

Montego Bay's Marine Park: The Real Bottom Line

LESLIE J. WALLING
Montego Bay Marine Park
Cornwall Beach Complex
P.O. Box 67
Montego Bay, Jamaica

ABSTRACT

The Montego Bay Marine Park (MBMP) represents an integrated approach to industrial urban development and conservation management. This is reflected in the broad institutional representation of the MBMP's Local Advisory Committee (LAC), which is responsible for developing the Park's management and policy guidelines.

The MBMP is one of two pilot national parks that will be established as part of the Protected Areas Resource Conservation Project, whose objectives are to develop the local expertise and environmental legislation necessary to establish and manage a National Parks System.

As Jamaica's first managed National Park, the MBMP represents the first entity for which environmental legislation has been developed with the essential infrastructural components of adequate funding, effective management and law enforcement, and community and government commitment to provide support for implementation.

Montego Bay's tourism product at the present time is based almost entirely on white-sand beaches and warm, clear waters.

The combined effects of urban run-off, overfishing, hillside erosion, pollution, and inconsiderate recreational practices, indirectly threaten this product base by impacting on what is still an attractive reef system.

A small administrative staff manages the operational facilities of the Park. Through community education and outreach programs, interpretive enforcement, research, and lobbying the MBMP's management unit will establish levels and types of usage which will facilitate the recovery and/or maintenance of the Park's ecosystem.

INTRODUCTION

Jamaica is located in the Greater Antilles, approximately 145 km. south of Cuba and 161 km west of Haiti. It is the third largest island in the Caribbean with a total land area of 10,939.7 sq. km. Jamaica is 236 km long and between 35 and 82 km wide (CEP, 1987).

The city of Montego Bay is located on a section of the island's north-west coast that is uncharacteristically oriented from north to south. This orientation provides protection from the north-east trade winds which prevail for most of the year.

The narrow coastal plan on which the city is sited is adjacent to the natural harbor and flanked by steep mountains. A system of paved and unpaved gullies

provides storm water drainage. The Montego River passes through the city to the sea at the southern edge of the harbor, draining a catchment area of 59,000 ha.

Montego Bay is the island's largest tourist resort, generating an estimated 33% of the US 4600 million earned annually from tourism (Bell, 1990). Montego Bay is the island's second largest city and third largest urban settlement, with a population of 95,000.

Montego Bay's tourism product at the present is based almost entirely on white sand beaches and warm, clear waters. The thirty hotel properties, the international airport, and the merchant and passenger ship port facilities lie within the city limits, an area of 7,600 ha.

The city has come under increasing development pressure over the last two decades. The island's worsening foreign exchange situation has put pressure on its mining, agricultural, and tourism sectors, to maximize their respective foreign exchange earning potentials. As a result, and despite the existence of environmental legislation and an advanced development and planning and control mechanism, the country is pursuing a path of non-sustainable development with respect to its environmental resources.

In her comprehensive case study of tourism development and environmental quality in Montego Bay, Bell (1990), noted that Montego Bay had experienced economic growth as a result of the growth of the tourism industry and the diversification of the city's economic base resulting from the establishment of a free zone and industrial parks. She concluded, however, that instead of benefitting from this economic growth, the city was paying a high civic and environmental cost. This she attributed to the fact that economic and population expansion had proceeded in the absence of adequate measures to protect the city's environmental assets because sectorial policies had been largely directed to achieving national economic and monetary goals at the cost of urban development of the city.

Montego Bay's course of development can be better understood in the context of the existing legal and policy framework as they relate to the environment.

The Jamaica Country Environmental Profile (CEP, 1987) sought to identify the major environmental problems and issues confronting Jamaica. the CEP identified four essential elements for effective environmental management in Jamaica:

1. Government commitment to pursue environmental goals, reflected in policy and priorities.
2. Institutional structures designed to implement environmental goals.
3. Sufficient monetary and technical resources.
4. An informed and aware constituency.

Non-Peer Reviewed Section

Gordon (1990) attributed our present path of non-sustainable development to:

1. The absence of a clear national environmental policy.
2. The effective exemption of some government agencies from the regulatory control of the government's primary environmental agencies.
3. The low hierarchical status and inadequate institutional support for the chief environmental agencies.
4. The absence of national accounting for environmental assets.
5. Inadequate mechanisms to facilitate public participation in environmentally sound initiatives.

It is becoming increasingly obvious that the economic future of Jamaica is not based only on its natural resources and the foreign currency that they can generate. The manner in which these resources will be exploited is of primary importance, because the real bottom line isn't your dollar, it is our environment.

The Montego Bay Marine Park represents, in a small way, this realization.

