

The Regional Training Workshop on Methodologies for Coastal Inventories & Information Management

Appendix XI

COUNTRY : Barbados

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SUBJECT : Inventories Of Coastal Resources And Uses In The Barbados Coastal
Zone Management Programme

MANAGEMENT PROGRAMME

Goal and Purpose of Inventory:

- ❖ To aid in the identification of resource types, locations, spatial coverage
- ❖ To aid in the identification of critical areas which might be threatened by physical development along the shoreline
- ❖ To identify potential sources of pollution along the shoreline

Issues Considered in Planning and Designing the Inventory

- ❖ Sources of original data, data availability and reliability
- ❖ Data access from government agencies
- ❖ Data gaps that need to be identified

Data Required for the Inventory:

Include but not limited to

1. Bathymetry
2. Land use
3. Coastal structures
4. Coastal habitat locations
5. Substrate and sub bottom types
6. Coastal vegetation
7. Coastal geomorphology - Beach and cliff types, locations other shoreline features
8. Shoreline and beach change characteristics

Sources of Data

- ❖ Aerial photographs - 1954, 1964,1972,1982,1991,1996
- ❖ Admiralty charts of Bridgetown, Speightstown, Oistins
- ❖ Hydrographic surveying - for off shore (deep water) and nearshore bathymetry (West and South coast PreFeasibility, Feasibility and Pre-investment studies; Deep water - East coast Diagnostic study)
- ❖ Diving surveys
- ❖ Lidar surveys - for nearshore bathymetry (Diagnostic study for East Coast study)
- ❖ On site verification (ground truthing)
- ❖ Existing data sets from other government agencies groundwater zones, groundwater catchments, water courses, geology, roads and major buildings and infrastructure, population distribution, property valuation, fisheries interests, land use patterns
- ❖ Topographic maps - 1:50,000, 1:10,000, 1:2500

High Priority Data

Including but not limited to

- ❖ Coastal land use
- ❖ Coastal vegetation
- ❖ Bathymetry
- ❖ Coastal habitat locations
- ❖ Coastal roads and main highways
- ❖ Main coastal buildings
- ❖ Beach and cliff types and locations
- ❖ Coastal water courses
- ❖ Groundwater catchment areas
- ❖ Population distribution characteristics

Data Collected

All of above

Current and Potential Use of Data

- ❖ GIS development for Barbados coastline
- ❖ Assisting with coastal development application assessment
- ❖ Assisting in policy formulation for coastal zone Management
- ❖ Predicting potential areas of coastal pressure for increased development
- ❖ Monitoring of coral reef health and coastal water quality

Resources Used/Needed to Collect Data

- ❖ Unit staff and equipment
- ❖ Trained staff
- ❖ Projects using foreign consultancy firms and their hiring of specialist sub-consultants- Pre-Feasibility (Proctor & Redfem), Feasibility and Pre-Investment (Delcan), Diagnosti East Coast (Sir William Halcrow and Partners)
- ❖ Equipment upgrades
- ❖ Training
- ❖ Counterparts collaboration with consultants that generated original data sets
- ❖ Other government agencies
- ❖ Purchase of oceanographic equipment
- ❖ Supervisory services by competent authority to assist Government in report reviews and data analysis ensure high quality product as final product

Constraints and Challenges experienced/Foreseen

- ❖ Training in data management and meta data archive creation
- ❖ Learning curves with new technology and insufficient time to appropriately adjust and practice with new technology
- ❖ Data access and data reliability from existing data sets of other government agencies
- ❖ Training of personnel
- ❖ Limited access to consultants which may have worked on specialized areas of project
- ❖ Current man power resources of the Unit to meet the increasing mandate
- ❖ Need for priority setting as data base increases in size and complexity
- ❖ Private sector demand increase for access to the information
- ❖ Data confidentiality and data availability for sale
- ❖ Future consultations that may use/reproduce data without relevant accreditation - intellectual property issues
- ❖ Implementation of project recommendations if there is no political commitment -finances etc to reflect the need to continue the works proposed in the long term - documents become shelf ornaments
- ❖ Realization of the need for continuity rather than one off project outputs
- ❖ Long term integration of planning for country projects to identify where potential project linkages exist and how this can contribute to coastal degradation.
- ❖ Ensure that the entire coastline is considered at initial inventory stage to ensure that baseline data is collected although project focus may be in a specific area of the coast.

SUMMARY OF APPROACH TO INTEGRATED CZM

- Must proceed beyond conceptual and cook-book approaches.
- Balanced and broad-based, not assuming relative importance of any single component over the other.
- Requires substantial investigative component.
- Significant funding and long-term commitment (on bilateral basis in Barbados). Development Bank and host country agreements well suited to addressing this problem.
- Critical to develop in-country capacity for CZM through hands-on experience and training - core staff needed.
- Substantial in-country (political) commitment to the process.
- Allow sufficient time and opportunity for interdisciplinary interaction.

**CHARACTERISTICS OF BARBADOS MODEL WHICH
MAY BE OF INTEREST TO OTHER SIDS.....**

- I. From outset, conceived as *phased incremental, long term process* - **not** a "**one-shot**" project.
- II. *Internally-driven* - TOR for **each phase** designed by locals, reflecting *realistically achievable goals and objectives*.
- III. Evolved from initial, *restricted focus (beach erosion and tourism)*, to a **more participatory and integrated approach, with increasing** levels of *stakeholder involvement*.
- IV. *Institutional strengthening and capacity building* are robust components.
- V. Program **has benefitted** from *strong political support*. Has survived 3 changes of **Government; expansion** of CZMU's budget **and public declaration of renewal of commitment with each change in administration**.
- VI. Initiative also **helps** to achieve fulfilment of Barbados' obligations in respect of **Chapter- 17 of Agenda 21** and Chapter 4 of SIDS Program of Action.