

PART A

1. INTRODUCTION

The beaches of Jamaica are of international renown, and are one of the main factors contributing to the growth and success of the island's tourist industry. The Government of Jamaica (GOJ), through the Natural Resources Conservation Authority (NRCA), and in consultation with the public and private sectors and non-governmental organizations, carried out a review of the policies addressing beaches, the foreshore and the use of the floor of the sea with a view to developing a comprehensive and up-to-date policy.

One of the primary reasons for the review was the recurring and sensitive issue of public access to the foreshore, a matter which has important ramifications for tourism and beach front property owners, the recreational use of the coastal resources by the general public and economic use by the fisheries sector.

In 1954, a Commission of Inquiry was appointed to "investigate the question of the use of beaches and foreshore lands throughout Jamaica, taking into account the needs of the public for recreation and varying purposes and to make recommendations for securing adequate facilities for such purposes". The Beach Commission was set up because of public agitation that fishermen were being squeezed out of beaches and the public could not find places to go. It was decided to develop comprehensive legislation to deal with the problem "at this late stage of affairs".¹

Today, however, for many there are still unanswered questions about the rights and obligations of both property owners and the general public, particularly in light of increases in population and changes that have taken place in the society in the forty-six years since the report of the Commission of Inquiry. There is a general perception that there are fewer and fewer opportunities for enjoying the beach as more coastal development takes place and because most public bathing beaches are in a state of disrepair.

The subject is also of concern to the fisheries sector as traditional fishing beaches have been coming under pressure from competing uses. A relatively new area of concern is the licensing of the use of the floor of the sea for purposes of mariculture² and the balancing of rights to marine resources between traditional

¹ Hansard, Proceedings of the House of Representatives, November 29, 1955

² Mariculture: the cultivation of plant or animal species in an underwater environment.

fishermen harvesting resources within the water column, and those engaged in mariculture who require more formalized arrangements which allow them use of specific areas of the floor of the sea.

This new policy is central to any comprehensive coastal resource management strategy³ and its objectives are:

1. The provision of physical and equitable access to the foreshore and the sea on a managed basis to all persons.
2. Expansion of beach-related recreational opportunities for both local residents and tourists.
3. Implementation of measures for pollution control and safety for the users of coastal resources.
4. Protection of the traditional rights of fishermen to access to the foreshore and the sea, and beaching rights on their return from sea.
5. Management of wildlife associated with beaches and the near shore.
6. Management of coastal resources in the light of their vulnerability to the effects of climate change and natural disasters.

3 A Discussion Paper towards Developing a National Policy on Ocean and Coastal Zone Management has been prepared (July, 2000).

2. BACKGROUND

2.1 The Legal Regime regarding Access to the Foreshore, the Floor of the Sea and Beaches in Jamaica.

Access to the island's beaches has always been a controversial issue in Jamaica. Members of the public have from time to time expressed the opinion that they are being denied access to the better beaches. Some of these beaches are bordered by private property or were traditionally beaches to which the public had access but which are now the subject of hotel or other coastal development. The controversy, it appears, arises from the notion that members of the public enjoy unrestricted access to the nation's beaches and that this access is being interrupted by persons who perceive that they have a greater right over the foreshore and floor of the sea.

The following paragraphs discuss the legal regime on access to the foreshore, the floor of the sea and to beaches in Jamaica in terms of:

1. rights of the bathing and fishing public
2. rights of owners of property adjoining the foreshore and
3. rights of persons applying for a licence pursuant to Sections 5 and 11 of the Beach Control Act.

Before addressing the topic however, it is necessary to define the terms foreshore and beach. (see figure1).

Whilst there is no legal definition of a beach, the following definition is being adopted for the purposes of this policy: a beach is

"the zone of unconsolidated material (sand or gravel), whether natural or manmade, that extends from the low water mark landward to the vegetation line, or to the crest of the primary dune, or to a line of debris deposited by wave action usually the effective limit of storm waves) or a combination of such factors."

Though the Beach Control Act, which is the principal Act that addresses this issue, does not define the concept of a beach, the Beach Control (Safety Measures) Regulations 1957 and the Beach Control (Hotel, Commercial and Public Recreational Beaches) Regulations 1978 define 'beach' as

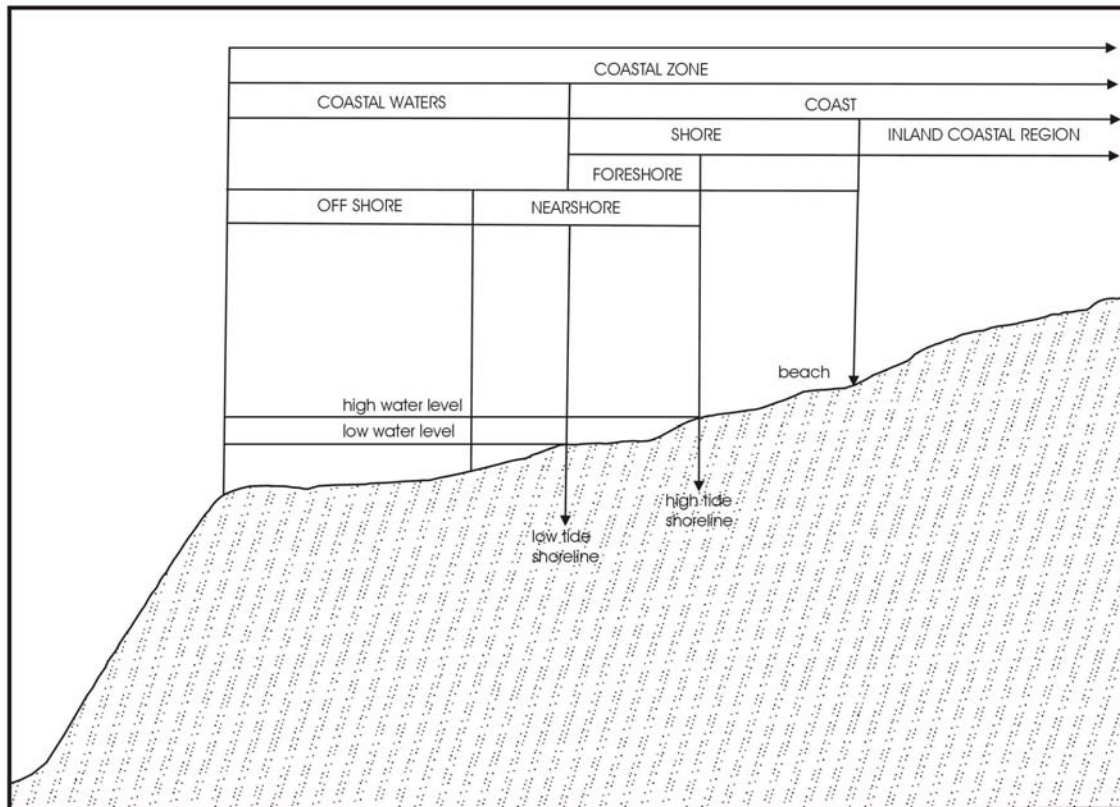


FIGURE 1: SOME DEMARCATIONS OF THE COASTAL ZONE

'...the licensed area including the area covered by water which is comprised in a licence granted under Section 11 of the Act in relation to a hotel, guest house, boarding house proprietary or members' club with a beach or a commercial or public recreational beach ...'

This definition without being confined to the parameters of a licensed area, is that which is most commonly conceived of as a beach.

The foreshore is

"that portion of land adjacent to the sea that lies between ordinary high water mark, being alternately covered and uncovered as the tide ebbs and flows".

