

HISTORY OF THE COASTAL ZONE MANAGEMENT UNIT AND THE DEVELOPMENT OF THE PROCESS OF INTEGRATED COASTAL ZONE MANAGEMENT IN BARBADOS

Recognition of a problem along the shoreline

During the latter half of the 1970's there was a growing concern over the perception of coastal erosion affecting the developing coastlines of Barbados. The concern was highlighted mainly as an economic one affecting the individual property owner and in the longer term having potential impact at the national level since the tourism industry was fast becoming the primary source of foreign exchange at that time. The media drew attention to this issue by depicting undesirable changes occurring along the coastline. These changes were considered to represent an economic physical and social threat to the island. This resulted in the concept of coastal zone management (CZM) being seen solely as a means to address the issues causing beach erosion, thereby ensuring that benefits from the tourism industry were safe guarded¹. This was especially important since the island by the early 1980's had set a course for economic development, which relied almost exclusively on beach tourism (i.e. sand, sea and sun). CZM in Barbados was therefore considered to be a problem solving activity in coastal conservation - the problem being beach erosion and within a wider context a rapidly developing coastal fringe.

Diagnostic and Pre-Feasibility Study (1982- 84)

In order to address these raising concerns the Barbados government in 1981 secured financial assistance from the Inter-American Development Bank (IDB) to carry out the island's first coastal conservation study for the West and South coasts. This study was termed the Diagnostic and Pre-Feasibility Study (1982-84). The rationale behind this was that these locations possessed the highest level of tourism development and infrastructure investment on the island (Cambers 1987). A temporary project unit – the Coastal Conservation Project Unit (CCPU) was established within the Government Service to oversee the execution of the study. It was considered to be the start of a new phase in land use and environmental planning and management on the island as the coastal zone had been singled out for specialized attention (Cambers 1987).

The study had several objectives and resulted in the identification of the following key issues as the cause of coastal erosion being experienced along the study area (Proctor and Redfern 1984):

- Poor water quality resulting from surface water, ground water discharge into the nearshore area
- Stress of the fringing reefs found in the nearshore as a result of the poor water quality
- Natural phenomena (e.g. hurricanes and winter storm swell events)

¹Barbados Coastal Conservation Project Description Report to the InterAmerican Development Bank 1981.

- Poorly designed and badly placed sea defense structures

Recommendations were also proposed regarding the types of options that could be used as conservation approaches, potential mechanisms to recover cost and the need to retain the project unit to continue its role in the monitoring of the coastline.

Resulting from this, the CCPU was given three prime mandates:

- (1) To continue its monitoring of the property and popular beaches around the island to establish long term trends.
- (2) To provide advice to the public on coastal matters and issues.
- (3) To provide a key advisory role to the Town and Country Planning Department on all matters related to coastal development and the marine environment.

Within this latter context the coastal planning area was determined by the Town Planning Department to be any functional land area located immediately abutting and abounding the coastline (land - sea interface). In essence this constituted any coastal development that was immediately adjacent to a beach or a cliff top. In some cases the area considered included land seaward of the first road encountered.

A seven (7) year period of consolidation followed, during which the CCPU continued its mandated work, but also expanded its functions to try to capture other environmental issues which could contribute to the negative effects experienced on the coast.

[See Past Projects – Diagnostic and Pre-Feasibility Study \(1982- 84\)](#)

Feasibility and Pre Investment Study for the West and South Coasts (1991 –1995)

In 1991, the Government then embarked on a Feasibility and Pre Investment Study for the West and South coasts. In this study², a full review was made of the trends detected in the collected data, together with the execution of pilot projects for evaluating the functional ability of certain types of coastal engineering works as a means for enhancing and stabilizing the shoreline.

