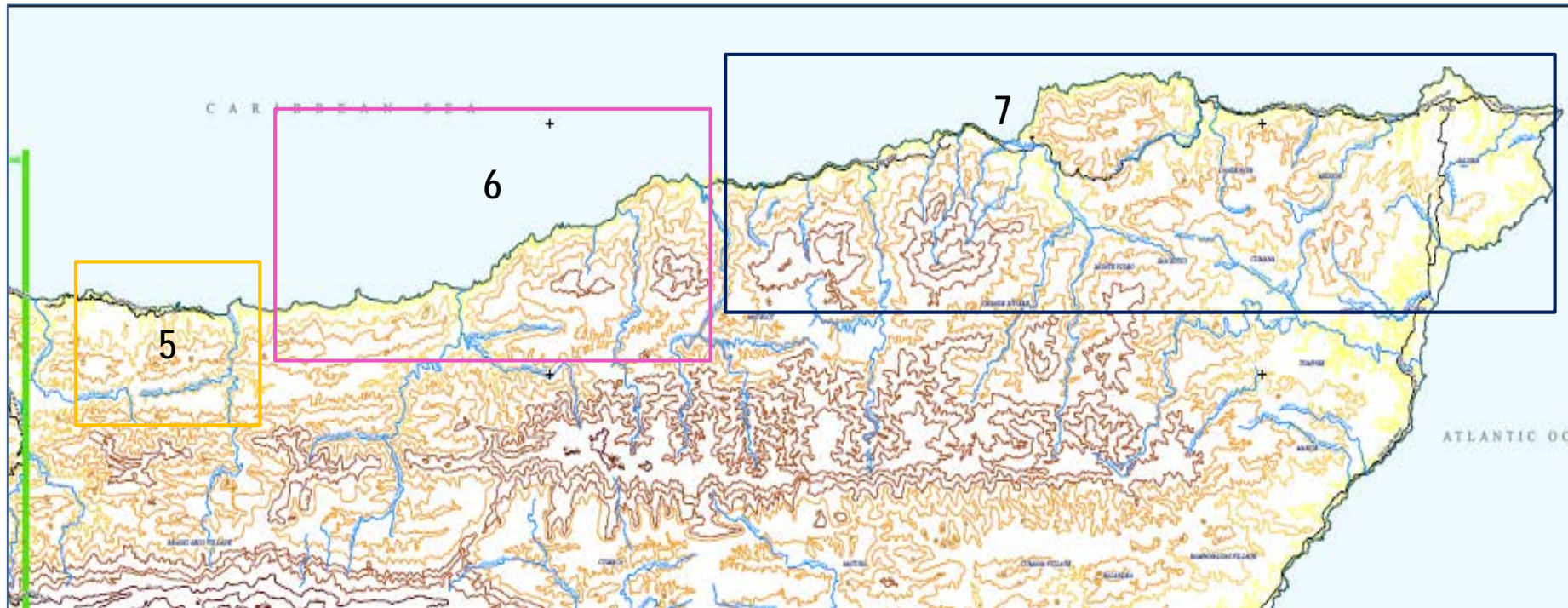
INDUSTRIES IMPACTED:

- ▶ **HOUSING;**
- ▶ **FISHING;**
- ▶ **AGRICULTURE;**
- ▶ **TOURISM;**
- ▶ **COTTAGE INDUSTRIES;**
- ▶ **FORESTRY;**
- ▶ **WILDLIFE SANCTUARIES.**

NORTH COAST OF TRINIDAD



NORTH COAST OF TRINIDAD



DELINEATION OF STUDY AREA

Sub division of the study area led to the following grids being examined:

- ▶  GRID 1 – Teteron Bay to Entrada Point;
- ▶  GRID 2 – Entrada Point to Macqueripe Bay;
- ▶  GRID 3 – Macqueripe Bay to Maracas Bay;
- ▶  GRID 4 – Maracas Bay to Las Cuevas Bay;
- ▶  GRID 5 – Las Cuevas Bay to Blanchisseuse Bay;
- ▶  GRID 6 – Blanchisseuse Bay to Matelot Bay;
- ▶  GRID 7 – Matelot Bay to Galera Point, Toco.

PROJECT OBJECTIVES

- ▶ **DATA COLLECTION;**
- ▶ **EXAMINATION OF PHYSICAL FEATURES;**
- ▶ **IDENTIFICATION OF LAND-USE PATTERNS;**
- ▶ **CONDUCT VULNERABILITY ASSESSMENT;**
- ▶ **DETERMINE OPTIMAL REDUCING FACTORS FOR DISASTER RESPONSE.**