Ownership of the foreshore is vested in the Crown except where rights are acquired under or by virtue of the Registration of Titles Act or any express grant or licence from the Crown subsisting immediately before 1956.

The portion of the beach above the foreshore may be private or public property.

In Jamaica, with the very limited tidal variations of 30 - 40cm (12" - 16") the foreshore is relatively narrow with an average width of approximately 1.5m to 2m (5' to 6') depending on the topography of the shoreline.

Rights of the bathing and fishing public

In common law, the public has no general rights of access to the foreshore or the floor of the sea or to beaches. There is no general right of bathing.⁴ There are no general common law rights over the foreshore except *to pass over it* for the purpose of navigation or fishing. In Jamaica there is no statute that conveys any general rights over the foreshore or the floor of the sea save and except the provisions in the Beach Control Act. Rights of fishing and bathing may however be acquired by custom and such customary rights are addressed in Section 14 of the Beach Control Act and Sections 4 and 9 of the Prescription Act.

The Beach Control Act of 1956 did not seek to convey general rights to the public to gain access to and use the foreshore or the floor of the sea. Section 3(1) of the Act declares that ownership in the foreshore is vested in the Crown and declares in Section 3 (3) that 'No person shall be deemed to have any rights in or over the foreshore or the floor of the sea except such rights acquired under the Act.' These rights include:

- (a) any rights enjoyed by fishermen engaged in fishing as a trade, where such rights existed immediately before the 1st June 1956, in or over any beach or adjoining land; or
- (b) the enjoyment by such fishermen of the use of any part of the foreshore adjoining any beach or land in or over which any rights have been enjoyed by them up to the 1st June, 1956.

Fishermen therefore have to prove that they had been enjoying these activities before 1956.

⁴ Atkins Court Forms, Vol. 1, page 279

Where rights of bathing are concerned, such rights are exercisable in connection with public recreational beaches or where acquired by custom. Privileges to bathe may be enjoyed within a licensed beach subject to the rights of the licensee. These beaches are subject to the Beach Control (Hotel, Commercial and Public Recreational Beaches) Regulations 1978 and the Beach Control (Licensing) Regulations, 1956.

Section 4 of the Beach Control Act, however, provides for owners and occupiers of land above and adjoining the foreshore to use that part of the foreshore adjoining their land for private domestic purposes.

No member of the public has any inherent right to bathe or walk along the foreshore, except where acquired by custom or on a public bathing beach, nor is there any general right to fish except as provided in S. 3 (3) of the Beach Control Act.

Rights acquired by custom/prescription

Section 14 of the Beach Control Act provides that the Authority upon receiving a petition from not less than five persons concerned with any dispute regarding the right to use any beach or land to gain access to any beach may act on behalf of the parties with a view to establishing such rights. Pursuant to Section 4 of the Prescription Act, the use of any such beach or access way must be for a period of not less than twenty years and such use must be uninterrupted and must have been so done without consent in writing.

Section 4 of the Prescription Act states:

"4 ... (1) When any beach has been used by the public or any class of the public for fishing, or for purposes incidental to fishing, or for bathing or recreation, and any road, track or pathway passing over any land adjoining or adjacent to such beach has been used by the public or any class of the public as a means of access to such beach, without interruption for the full period of twenty years, the public shall, subject to the provisos hereinafter contained, have the absolute and indefeasible right to use such beach, land, road, track or pathway as aforesaid, unless it shall appear that the same was enjoyed by some consent or agreement expressly made or given for that purpose by deed or writing."⁵

⁵ Memorandum from the Attorney General's Chambers dated 1st July, 1987

This prescriptive right has to be declared by the Court.

Rights of owners of property adjoining a beach

Section 4 of the Beach Control Act gives a right to any person who is the owner or occupier of any land adjoining any part of the foreshore and any member of his family and any private guest of his, to use that part of the foreshore adjoining his land for private domestic purposes, that is to say, for bathing, fishing, and other like forms of recreation and as a means of access to the sea for such purposes. However, where such land is being used for commercial purposes, then any such use of the foreshore can only be carried out with a licence from the Beach Control Authority (now Natural Resources Conservation Authority)⁶.

Public Bathing Beaches

Public bathing beaches are those beaches, which have so been designated by the Natural Resources Conservation Authority. Such beaches are either those adjoining lands owned by the Authority or other government department or Agency or those reserved in housing developments. The designation of such beaches is consistent with the Authority's mandate under section 12 (1) of the Beach Control Act, which provides that:

"The Authority shall from time to time determine the needs and requirements of the public in relation to the use of-

- (a) any portion of land, whether such portion of land adjoins the foreshore or not; and
- (b) the foreshore, for or in connection with bathing or any other form of lawful recreation or for the purpose of fishing as a trade or otherwise or for the purpose in the interest of the economic development of the beaches of the island."

Public bathing beaches may also be declared pursuant to Section 52 (1) of the Beach Control Act, which provides that a declaration may be made where a beach is being used by the public for fishing, bathing or recreation upon payment of a fee. Such beaches would presumably be private property. The section further provides that the Authority may consult with the owner of the beach or person exercising control of the beach or receiving the fee, to declare such beach to be a

⁶ The NRCA Act, 1991 vested in the NRCA the power to administer the Beach Control Act.

public bathing recreational beach. The person who owns or exercises control over the beach may, pursuant to Section 55 of the Beach Control Act, appeal to the Minister against the order declaring the beach to be a public recreational beach. The owner or person exercising control over the beach may also request that the Authority revoke the order and allow him to have full control over the beach.

It should be noted, however, that there is no record of any such declaration under this provision.

The Natural Resources Conservation Authority grants licences to persons operating public bathing beaches, hotel beaches and those associated with a guest house. The rights of the public on a hotel or commercial beach are subject to the Beach Control (Hotel, Commercial and Public Recreational Beaches) Regulations 1978, which dictate the public's obligations as well as those of the licensee.

Obligations of the Public within a licensed area

The regulations require *inter alia* that every person entering a beach must:

- Conduct himself in an orderly manner
- Be decently clothed
- Dispose of garbage in containers provided
- Not swim outside of designated times
- Not enter or leave a beach except through passages appointed for that purpose.

Rights and Obligations of the Licensee within a licensed area.

Section 5 of the Beach Control Act prohibits encroachments on or use of the foreshore or the floor of the sea for any public purpose or for or in connection with any trade or business or commercial enterprise without a licence. The Beach Control Authority (Licensing) Regulations identify various types of encroachments and uses for which a licence is required.

The Licensee's rights are to:

- Charge fees approved by the NRCA
- Grant permission to use the licensed area
- Open and close a beach
- Control the erection of structures
- Grant permission for the carrying out of commercial activities including selling of goods and wares
- Regulate behaviour subject to the Beach Control (Hotel, Commercial and Public Recreational Beaches) Regulations 1978

Each licence is subject to terms and conditions, which set out the licensee's obligations. These include:

- The provision of life saving apparatus and first aid equipment
- Providing lifeguard services
- Giving the public adequate indication of safe swimming areas
- Keeping the beach and all facilities in a clean and orderly condition

Fishing Beaches

Fishing beaches are designated by the Fisheries Division of the Ministry of Agriculture. There are approximately 121 fishing beaches (See Map 3 for a list of all fishing beaches.) The NRCA has the authority to license fishing beaches under the Beach Control Authority (Licensing) Regulations, 1956.

The Beach Control (Hotel, Commercial and Public Recreational Beaches) Regulations 1978 do not apply to designated fishing beaches. Regulation 6 of these Regulations expressly states that no person shall use a beach licensed as a hotel, commercial or public recreational beach for the purpose of fishing.

Fishing is regulated under the Fishing Industry Act. It is an offence to fish without a licence.