THE PROTECTED AREAS RESOURCE CONSERVATION (PARC) PROJECT

The Montego Bay Marine Park (MBMP) is one of six component parts of the broader Protected Areas Resource Conservation (PARC) Project. The PARC Project is a 32-month, US \$2.9 million, Government of Jamaica/United States Agency for International Development (USAID) funded project, whose overall goal is to integrate the conservation of biodiversity with the objective of sustainable development.

Over the long term it was felt that this goal could be best achieved through the establishment of a National Parks System. This objective is to be achieved or stimulated through Phase I of the PARC Project, the two-fold purpose of which is to:

1. Immediately initiate the implementation of park and protected area activities through the establishment of two pilot National Parks (The Montego Bay Marine Park and the Blue Mountain National Park): this activity would serve to provide immediate protection for selected endangered environments while providing a practical opportunity for developing local park-management experience and expertise.
2. Develop a National Park and Protected Area System Plan that would lay the foundation for a self-sustained Park System which, in turn, would promote an appreciation and understanding of the environment and environmental education.

The Systems Plan will document and prioritize National Park sites, and suggest mechanisms for funding the Protected Areas System.

Organizational Structure

The broad PARC Project will be implemented through an arrangement of Government institutions, statutory organizations, environmental non-governmental organizations, and advisory/steering committees.

Three organizational entities will be responsible for the implementation of the Montego Bay Marine Park Programme, namely, the National Resources Conservation Department (NRCD), the Montego Bay Marine Management Unit, and the Montego Bay Marine Park's local Advisory Committee.

The NRCD is the primary government agency responsible for the conservation and management of the island's natural resources. In this capacity the NRCD was appointed as the agency responsible for the implementation of the MBMP through the establishment of physical infrastructure and the MBMP Management Unit.

The MBMP Management Unit is responsible for the day-to-day management of the MBMP and the implementation of policy and management directives. The Unit currently comprises a Manager, Public Relations and Education Office, a Secretary/Administrative Assistant, and three of four Park Rangers, and an Office Attendant.

The Manager and Public Relations/Education Officer are responsible for preparing implementation proposals (public education, community outreach, environmental monitoring, zoning, etc.) for review, and for implementing the programme in their approved form. The Rangers are responsible for enforcing the park regulations and assisting in the community outreach and education programs when necessary.

The MBMP's local Advisory Committee is the local representative committee responsible for assisting with the development of broad management and policy guidelines for the MBMP. It is made up of representatives from local interest groups and government agencies:

1. The River Bay Road Fishing Cooperative
2. The White House Fishing Cooperative
3. The Jamaica Tourist Board
4. The Jamaica Hotel and Tourist Association
5. The Montego Bay Chamber of Commerce
6. The Jamaica Association of Dive Operators
7. The Parish Council Planning and Development Committee
8. The Jamaica Constabulary Force – Marine Police Division
9. The National Resources Conservation Department
10. The Fisheries Division
11. The Montego Bay Marine Park
12. The American Chamber of Commerce

The Montego Bay Park

The objective of the MBMP is to establish and manage a marine park in Montego Bay by:

- Developing user regulations that will create activity patterns consistent with the principle of sustainable usage.
- Developing an enforcement presence in the form of a corps of park rangers that will operate on the principle of "Interpretive Enforcement" (Causey, pers. com.).
- Educating the community about the aims and objectives of the MBMP, the benefits to the community of environmental conservation, and the cost to the community of environmental degradation that results from non-sustainable usage patterns.
- Establishing strategies for regulating developments located outside the boundaries of the MBMP, but whose activities influence the MBMP.
- Establishing a base-line environmental audit that will describe current conditions in the MBMP at the start of the programme and provide periodic assessments of environmental conditions, so that the effectiveness of applied management strategies can be evaluated.
- Facilitating the recovery of fish populations and benthic habitats in the no consumption or core zones.
- Delineating the MBMP boundaries.
- Developing a comprehensive management plan that, among other things, will address the issues of zoning, concessions and licensing.

History

The Pilot Marine Park that is in the process of being established as part of the PARC Project represents the second attempt that has been made to establish a marine park in Montego Bay.

The first marine park was established as a result of initiatives that were taken in 1973. The Special Projects Division of the Jamaica Tourist Board took on the task of having the area officially designated. In July 1974 a 59-ha protected area was created under the Beach Control Act (Beach Control Order 1974). At the time the marine park project was viewed by some with expectation and optimism. It was felt that where the Ocho Rios Marine Park had failed for lack of funds in 1966, the Cornwall Beach Marine Park (as it was called) would succeed under the management of the Jamaica Tourist Board. Unfortunately, this was not to be. The Park's boundaries were never marked although the marker buoys had been purchased, and the regulations were never enforced although five wardens had been appointed. Although the first marine park in Montego Bay did not get off the ground, the efforts of those involved were not wasted

Recommendations for regulations that would govern activities in the first marine park were submitted to the Secretary of the Ministry of Mining and Tourism for approval. Though some recommendations such as the prohibiting of sailing boats, photography, and underwater billboards were not accepted, those recommendations that were accepted now form the legal basis on which the new and expanded Montego Bay Marine Park will be established.