As part of this 4-year study, an institutional strengthening component was developed to address the staffing requirements of the CCPU. It looked at the long-term needs of the office together with the drafting of coastal related legislation for the protection and enhancement of the coastline and the marine environment. Additionally it was recognized that as part of the development application process for coastal sites the Unit would perform “internal” coastal impact assessments and based on these assessments would provide its recommendation to the Town and Country Planning Department (See Fig. 1). The institutional strengthening study considered ways of formalizing this process in order to reduce the negative impacts of development in the coastal zone. It was

² Also jointly funded by the Government of Barbados and the IDB.

recommended that in the short term the Town and Country Planning Act – which was the sole legislation for development consideration at that time – be amended to provide a legal requirement for environmental impact assessment (Alleyne 1998). In the past the use of EIA had been couched in the legislation by the statement that in essence the Chief Town Planner retained the right to request any additional information deemed necessary for the comprehensive evaluation of any development plans submitted to the Town Planning Department. While not being clearly defined, it did provide a mechanism for the Chief Town Planner to request additional detailed studies on proposals that had been submitted. It was felt that in the long run “a more rigorous coastal impact assessment process” should be developed under the CZM process (Willms & Shier 1992).

As part of the institutional strengthening study the CCPU was proposed for up grading to a fully permanent unit within the public service. Being identified as a specialist unit, it would take over responsibility for primary functions occurring in the coastal zone, with all other government agencies which exercised relevant control of some aspects of the coastal zone, having to involve the Unit in all aspects of proposed coastal plans. The new legislation drafted in the study - the CZM Act – ensured the necessary consultation took place between agencies and the coastal unit (Willms and Shier 1993; Simmons & Associates 1994).

Thus at the end of the Feasibility Study in 1995, the CCPU was recommended to become established as a permanent agency within government and was renamed the Coastal Zone Management Unit (CZMU). The study also presented recommendations for the level of staffing it would require in the immediate future, there was drafted legislation to deal with the issues of coastal management and coastal planning and marine pollution.

Additionally, the work from the technical study component of the project had consolidated much of the data which had been collected and recommendations were presented for priority locations considered to be in urgent need of attention (shoreline protection, stabilization enhancement aesthetic improvement and natural protection); a draft coastal management plan for the south and west coasts was developed; the priority issues which still required urgent attention in the long term were:

1. Improvement of nearshore water quality;
2. The health and viability of the nearshore fringe reefs;
3. Sedimentation loading from surface and overland runoff discharging into the nearshore;
4. Polluted ground water seeping into the nearshore;
5. Effective management of coastal development and engineering structures designed for property protection.

Suitable recommendations were presented as options for the long term monitoring and improvement of the nearshore environs, provided an integrated cross sectoral approach was initiated within the CZM process.

[See Past Projects – Feasibility and Pre-Investment Coastal Conservation Study](#)

Barbados Coastal Conservation Programme - Phase 1 Study (1996 – 98)

Immediately following on from the Feasibility and Pre-Investment Study, the Government realized that while all the coastal diagnosis had occurred for the developed shoreline, there was a paucity of similar information on the lesser and least developed coast on the Atlantic seaboard. Tourism as an industry recognised the need for change in the 1990's to improve the quality of the tourism product and experience. So developer's eyes turned to the East Coast – large acreages of “virgin” land literally untouched by the sort of development as seen on the west coast. It also had two (2) unique features associated with it:

1. The village community structure still exists;
2. The highly unstable nature of the land along that coastal had never allowed it to be openly considered for major forms of development.

The coastline on this side was “prospectively targeted”³ for its large open wind swept vistas – thus possessing an ability to effectively change the tourism product from the traditional sand sea and sun to possible golf course, health spas and recreational outdoor activities (hiking and camping).

The Government cognizant of this, trend embarked on its third project within the conservation programme. – a Diagnostic, Feasibility and Pre-Investment study of the East Coast – the Phase 1 Study. This two (2) year project also jointly funded by the Government of Barbados and the IDB, was intended to gather raw baseline data, identify potential “hot spots” for coastal development and identify locations which required immediate coastal conservation protection or enhancement. Additionally it was to provide a comprehensive coastal zone management plan (CZMP) for the island, consolidating the draft plan from the feasibility study with the one from the Phase 1 Study. Thus the island would possess an integrated coastal plan capturing the diversity of the coastline together with the policy issues that would expedite its sustainable management. The results of this project further strengthened the linkages developed with other government agencies since the legislative review actually identified where redundancies and overlap existed and which agency had responsibility for enforcement. Thus the issue of “bureaucratic passing of the buck” was “technically” at an end.

[See Past Projects – Coastal Conservation Programme Phase 1](#)

³ Where current land owners and prospective developers pursued varying development application approaches for the development of the coastline while attempting to portray conformity with the Barbados National Park Plan (1998) which covers much of the East Coast area.