Other related Legislation

Other laws that affect beaches include the Harbours Act, the Jamaica National Heritage Trust Act, the Local Improvements Act, the Morant and Pedro Cays Act, the Quarries Control Act, the Town and Country Planning Act, the Tourist Board Act, the Urban Development Corporation Act and the Public Health Act.

2.2 Policies: 1950s - to the Present

Role of the Beach Control Authority

The Beach Control Authority was established under the Beach Control Act "to control the use of the foreshore so as to advance on a fair basis the interests of developing commercial enterprises and in particular the hotel industry, the interest of the public who have a right to have places for recreation, to have the means of access to the sea for their own amusement and for the interests of the fishermen which must be protected and developed".⁷ The Beach Control Authority is now the Natural Resources Conservation Authority (NRCA) and hereinafter will be referred to as the Authority.

The functions of the Authority are the following:

- a) The granting of licences for the use of the foreshore and/or the floor of the sea for commercial, recreational, fishing, public or other purposes.
- b) Ascertaining the needs of the public in relation to the beaches and making provisions for them.
- c) Acquiring beaches and other coastal lands for the use and benefit of the public.
- d) Maintaining and developing beaches for the benefit of the public.
- e) The protection of existing beaches and where possible, the establishment of new ones.

The law stipulates that a licence is required from the Authority for the use of the foreshore in connection with any commercial enterprise along the coast, which involves the use of, or encroachment on the foreshore and/or the floor of the sea and the overlying water.

One of the early actions taken by the Authority in 1957 to protect existing public rights, was to acquire for the use of the public, the popular Dunn's River beach in

⁷ Hansard, Proceedings of the House of Representatives, November 29, 1955

St. Ann which the owners desired to develop exclusively for hotel purposes.

The Authority also encouraged the construction of sea defences, such as groynes, at places where erosion threatened to destroy the beach, e.g. at Annotto Bay in St. Mary and St. Margaret's Bay in Portland.

The Beach Control Act also provides for the declaration of protected areas and the prohibition of activities such as fishing, waste disposal, dredging and the removal of coral in such areas.

Regulations were developed under the Beach Control Act concerning licensing, safety measures, the operation of hotel, commercial and public recreational beaches as well as orders on protected areas (Ocho Rios, Port Royal and Montego Bay) and protected species (black coral).

The approach of the Beach Control Authority was basically one of a judicious apportionment of the limited coastal resources in an effort to cater to the various competing demands of bathing, fishing, resort development, industry, etc., and the Authority at the time embarked on a policy of issuing exclusive licences to the resort sector, after making reasonable provision for public bathing and fishing.

Priorities

The priorities of the Beach Control Authority were as follows:

- (a) The provision of beaches for fishermen.
- (b) The provision of public bathing beaches.
- (c) Preservation of scenic coastal drives, wherever possible.
- (d) Licensing of hotel and resort beaches.
- (e) Licensing of other commercial uses of the foreshore.

Today, other priorities include the rehabilitation and maintenance of safe and healthy beaches as well as securing additional public access to beaches.

Licensing

Under the Beach Control Act, two basic types of beach licences may be granted (renewable on an annual basis) - an 'ordinary' licence and an exclusive licence. From the legal perspective, "an ordinary licence may be granted to many persons in respect of the same right. Where an exclusive licence is concerned, the cases suggest that it grants a right to one person against all other persons to do that

which the licence permits.... Thus if a hotel owner has been granted an exclusive licence for the use of the foreshore, it would mean that the Beach Control Authority ought not to grant any one else a licence to do what the particular hotel owner has been empowered to do. In effect it means that no one else may exercise the right granted to him by the exclusive licence. "⁸

Prior to the mid- 1970s, the Beach Control Authority issued licenses that conferred exclusive rights to the use of the foreshore to the property owner. Since 1976, the issuing of exclusive licenses has been terminated and licences only give the property owner the right to use the foreshore. However, previously issued exclusive licenses were not rescinded, and the practice of renewing them has continued.

In order to ensure orderly development, site-specific conditions are usually attached to the licences. The conditions attached generally include provisions such as those set out at **Appendix I**.

Acquisition and Management of Beaches

Where coastal areas were subdivided, the Beach Control Authority in collaboration with the Parish Councils would seek to ensure that beach properties were reserved for public recreational use. In most cases, beach properties reserved in subdivisions were either transferred to the Authority or to the Parish Council. In some cases the Beach Control Authority directly acquired beach property for public use. In other cases, private property owners donated beach property to the Authority as a gift.

From the start of its operations in 1956, the Beach Control Authority adopted a policy whereby public bathing beaches after acquisition, were handed over to the respective Parish Councils for development and control. The capital funds for such development were always provided in the Authority's Capital Budget, while the recurrent maintenance and staff requirements were made available to the Parish Councils through the Ministry of Local Government.

It was never the policy of Government that the Authority should take responsibility for the actual administration of any public bathing beaches, although there would be prior consultation with the Parish Councils regarding the type and extent of facilities considered desirable for each site. The Authority's parent Ministry would

⁸ Memorandum from the Attorney General's Chambers dated 1st July, 1987

be advised of all plans that were being made for the development, maintenance and administration of such beaches.

The beach policy as set out above was carried out from 1958, soon after the Authority became operational, until October 1985, when, as part of a structural adjustment programme, it was decided that

"Those services for which the Local Government Authorities continue to be responsible and which can be more efficiently performed through private contractors, will be privatized through service and management contracts or leases. Specifically this policy relates to ... public bathing and fishing beaches."⁹

As a result of this policy of divestment, all monetary support for maintenance and operational expenditure on public bathing beaches was cut off and efforts to have them divested failed to attract any viable proposals.

These beaches fell into a state of disrepair, particularly after Hurricane Gilbert. Some beaches are still being used by the public without the benefit of lifeguard protection and other basic amenities.

In an effort to have the public bathing beaches restored with a minimum demand for public funds, the Government took the decision in 1989 that Recreational Development Corporation (RDC) should be established to carry out this process.

In October 1992, however, the Government gave approval for the assets and functions of Recreational Development Corporation to be vested in Tourism Product Development Company (TPDCo).

It was intended that the management and development responsibilities for certain beaches would be divested by way of an instrument of lease offered to select concessionaires. TPDCo was given the responsibility to select the concessionaires, after all the facilities had been advertised publicly. All plans were to be approved by the relevant agencies. The NRCA would be responsible for the design and implementation of this system.

The Authority in collaboration with the Fisheries Division would also seek to secure suitable lands for the use of fishermen. The policy was to ensure that when land

⁹ Ministry Paper No. 10 dated April 16, 1985 from the Ministry of Local Government

including a beach was acquired for this purpose, it should be handed over to the Fisheries Division of the Ministry of Agriculture for management. This Division has the ultimate responsibility for fishing beaches including the facilitation of beach development and the monitoring of activities on fishing beaches (including the offshore cays).

The Division has found it challenging, however to maintain all fishing beaches and therefore, a policy has been adopted which encourages fisheries organizations (e.g. co-operatives) to take over direct management of the beaches they use.

Beach Access

The Beach Control Authority's policy was that access to all public bathing beaches should be free of charge and that the public should be required to pay only for amenities provided (should they desire to use them). Such fees would be used to assist in covering the maintenance cost of the facilities.

To ensure that optimum use was made of foreshore lands, the Authority arranged with Parish Councils for all applications for subdivision of lands to be submitted to it for comments and recommendations before final approval. In this way the Authority succeeded in having several portions of beach lands reserved for public use.