PROJECT DISCUSSION

SUSCEPTIBLE AREAS: POCKET BAYS & CLUSTERED SETTLEMENTS

▶ **VULNERABILITY OF COASTAL STRIPS**

COASTAL EROSION

BLANCHISSEUSE



TOCO



PROJECT DISCUSSION

SUSCEPTIBLE AREAS: POCKET BAYS & CLUSTERED SETTLEMENTS

▶ **VULNERABILITY OF CLUSTERED SETTLEMENTS**

CLUSTERED SETTLEMENTS



PROJECT DISCUSSION

SUSCEPTIBLE AREAS: POCKET BAYS & CLUSTERED SETTLEMENTS

▶ **VULNERABILITY OF TRANSPORTATION NETWORKS**

NORTH COAST MAIN ROAD



NORTH COAST MAIN ROAD



PROJECT DISCUSSION

SUSCEPTIBLE AREAS: POCKET BAYS & CLUSTERED SETTLEMENTS

▶ **CRITICAL LIFELINE INFRASTRUCTURE**

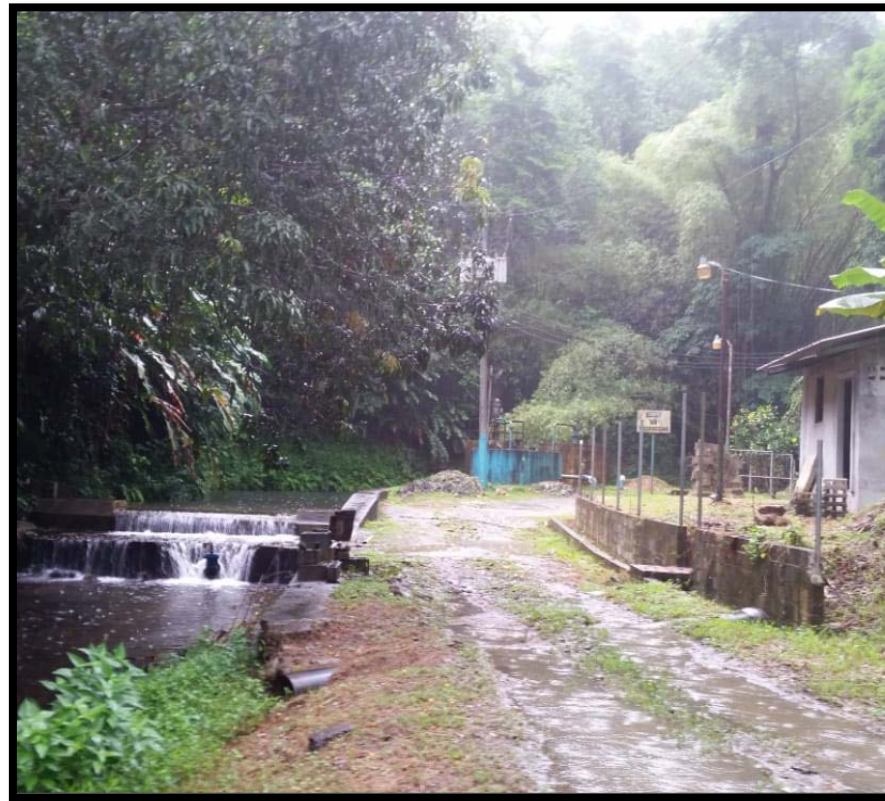
- ▶ **POWER SUPPLY;**
- ▶ **POTABLE WATER SUPPLY.**

POTABLE WATER SYSTEMS

La Filette Waterworks



Blanchisseuse Waterworks



PROJECT DISCUSSION

SUSCEPTIBLE AREAS: POCKET BAYS & CLUSTERED SETTLEMENTS

▶ **VULNERABILITY OF ECOSYSTEMS**

MARACAS BAY – MANGROVE SWAMP



PROJECT DISCUSSION

SUSCEPTIBLE AREAS: POCKET BAYS & CLUSTERED SETTLEMENTS

▶ **VULNERABILITY DUE TO AGRICULTURE**

RESULT OF HILLSIDE AGRICULTURE



MARACAS BAY

PROJECT DISCUSSION

SUSCEPTIBLE AREAS: POCKET BAYS & CLUSTERED SETTLEMENTS

► VULNERABILITY OF LIVELIHOOD - FISHING

FISHING INDUSTRY



LAS CUEVAS FISHING DEPOT

VULNERABILITY ASSESSMENT MATRIX

GRID	1	2	3	4	5	6	7
THREAT							
Flooding	L	L	H	M	H	M	M
Hurricanes	H	M	H	H	H	H	H
Storm Surges	H	M	H	L	M	M	M
Sea Level Rise	M	L	H	L	M	M	M
Earthquakes & Tsunamis	H	M	H	H	H	H	H
Coastal Erosion	L	L	L	L	M	M	H

RECOMMENDATIONS – SOE REPORT 2004

- ▶ • **Enforcement of Policy and Regulations**
- ▶ • **Proper Allocation of Lands for Housing and Settlement**
- ▶ • **Joint Management of Resources**
- ▶ • **Public Responsibility and Public Education**
- ▶ • **Research and Documentation**
- ▶ • **Monitoring and Evaluation**

- ▶ **Sectors protected: Biodiversity, Land Use, Forest Resources, Coastal Resources and Agriculture.**

CURRENT STATE OF AFFAIRS



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Rincon Intake



CURRENT STATE OF AFFAIRS



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