In 1986, the Minister of Tourism established the "Marine Parks Action Committee" to act as a catalyst for marine park development. The activities of the Marine Parks Action Committee resulted in the publication of the Organization of American States funded, "Project Proposal for the Development of Montego Bay National Park, Jamaica" report (O'Callaghan, *et al.*, 1988). the publication of this report was quite timely as it evaluated and identified the management, funding and administrative needs for an operational Marine National Parks System. This effectively addressed the recommendations of the USAID funded, "Jamaica Country Environmental Profile" (CEP, 1987) on the establishment of marine protected areas. In so doing, the O'Callaghan (1988) report catalyzed USAID's commitment to the establishment of a National Parks System and what is now the PARC Project.

The justification given by O'Callaghan (1988) for selecting Montego Bay over the other eight (8) sites considered to be potential marine park or reserve areas were not strictly environmental. the factors that were considered important were:

1. Its status as the largest resort city in the island.
2. The proximity of the proposed visitor centre site to resort infrastructure.
3. The need to protect off-shore patch reefs so that their recovery could provide a scenic, well-populated marine environment as a tourist attraction.
4. The existence of community support for the programme.

The MBMP was therefore conceived as an integral component in the development of Montego Bay's tourism product and not strictly as a conservation effort. Considering the direction that Montego Bay's development has taken, the MBMP must be capable of influencing the way Montego Bay functions in an organic sense and the type of physical development policies it will pursue if the MBMP is to succeed.

The MBMP must do more than enforce regulations and educate the public; it must act as a catalyst to speed up the necessary changes.

Location/Description

The Montego Bay Marine Park will be a 15.3 km environmental protection and management zone that will lie immediately off the coast of Montego Bay on Jamaica's north-west coast.

The regulations gazetted in the Beach Control Order (1974) will apply to the enlarged Marine Park. The seven categories of activity that are prohibited under the Order are:

- fishing of any kind
- the use of boats other than those propelled by wind or oars
- the disposal of rubbish, the destruction or removal of coral, sea fans, and sedentary marine animals
- the dredging or disturbance in any way of the floor of the sea
- water skiing
- the searching for or removal of any treasure or artifact from the floor of the sea

The boundaries of the enlarged marine park will enclose two areas that are, in principle, protected by environmental legislation. These are:

- the 59-hectare "protected area" established under the Beach Control (Protected Area) (Montego Bay) Order 1974.
- the 258-hectare Bogue Island Lagoon Fish Sanctuary established under the Fishing Industry Act, the Fishing Industry (Fish Sanctuaries) Order 1979.

The park's boundaries will enclose three basic types of functionally related ecosystems:

- Approximately 7 kilometers of reef system.
- Approximately 83-hectares of mangroves bordering and forming four islands in the Bogue Island lagoon.
- Extensive seagrass beds found in the Bogue Island lagoon along its south-east border and in patches, off the shore and immediately south of the Sangster International airport.

The Bogue Island Fish Sanctuary along with no-consumption core zones in the north (220.5 Ha) and south (79.3 Ha) of the MBMP will be the three areas in the proposed park that will be completely protected by the MBMP.

Issues affecting the Implementation of the MBMP

There are a number of examples of the misuse of environmental resources within the proposed MBMP boundaries, examples of the direct and indirect use of the marine environment in ways that cannot be sustained.

Coral is being harvested for souvenirs to be sold to tourists; the reefs have been over-fished by increasing numbers of fishermen chasing fewer and smaller fish.

Snorkelers from charter boats are descending on the shallow nearshore patch reefs, and through ignorance and inexperience bumping, touching and crushing coral colonies to death.

Boat operators are damaging corals by anchoring too close to or on the corals, allowing the anchor chain or anchor to be dragged over the corals.

Hotels and restaurants on the coast release sewage at various levels of treatment, and grey water, into the sea.

“Disposable” plastic cups and styrofoam plates from food concessions on the beaches, and fruit juice cans and beverage bottles from charter and private boats can be found on the sea floor close to beaches and shallow water patch reefs.

Activities that occur outside the proposed park boundaries but that affect the marine environment include:

- the disposal of improperly treated sewage from the overloaded municipal sewage treatment plant at Catherine Hall into the sea.
- the improper disposal of dredge fill
- the disposal of untreated industrial wastes directly into conduits that lead to the sea.
- the use of gullies as garbage dumps and the subsequent washing of garbage into the sea.
- the transport of agrichemicals via drainage ditches to the sea.
- inadequate gully maintenance
- the transport of sediments, the products of hillside erosion and improper aggregate storage practices, via water courses to the sea.
- sand stealing
- the use of drainage channels near squatter settlements for disposal of human waste

The combined effect of these activities is to degrade the tourism product that they intended to exploit.