The Authority also aimed to preserve the scenic beauty of the coastal drive by recommending that the height of fences between a road and the sea should be restricted to 1.3 m (4'6") from ground level. In the Manual for Development prepared by the Town Planning Department, the preservation of access to the beach and coastline is included in the following statement:

"Development and subdivisions along the coast and riverbanks should be so designed as to allow the public to enjoy the seaside, the riverbanks and the beaches. For that reason, special areas should be left for fishing beaches and for good bathing beaches with access provided from a public thoroughfare. In some areas, adequate parking may be required.

An area of seaside park should also be provided in every housing development or subdivision along the coast, between the high water mark and the nearest row of lots. This would add value to the lots within the subdivision and at the same time allow unrestricted passage along the foreshore."

In Negril, in particular, the Development Order specifies "no development will be permitted on land adjacent to the line of high water mark which would preclude public access to and from the foreshore... To enable the fullest enjoyment of the natural beauty of Negril, at no point will the erection of structures or fences be allowed within 45m (150 feet) of the high water mark except where, due to the presence of rocks, no beach exists or with the permission of ... the local planning authority..."

PART B

3. STATUS OF BEACHES

Jamaica has 795km (494 miles) of shoreline of which approximately 30% is characterized as sandy beach¹⁰. About 4.5km of the shoreline are designated as public beaches and another 2.88km are used in association with hotels. The Negril beach is approximately 11km (7 miles) long.

With increased tourist and residential development along the coastal strip, fewer good beaches are being left available for development for public use.

Vast stretches of white sand beach provide the location for the principal resort areas, including Negril, Montego Bay and Ocho Rios. These white sand beaches originate from the offshore coral reefs, calcareous algae and other calcareous-producing organisms (foraminifera) living in seagrass beds. Many of the south coast beaches are nourished by river sediments and are typically of black sand.

At present, there are eighty-seven (87) public recreational beaches used by the public for bathing, of which eighteen (18) are commercial recreational beaches (Map 1). There are two hundred and seventy-five (275) beaches associated with guest houses and villas, sixty (61) bathing beaches associated with hotels (Map 2), and one hundred and twenty-one (121) fishing beaches (Map 3).

A large number of hotel beaches are located on the north coast. These beaches are generally of a high standard. The majority of these beaches are available to the general public on a fee basis, for use of the hotels' facilities, and in some cases access may be had on payment of a club fee.

A comprehensive survey was undertaken by the NRCA in the summer of 1997 to assess the status of all public bathing beaches located around the island. This was followed by a smaller survey in 1998.

The findings were as follows:

- **17 of the 87 public bathing beaches meet the minimum acceptable safety**

¹⁰ Data on all beaches were obtained under the Coastal Zone Planning Project carried out under a technical assistance project between the Governments of Jamaica and Sweden and are included in the Coastal Atlas. This is available at the Coastal Zone Management Unit of the NRCA.

- standards. The rest are either in a state of disrepair or have no facilities on site.
- Squatting is a major problem at fishing beaches. In addition, at some of the beaches, shacks and stalls have been built, adding to already unsanitary conditions.
 - In general, bathing beaches located on the north coast have a larger sphere of influence than those located on the south coast. The entire road network system is a strong influence, in that major roadways on the south coast are located mainly in the interior, while the major roadways on the north coast run adjacent to the coastline in many places, making those beaches more accessible.

Beach Rehabilitation Programme

In 1998, the Natural Resources Conservation Authority started a programme of rehabilitation of public bathing beaches with the refurbishing of the Orange Bay beach in Portland. Other beaches rehabilitated under this programme are the Jacob Taylor beach at Silver Sands, Trelawny and the beach facilities at the Negril Community Centre.

The funds for the rehabilitation have come mainly from the fees collected for beach licences.

Other beaches have been developed by Government agencies such as the Urban Development Corporation, the Tourism Product Development Company and the Petroleum Corporation of Jamaica.

PART C

4. ISSUES

4.1 Public access to beaches

The situation in Jamaica

Discussion of the issue of public access to beaches is usually focused on the sense of exclusion that some people have from hotel beaches, which are also some of the better beaches in Jamaica. There are also at present, few operational public bathing beaches and commercial recreational beaches.

The problem was expressed as follows in a letter to the Beach Control Authority in 1973: "It is a matter of concern that hotels, which are supposedly open to the public, are allowed to pursue an undisguised policy of trying to exclude the public from their beaches in such ways as failing to provide changing facilities; placing excessive charges on the use of the beach; and using their staff to intimidate the public. Although hotels are under law open to the public, in practice their beaches really are not."

The arguments on the other hand are that opening the beaches would hurt tourism, particularly the "all inclusive" hotels. It has also been suggested that some people might feel that if the Crown owns a beach, they have a right to reach that beach through private property.

While Jamaicans may agree in principle that there should be far more liberal access to beaches, the subject of beach access is complex. The arguments for or against expanding opportunities for beach access can rest on considerations of law, policy, market economics, and a host of social issues.

In terms of definitions, beach and foreshore are commonly confused. If the foreshore is the strip of beach between mean tides, it could be a very narrow strip, and would be inaccessible during periods of high tide. When most people refer to the beach, and to beach access, they are likely referring, not only to the foreshore, but also to the dry sand portion between the primary dune or vegetation line and the water line. In Jamaica, unlike the situation elsewhere, the dry sand portion of the beach is generally private property. Jamaica is one of the few countries, which allow private ownership of beach lands.

In some areas, access roads to beaches have become overgrown and neglected or

have been deliberately barred, e.g. the entrance to the White River fishing beach. Many of Jamaica's best beaches are "pocket" beaches of a few metres in length. There is a perception that most of these beaches have been acquired for exclusive use by hotels. Notwithstanding their size, most of these beaches can be opened to wider use if properly managed.

The effect on tourism in Jamaica of having open access to all beaches has never been studied.

The Regional and International Perspective

The matter of public access to beaches is of concern all over the world, whether the conflict is between the owners of private beach front property or commercial resort owners and persons who wish to walk along a beach.

In one state in the USA, a 'residents-only' beach policy got a constitutional test¹¹ - and succeeded, but this decision has since been appealed¹². In another state, however, the public has vested property rights in the public beaches, and free use of and access to and from the beaches are guaranteed¹³. In some states, policies maximize public access and recreational opportunities to and along the coast consistent with sound resource conservation principles and require that any new development between the sea and the nearest public road make some provision for public shoreline access.

In most Caribbean countries there is no written policy but there is free access to the beach. The matter of coastal development and traditional access to beaches is still, however, a concern in many Caribbean islands.

In Trinidad and Tobago, notwithstanding the existence of the Three Chains Act, which appears to open to public access, all property within a specified distance from the high water mark of the adjoining beach, the view was expressed that the tourist industry would collapse in Tobago if all property within the three chains around the island is in fact communal property¹⁴.

Most countries in developing coastal policies have included the improvement of public access to beaches as an objective of their policy.

11 Free! February 20, 1998

12 The Inquirer, Sunday June 18, 2000 - "Town fights to keep outsiders off its beaches"

13 Coastal Issues – Texas General Land Office

14 2000 InterPress Services 25 April, 2000 – Whose beach is it anyway?

4.2 Management of Beaches

It is agreed that sufficient funds should be spent for the satisfactory development and maintenance of public beaches to make them more attractive to residents and visitors alike.

The various types of beaches envisaged are as follows:

- a) Beaches operated in conjunction with hotels, guest-houses and villas.
- b) Commercial beaches managed for profit
- c) Public beaches for which a charge is made to cover operational costs
- d) Public beaches for which there is no charge
- e) Protected beaches
- f) Beaches left in their natural state

Public beaches operated on a non-profit basis may present management problems. There will be the need for consultation with communities on the development of beaches to be leased to commercial interests.

Management issues common to all beaches include:

- Safety
- Waste disposal
- Beach maintenance and protection
- Security
- Infrastructure

A matter of special concern to the NRCA as a regulatory agency, will be to ensure that all beaches are properly managed on a non-discriminatory basis, that beach regulations are adhered to and that issues of safety, waste disposal and beach maintenance are being properly addressed. To this end, the NRCA may find it appropriate to assign persons as beach inspectors with enforcement powers.

4.3 Facilities at Public Bathing Beaches

As noted above (Status of Beaches) few of the public bathing beaches are equipped with functional toilet and changing room facilities and the majority of these beaches are in a state of disrepair.

In addition to the required safety facilities, a fully equipped public bathing beach should have changing rooms, washrooms, toilets, parking facilities for cars, garbage disposal facilities, security and in some cases, refreshment kiosks. Fully operational commercial beaches and hotel beaches are required to have these facilities as a part of their commercial operation.

4.4 Licences

Reference has already been made to the practice of the Beach Control Authority of issuing licences giving exclusive use of the foreshore and floor of the sea, usually for 25m (75 feet) seaward of the high water mark. This permitted the property owner/licensee to deny access to other users of the beach and sea in their licensed area. Although no new exclusive licences are being issued many of those already granted are renewed yearly and remain legally in force.

In the contemporary context, exclusive licences such as prevailed are unacceptable and alternative mechanisms must be provided to permit residents of Jamaica access to the best beaches while at the same time giving property owners some measure of control over the use of facilities.

4.5 Nude bathing

The Beach Control (Hotel, Commercial and Public Recreational Beaches) Regulations states, "every person entering or using a beach shall ... be decently clothed"¹⁵. There are however, some hotel properties where special places are provided for the practice of nude bathing.

4.6 Coastal Development

The issues here relate to increase in density levels along the coast, illegal encroachments and coastal modifications, the unauthorised erection of fences, the blocking of views of the sea by the building of too high walls and the diversion of coastal roads.

¹⁵ The Beach Control Act Regulations; section 18. The Beach Control (Hotel, Commercial and Public Recreational Beaches) Regulations, 1978.

The illegal erection of fences across the foreshore on private and some hotel properties has reinforced the impression that Jamaicans are excluded from certain beaches.

In many parts of the island, magnificent views of the sea used to be freely available along coastal roads. In recent years, however, several roads have been diverted in order to accommodate resort developments, which have sought to obtain exclusive use of the beach for example, San San in Portland and Pear Tree Bay, St. Ann.

While it is recognised that the marketability of such resorts can be enhanced through the exclusive availability of the view of the sea and the use of the beach, it is considered important that the public should not be deprived of the view of the sea nor the opportunity to stop by the seashore where appropriate.

Development on the seaward side of coastal main roads should be so arranged that there is no continuous wall or buildings obscuring the view of the sea. Appropriate lay-bys should also be provided at vantage points along the coast. In some other countries, e.g. Puerto Rico, no development is permitted between the coastal road and the sea in tourist areas.

In some cases, the diversion of a road is necessary as this may afford more recreational space adjoining the beach, for example Bluefields beach, St. Elizabeth.

The Town Planning Department in planning for any coastal development collaborates with the NRCA to ensure that special areas are left for fishing beaches and for good bathing beaches with access from the public thoroughfare.

4.7 Safety

On issuing a licence to a property owner to operate a beach or by declaring any beach a public bathing beach, the NRCA requires that certain safety measures be in place.

The particular factors, which must be taken into consideration, are:

- physical features (such as the slope of the sea floor or the existence of strong currents). Some traditional bathing places (e.g Palisadoes off Port Royal) have a steeply sloping foreshore and non-swimmers can get out of their depth suddenly and unexpectedly, sometimes with tragic results. In

other places (e.g. Holland Bay in St. Thomas, Engine Head Bay in St. Catherine, Cable Hut, St. Andrew and Long Bay in Portland) strong currents may take swimmers away from the shoreline.

- the water quality, which must meet acceptable water quality standards.
- the taking of steps to ensure that boats, especially power boats and jet-skis are not permitted in the vicinity of bathers.
- safety equipment, which must be in place and available, for example marker buoys defining bathing limits, life rings, first-aid equipment, warning signs where necessary in areas that are unsafe (e.g. as at the bottom of Dunn's River Falls).
- the certification and employment of lifeguards.

Traditionally, lifeguards have primary responsibility for safety in the water, but since operations on a beach involve other issues of safety and orderliness, steps might be taken by licensees to hire persons to monitor beach activities.

In general, safe swimming and bathing conditions can be provided when the following conditions are available:

Natural Conditions:

- Absence of strong rip currents
- Low wave energies
- Uniform seafloor topography with no hidden deep areas or drop-offs
- Absence of harmful marine organisms
- Absence of harmful water-borne pathogens or pollutants that could affect health

Infrastructural Conditions:

- The presence of trained lifeguards and safety paraphernalia.
- The presence of demarcated safe/unsafe areas for swimming.
- Strict regulations on beach use and conduct at beach facilities.

Unfortunately, every year there are incidents of drowning in near shore waters of the island. Between January and June 2000, the total number of drownings in Jamaica, as reported by the Constabulary Communications Network was 22, of

which 10 were associated with beaches.

The majority of the drownings associated with beach use were as a result of non-swimmers bathing in high-risk areas and at beaches not equipped with water safety devices.

4.8 Pollution and Water Quality

Recreational coastal and marine water quality is influenced by several factors including the discharge of sewage and industrial effluent into the coastal and marine waters, non-point source discharges from agricultural activities, urban runoff and modifications of natural systems (including the destruction of wetlands), urbanization and the growth of informal settlements in coastal areas.

In addition, water sports, boating, yachting, fishing and commercial shipping activities generate and discharge wastes into the near shore waters.

Water quality on Jamaica's recreational beaches is monitored by several agencies and has consistently met the existing standards except in the case of a few beaches where "spikes" associated with periods of heavy rains are experienced.

Population growth and the increase in informal settlements are likely to have a negative impact on the coastal water quality and may lead to contamination.

a. Oil Pollution

Oil pollution on the foreshore may arise from marine or land-based sources. Examples of pollution from ships include inappropriate disposal of bilge, poor maintenance giving rise to leaks, or an accident at sea.

Land-based sources of oil pollution arise from poor environmental practices, for example at power plants, petrol stations, oil refineries, garages, etc. Oil is sometimes deliberately dumped in storm gullies, rivers, streams, etc. Such oil is ultimately washed to sea and causes beach pollution if it drifts back onshore. Occasionally accidents onshore may also result in oil reaching the shore and causing pollution on beaches.

Oil pollution on the beach frequently results in the formation of "tar balls" - blobs of tarry oil of varying sizes, which cling to the feet, and can cause damage to clothing, fishing nets and fouling of fishermen's boats.

Due to the dominant westerly currents, any serious ship accident north or east of Jamaica might result in a major pollution incident on north coast beaches. A National Oil and Hazardous Material Spill Contingency Plan has been developed to govern the manner of response to land and water body spills. The plan also involves a National Oil and Hazardous Material Spill Response team comprising a number of government agencies such as:

- The Office of Disaster Preparedness and Emergency Management, which has overall responsibility for the coordination of responses to spills.
- The Jamaica Defence Force Coast Guard, which is the designated body for the initiation of cleanup responses to marine oil spills.
- The Jamaica Fire Service, which has responsibility for the cleanup of land-based spills.
- The Natural Resources Conservation Authority, which is second in command to each of the clean-up implementing bodies, and provides support through the provision of environmental information related to the spill and through the provision of cleanup and disposal options suitable to the environmental conditions present at the spill site.