The MBMP's public education programme is being implemented while preparations are being made to have the expanded MBMP boundaries approved in order to develop a community awareness of and appreciation for the marine environment that will be protected.

The MBMP is involved in the development of a teaching package for teachers to introduce their students to the marine environment. The park has a weekly column in the regional newspaper *The Western Mirror*. The column has looked at developments and activities in Montego Bay that may help or hurt the marine environment, discussed the natural functions of the various types of habitat in and around the proposed Marine Park, and reviewed some of the existing environmental laws.

A brochure is in the process of being printed and interpretive displays for our visitor centre are being prepared.

Once the park's boundaries have been approved, the MBMP will officially have enforcement and management control of the expanded area. This will represent another first for the MBMP, as the rangers will represent the first

effective environmental enforcement unit in Jamaica supported by adequate funds and equipment.

One of the activities that the MBMP will undertake in the development of Park legislation will be to produce a comprehensive compilation of existing environmental legislation relevant to the MBMP by gleaning the pertinent sections from existing Acts and Orders.

Information collected by the MBMP on usage patterns and environmental considerations will be used to develop detailed zoning and mooring buoy programme proposals. These programs will introduce new regulations to complement those that have been created by existing legislation.

The environmental audit will consider the monitoring of basic abiotic parameters such as water temperature, salinity, turbidity, phosphate and nitrate concentration, and pollutants such as pesticides and petroleum products. The biotic parameters that will be monitored include fish stock analysis for abundance and species composition and benthic community composition analyses. Towed diver surveys will be conducted for rapid, low resolution assessments at more frequent intervals.

Each of the fishing cooperative societies of River Bay Road and White House has a representative that sits on the LAC of MBMP. There has been an agreement in principle from the fishing co-ops to abide by the regulations of the MBMP, particularly those that relate to no-fishing or non-consumption zones. This participatory cooperation is part of the solution to the problem of over-fishing on Montego Bay's reefs.

Full compliance with the MBMP no-fishing regulations may in the long term depend on more than agreement in principle given during the planning phase of the programme. It is probable that some consideration will have to be given to income generating options for the thirty fishermen who will be effectively barred from coastal fishing by the MBMP's regulations and their very basic fishing craft that could not be used for off-shore fishing. The MBMP does not have the authority to investigate or implement the feasibility of income generating options for dislocated fishermen. However, members of the LAC and interested parties are seeking options while operating within their respective terms of reference.

CONCLUSION

It is becoming increasingly obvious to those that live in Montego Bay that the city's course of development to date has a lot left to be desired.

The balance between land use for economic development and land use for community infrastructural development and environmental conservation is heavily weighted to the side that generates foreign exchange rapidly.

The quick-fix option always looks attractive because it appears to promise a quick solution to pressing problems. But in Montego Bay the real bottom line is becoming clearer and clearer.

The Montego Bay environment earns Jamaica approximately US\$200 million per year. Yet an outbreak of typhoid, high coliform counts detected near major beaches, heavy deposits of filamentous algae on our beaches and reefs, or disfigured reefs with very few fish could cause this income to fall.

The MBMP represents the realization that Montego Bay's marine environment needs to be protected and managed: protected from those activities that exploit the marine environment on a non-sustainable basis; managed so that traditional users can continue or resume at some further time, their activities – but in a manner that is sustainable.

LITERATURE CITED

- Beach Control (Protected Areas) (Montego Bay) Order. 1974. *Jamaica Gazette Supplement* vol. XCVII No. 139.
- Bell, Y. 1990. *Mismanaged Urban Growth: Tourism Development and Environmental Quality in Montego Bay*. Prepared for the Conference on Urban Management: Understanding the Economic and Environmental Linkages. Bridgetown, Barbados, September 5-7, 1990.
- CEP 1987. *Jamaica Country Environmental Profile*. Prepared by NRCD and Ralph M. Field Associates, Inc. for the International Institute for Environment and Development.
- Fishing Industry (Fish Sanctuaries) Order. 1979. *Jamaica Gazette Supplement* Vol. CXI No 23.
- Gordon, V. 1990. *Overview of sustainable development and Jamaica*. Paper presented at the National Conservation Strategy Consultation, April 25-27, 1990. Kingston, Jamaica.
- O'Callaghan P. A., Woodley J., and Aiken K.A. 1988. *Project Proposal for the Development of Montego Bay National Park, Jamaica*. Report prepared for the Department of Regional Development Secretariat, Organization of American States.
- Tourist Board (Watersports) Regulations (1985) *Jamaica Gazette Supplement* Vol, CVIII No. 88.