Steps should be taken nonetheless for better understanding of ocean currents around Jamaica so that in the event of any spill the likely movement of the spill may be predicted from oceanographic data.

b. Sewage Pollution

The disposal of domestic waste into coastal waters is a significant factor affecting the marine environment. A large number of coastal communities lack basic sewage treatment facilities and therefore discharge nutrient-rich sewage into the sea. Sewage effluent standards exist and will soon be promulgated into law.

The National Water Commission has the main responsibility for the collection, treatment and disposal of sewage, and the operation and maintenance of sewage treatment plants in Jamaica. Over the last three years, the NWC has established collection and treatment systems in three major resort areas and there is currently a proposal for an expanded municipal sewerage system for the Kingston Metropolitan Area. The difficulty, however, is that very few households and small commercial operations have connected to the new systems due to the high cost of connection. Older plants owned by the NWC have not been properly maintained,

but there is a proposal to rehabilitate all the sewage treatment plants and bring them into harmony with the design specification standards. Other agencies owning and operating sewage treatment plants have failed to maintain them over the years and have also contributed significantly to the pollution of the marine environment.

The high cost of installing treatment plants, and the difficulties of maintaining them in good operational condition, have led to many coastal properties relying on soak away pits for sewage disposal. The problem is further compounded in that most of these properties are situated on porous limestone bedrock, with the result that sewage disposal systems frequently leach nutrients and sometimes bacteria into the adjacent coastal water.

The NRCA and the local health departments have the responsibility to undertake regular monitoring of sewage treatment plants.

c. Industrial and Agricultural Pollution

Trade effluent standards for industrial waste have been drafted but are not yet in force.

There is need to treat industrial and agricultural effluents. The significant polluting industries are: sugar, bauxite/alumina, chemical, cement, distilling, oil refining, dry cleaning and food processing which produce in some cases highly toxic, non-biodegradable waste products that enter ground and surface waters or are directly discharged into the marine environment.

Soil lost from agricultural land-use and deforestation enters the marine environment as silt and, smothers corals and sea grasses. The potential for polluting the marine environment has been heightened by the use of agrochemicals. As traditional agriculture gives way to farming practices that utilize large amounts of artificial fertilizers and a wide variety of pesticides, the danger of contamination of surface water, as well as that of nearshore coastal water from runoff increases accordingly.

d. Noise Pollution

Noise pollution has become a problem on some beaches and to nearby residential communities and hotels.

The sources of noise pollution on beaches may include: stationary sound systems,

radios, motor boats and jet skis. At some public beaches concerts or parties are held on a commercial basis, usually causing excessive noise.

Noise pollution standards were drafted in 1998 and are yet to be adopted.

e. Solid Waste Disposal

Solid waste washed up or dumped on bathing beaches is a constant problem.

Solid waste is derived from many sources including illegal dumping from ships at sea; waste from urban and agricultural environments washed down in rivers or storm gullies and then carried by inshore currents towards the beaches; wind driven wastes; and negligence by users of the beach. There is no single cure for this problem but public education and strict enforcement of the Litter Act and the NRCA Act must be prominent in any remedial measure.

4.9 Squatting

The problem of squatting along the coast of Jamaica arises from an acute shortage of housing. There are some squatter communities that have existed for many years on public and private property. The most widely known of these communities have occurred on south coast beaches such as Hellshire, Old Harbour Bay, and Rocky Point.

Squatters create problems of pollution and at times restrict the general public's access to recreational space. They also despoil adjacent areas, particularly by creating problems associated with improper disposal of sewage and solid waste.

4.10 Beach Erosion

Beaches are dynamic systems and are subject to continuous change on spatial and temporal scales. Beach erosion is occurring in several parts of Jamaica, and both physical and economic damage can occur as was the case in Negril in December, 1998. However, there are no island wide quantitative estimates of the cost available.

Coastal erosion may be attributed to both natural and man-made causes:

- Natural causes include: storm waves, accelerated sea level rise, ocean currents, changes in river discharges and sediment input to the coast.

Not much can be done to offset natural causes of erosion. Of the beaches surveyed by the NRCD after Hurricane Gilbert, 57% were found to have been eroded, with damage to beaches most severe at the eastern end of the island. Over the last few years, the effects of El Nino and cold fronts have generated swell waves, which have caused erosion of north coast beaches.

- Human activities that contribute to coastal erosion are varied and in many cases more controllable. These include: extraction of sand from river channels/mouths, beaches and sand dunes; physical development causing erosion as a result of an alteration in either wave pattern or in the pattern of inshore currents; wave wash from passing powerboats, construction activities both at the shoreline itself, which remove natural defences (e.g. by removing mangroves) and by increasing sedimentation of protecting reefs; and poor engineering practices.

Illegal sand mining is a longstanding problem but continues due to the lack of enforcement and because offenders operate mainly at nights and are seldom caught quarrying. Apart from law enforcement, community support is also needed to curb the practice.

Many developers attempt to improve their property by making shoreline alterations. Frequently, because of a lack of knowledge of coastal engineering and coastal oceanography, these developments cause shoreline erosion and remedial measures have to be put in place by constructing groynes or other structures. This issue requires careful attention at the environmental impact assessment stage to ensure that coastal engineers and oceanographers are involved.

It also requires that steps be taken by Government to gather information about the coastal currents and other water movements around Jamaica that can then be used in the preparation of suitable impact assessments.

4.11 Wildlife Protection

Many of Jamaica's beaches and offshore cays are nesting sites for turtles, sea birds, shorebirds and other animals, some of which are endangered and protected. Although the decline of wildlife may be attributed to several causes, habitat destruction is the most important. This is due to factors such as the increasing human presence on the cays and beaches, sand mining, unregulated camping and recreational activities.

Litter on beaches can obstruct turtle hatchlings on their journey to the sea,

discarded glass and metal can injure turtles and other wildlife, and larger objects on the beach can prevent them from finding a nest site.

Coral reefs and sea grass beds are also important for protecting the beach and supplying sediments for the maintenance of the beach profile. Wetlands are among the most biologically productive ecosystems, and play a great part in stability of the coastline. Coastal wetlands that support mangrove growths are particularly important as nurseries for several marine organisms.

New interest in developing the south coast for tourism will mean that several beaches and coastal wetlands, which have been relatively safe havens for these animals in the past, will come under developmental pressure in the future.

4.12 Mangroves

Mangroves have many important ecological functions and commercial uses. Mangroves protect our shoreline from erosion by acting as buffers against wave action, and also act as sediment traps thereby protecting other important marine resources such as coral reefs and sea grass beds from being smothered by silt and other debris. Mangroves are also ecologically and commercially important wildlife habitats and nursery areas as they support a variety of birds, crustaceans, and fish. Mangroves are vitally important because they are integrally linked to the ecosystem processes supporting the health and functioning of coral reefs, seagrasses, and beaches. There is also a latent potential for the use of mangroves in conjunction with ecotourism, scientific research, and education.

Although mangroves are very important in the coastal environment, their existence is threatened by land reclamation, agriculture, fire, harvesting for timber and a variety of pollutants. Urgent action will be need to be taken to deal with the wanton destruction of this valuable resource.

4.13 Cays

There are several cays and islands around Jamaica and they can be grouped as inshore and offshore. These features are mainly of coralline formation, the large majority of which are off the south coast of Jamaica. Most of the cays are small, often less than 0.8 hectares in size.

The Commissioner of Lands has responsibility for administering the cays, however some small ones close to shore are privately owned e.g. Navy Island.

The cays provide habitat for numerous species of flora and fauna¹⁶ and are important for both fishing and recreational use. Most are accessible only by boat and lack suitable infrastructure for their development as recreational centres. Fishermen seasonally or permanently inhabit a few of these cays for example the Pedro and Morant cays. This has been the case for the past 30 to 40 years.

There is need for the activities on the cays to be regulated. The Morant and Pedro Cays Act of 1907 is presently not sufficient to control activities on the cays as it only provides for the licensing of fishermen and minimum control over the use of other marine resources.

4.14 Marine Protected Areas (MPA's)

A marine protected area is an area of coastal land or water that is specially designated for the protection and maintenance of its ecological systems, biodiversity and/or specific natural, cultural or aesthetic resources. It encompasses, protected seascapes, national nature reserves, natural landmarks, habitat/species management areas and managed resource protected areas and marine parks.

A total of five marine protected areas have already been established, with three of these being classified as marine parks while the other two include both land and marine areas. The motivation to protect specific marine areas is largely a consequence of human activities, and the need to maintain the health and vitality of our marine resource base, together with wide ranging issues of pollution, continued urbanization of coastal areas, habitat loss and alteration and over exploitation are key concerns.

The benefits of marine protected areas in Jamaica are many, and include:

- contributing to the function and integrity of ecosystems;
- providing recreation and tourism opportunities;
- providing opportunities for increasing knowledge and understanding of the marine environment;
- providing socio-economic benefits, assisting in the expansion and diversification of the economic base; and,

16 "Jamaica has regionally important colonies of nesting seabirds associated with the cays within its territorial waters such as the Morant and Pedro Cays" - BirdLife Jamaica press release July 15, 2000 on "Status and Conservation of West Indian Seabirds" published by the Society of Caribbean Ornithologists

- improving the health of our marine resources.

4.15 Mariculture

As traditional fisheries decline, there is likely to be an increasing demand for cultured marine products. In the Jamaican context the most likely target species are:

- "Irish moss" (a marine alga) grown on racks in shallow water
- Oysters grown on racks or ropes suspended from rafts in inshore lagoons or harbours
- Lobster grown by a ranching method in 'casitas' or shelters on the sea floor
- Penaeid shrimp grown in shallow ponds in coastal areas
- Finfish grown in cages suspended from rafts in inshore waters.

Improvements in mariculture technology may result in other species being targeted in the future. All these forms of culture have potential for income generation, but also for conflict for space and resources with traditional fishermen. This will be so especially if lobster culture in casitas is introduced.

Several issues arise including:

- The need to regulate the industry and to reduce or eliminate any sources of conflict
- The need to issue licences and collect fees for use of the sea floor
- The need to monitor the activity and ensure that environmental standards are maintained while ensuring successful income generation
- The need to allocate exclusive use to operators for portions of the sea floor.

The existing legislation does not adequately address mariculture issues such as the leasing of the sea floor and water column, protection from up current pollution, preventing coastal developers from modifying the surrounding environment, etc. In general, mariculture activities will not conflict with public beaches as the activities usually take place in a different part of the marine environment.

4.16 Fishing Beaches

Fishing beaches are relatively evenly distributed along the coast. The largest

beaches are Old Harbour Bay, Hunts Bay, Greenwich Town, Rocky Point, Alligator Pond, the Rae Town Fishing Complex, Whitehouse and Port Morant. All these beaches are situated on the south coast.

Ideally, facilities for a fully functional fishing beach should include gear sheds, individual lockers, toilets, water supply, a petrol pump, electricity, fish cleaning troughs, repair shop, cooperative store and offices, vendors' stalls, showers and garbage disposal facilities. The facilities at the majority of fishing beaches, however, are either in poor physical condition or inadequate for the fishermen.

i) Ownership status

At present, there is little documentation on the ownership, size and boundaries of most of the fishing beaches. As a result, conflicts have arisen between fishing groups and other beach users such as hoteliers and property developers.

The Fisheries Division has the main responsibility for regulating and managing fishing beaches. Few formal arrangements have been established for the delegation of management to fishing cooperatives or other established groups. The efforts of the co-operatives have been largely unsuccessful. A major reason for this is that the ownership status of the beaches has never been resolved.

ii) Unregulated development

The unregulated development of infrastructure on the beaches, often resulting in shanty villages with poor liquid and solid waste disposal practices, needs to be addressed. In at least one case, (the Causeway) there is need for the relocation of a fishing community to a more appropriate site.

PART D

5. THE BEACH POLICY

Objectives:

1. Provision of physical and equitable access to the foreshore and the sea on a managed basis to all persons.
2. Expansion of beach-related recreational opportunities for both residents and tourists
3. Institution of measures for pollution control and safety for the protection of users of the coastal resources.
4. Protection of the traditional rights of fishermen to access to the foreshore and the sea, and beaching rights on their return from sea.
5. Management of wildlife associated with beaches and the nearshore.
6. Management of coastal resources in the light of their vulnerability to the effects of climate change and natural disasters.

Objective 1

Provision of physical and equitable access to the foreshore and the sea on a managed basis to all persons.

The main strategy will be the development and proper maintenance and management of public bathing beaches of a high quality and accessways to the beaches are to be publicized and developed as appropriate.

The right of the public to walk along the foreshore and to bathe in the sea is to be created through amendment of the Beach Control Act. This right will be a qualified right as there will be obligations for both the public and licensees. The right of the public within a licensed area will be subject to the rules governing the area - such rules to be determined by the NRCA and the licensee (for example - the number of people using the area, garbage disposal, behaviour).

Members of the public using the foreshore and the floor of the sea in front of private property must have due regard to the rights of the property owner to

peacefully enjoy the use of their property.

Public Access to Bathing Beaches and the Foreshore

The problem of access has become more significant in recent years as a result of a lack of maintenance of existing public bathing beach facilities and changing shoreline development patterns. Many new shoreline developments do not provide for public access and in some instances block existing public accessways to the coast.

There are several ways of providing opportunities for public access including:

- Identifying, re-opening (where necessary) and preserving existing accessways.
- Requiring the provision of access to the beach at new coastal zone developments

- Government acquisition of land for accessways
- Negotiation of easements to provide access to the foreshore
- Designation of access points to the foreshore

The measures to be undertaken to address the issue of public access to beaches will include the following:

1. **Beach access inventory**: A detailed access inventory of the entire coastline will be undertaken. This inventory should identify and describe all known access points, and identify beach areas considered accessible and inaccessible, as well as adjoining properties, whether private or public, that separate beaches from public roads.
2. **Beach access plan**: A beach access plan will be developed based on the inventory. The plan will take into account:
 - The varied character of the coast from place to place (e.g., small pocket beaches and rocky headlands in some, and long, continuous beaches in others).
 - The preservation of existing coastal roads and beach parks.
 - The use of beaches and current and future access requirements

- The type of access and/or facility (including, where appropriate, parking facilities, pedestrian accessways, etc.).

The plan will establish priorities for action.

3. **Requiring new coastal projects to provide access:** The NRCA in collaboration with the Town Planning Department and the local planning authorities will use the development approval process to implement a policy of requiring public access at beachfront projects. To make this enforceable, regulations should be developed which require developers to provide accessways to beaches and specify the nature of that requirement in as much detail as possible.
4. **Acquisition of accessways by Government:** The recommendation of the beach access plan above may show that public acquisition of land (or rights-of-way) is required to provide access to some sections of the coast. The Government may also negotiate with property owners on the matter of providing easements to this effect.
5. **Protecting and clarifying existing accessways:** The Prescription Act and customary use may have created important access rights to the coast. The beach access inventory shall identify longstanding accessways that have been used in excess of twenty years and these should be protected. Beach access points will be designated under the relevant act.

Legislation

The Beach Control Act is to be amended to give the public the right of passage along the foreshore and to bathe in the sea, subject to the rights of licence holders and private property owners. In the case of licensed areas, the provisions of the Beach Control (Commercial Recreational Beaches) Regulations will apply. The existing regulations will also be amended to include soliciting, and harassment as offences. Licensees will also be able to develop their own rules with the approval of the Authority.

Planning regulations will be developed to ensure appropriate access points to the foreshore and the sea. Steps will be taken to ensure that public rights of way are reserved at all major bathing beaches at reasonable intervals.

The Beach Control Act will be amended to allow for declaration of all public bathing beaches.

Licences

The conditions under which beach licences are granted will address the matter of public use of the licensed area and prohibit the erection of structures across the foreshore. The NRCA needs to determine whether the conditions attached to licences are being complied with, through regular monitoring, as some licence holders have in the past ignored conditions by, for example, constructing fences that extend onto the foreshore, or otherwise discouraging public access to the foreshore.

All exclusive licences that are found to be still valid - except those in industrial areas - will be phased out within two years.

Beach pass system

Many hotels have a system of granting day passes for allowing persons who are not guests of the hotel to use and have access to many of the hotel facilities. A beach pass system, which allows public access to the beach at a reasonable fee for beach facilities, only will be encouraged. The NRCA will determine in agreement with each hotel the cost of the beach pass.

Coastal Development

No coastal properties, including cays, owned by the Government or its agencies shall be sold, leased and/or developed without prior consultation with the NRCA and review by the key planning and resource management agencies. All applications for leases or major developments should be accompanied by a management plan for review, approval, refusal or modification by NRCA/NEPA. Government divestment of beach properties shall be by leasehold only.

The diversion of coastal roads should be avoided, but where this has to be done, the original coastal road must be maintained as an alternative scenic route.

Coastal orders shall preserve 'windows' to the sea by establishing restrictions on walls and fences, i.e. fences no higher than 1.4 m (4'6") must be left to provide a view of the sea.

Old access roads and trails to public bathing beaches will be identified and those accessways which are blocked will be reopened in collaboration with the Parish Councils.

Objective 2

Expansion of beach-related recreational opportunities for both residents and tourists

Beach Development Programme

The Government will accelerate its programme to develop public bathing beaches. Opportunities for the leasing of recreational beaches will be provided for the private sector and community-based organizations.

Beach Acquisition

The NRCA in collaboration with the Parish Councils will continue to pursue the policy of reservation of beach properties in subdivisions, direct acquisition, or acceptance of donations of properties from private property owners. New acquisitions will be made where it is deemed necessary.

Government, through the NRCA will also selectively identify and acquire suitable properties for use as beaches and/or coastal parks whenever opportunities arise.

Management of Public Bathing Beaches

NRCA will retain overall responsibility for beach policy. Every effort will be made to involve local community-based organisations in the management and sustainable use of public bathing beach facilities. CBO's with activities focused on coastal resources and management will be supported and encouraged through the provision of financial and technical assistance where possible.

In addition the NRCA will take steps where appropriate to upgrade some public bathing beaches with a view to their ultimate lease to commercial interests on terms to be agreed and to develop or assist in the development of non-paying beaches.

Divestment of government beach property shall be by leasehold only. It is recommended that leases not exceed 21 years in the first instance and be subject to review every 5 years.

Fees for public bathing beaches will continue to be set with the agreement of the NRCA. All children under the age of 12 shall have free access to public bathing beaches. (It is advisable that an adult accompanies children).

Tourism Product Development Company (TPDCo) will develop certain Government-owned beaches on a commercial basis. Some of the licence fees collected from these beaches profit from the lease of these beaches will be used, in consultation with NRCA and the relevant Parish Council, to upgrade other public beaches. The Urban Development Corporation has development and management responsibilities for beaches that they own.

The NRCA and the Parish Councils will develop a programme for the development and rehabilitation of public beaches whether they are considered commercially viable or not. Rehabilitation will include the provision of basic facilities such as water and toilet facilities, garbage disposal facilities and lifeguard protection. Thereafter the public will be required to pay a reasonable fee towards defraying the operational expenses. Some beaches will be rehabilitated by the NRCA from the licence fees paid for hotel and commercial beaches.

Seaside parks

These parks will be strategically located to provide views of interesting features and access to the coast. There will be provision of sanitary facilities, car parking and refreshment facilities.

Objective 3

Institution of measures for pollution control and safety for the protection of users of the coastal resources.

Programmes for the improvement of coastal water quality, including the requirement to meet standards will be developed and legislation put in place for safety and pollution control measures.

Safety

The NRCA will publish once a year a list of all beaches, which have met the conditions of licences issued.

The Beach Control (Safety Measures) Regulations, 1957 that set out the responsibilities of licensees and lifeguards in relation to safety at public beaches, have been revised. The new provisions include more stringent requirements for the qualification of lifeguards and for the equipment to be provided by the licensee. Training standards for lifeguards are consistent with those established by the Royal Life Saving Society. The NRCA will continue to monitor beach activities

to ensure that these regulations are observed.

The Beach Control Act will be amended to give the NRCA the power to close beaches which are in breach of the Beach Control Act or any of its regulations.

Separate regulations for the operation of powerboats and other motorized craft in near shore or inland waters will be developed by the competent maritime authority in collaboration with the NRCA. These regulations will, in part be used to ensure that power boat operators, for example, do not endanger the lives of other users of the sea or affect other legitimate activities carried on within nearshore waters.

A list of dangerous areas in relation to bathing will be published by the NRCA on an annual basis. In addition warning signposts will be placed appropriately.

Coastal Water Quality

The regulatory and resource management agencies of central and local government will develop partnerships with stakeholders and civil society groups to improve monitoring and enforcement of water quality standards. Information and bulletins on the state of water quality will be issued regularly. Arrangements for public information bulletins and signals to indicate beaches whose water quality meet the recreational (bathing) standards.

The NRCA in partnership with stakeholders will encourage proper waste management practices within coastal communities.

The NRCA will develop and adopt water quality standards for bathing and will regularly review the national sewage and trade effluent standards in keeping with international standards.

In order that water quality at bathing beaches can be maintained at acceptable (Pan American Health Organisation/ Environmental Health Unit) standards, the sewage problem must be addressed and steps taken to develop community-based disposal systems (aeration ponds and polishing beds), ensuring that effluents are discharged at points determined to result in minimal or no effect on the coastal zone.

Pollution Control

The need exists to review and refine the present standards and guidelines for

activities on recreational beaches. The management of waste (solid and liquid) on all recreational beaches will be made a high priority activity by local government.

Licences will continue to be used to require that operators of beaches and other coastal developments are made responsible for ensuring that no solid waste is allowed to accumulate on the beach site and that it is disposed of in an appropriate manner.

Licences will also be used to require that licensees report to the NRCA, within a reasonable time, any incident of pollution, which may affect the beach or water quality at the site or may cause harm to the users.

The NRCA will continue to clean the beaches owned by the Authority and initiate coastal clean-up days and adopt-a-beach programmes.

The dumping of solid waste within the nearshore, on beaches, dunes, or in wetlands (including mangrove) is not permitted. Trash cans and regular collection of garbage should be provided at as many beaches as far as possible. Fishers association should be encouraged to place and maintain suitable litterbins on fishing beaches.

Jamaica has several obligations as far as pollution of marine waters is concerned, being a party to several international treaties on marine pollution.

Noise

Beach users shall not create noise at such a level that disturbs either those persons at the beach or the neighbouring properties. The playing of music at beaches should be done in such a way that the activity does not result in any breach of the NRCA/NEPA noise level standards. These standards have been developed and will be promulgated shortly.

- A police permit should be required for special functions (e.g. beach parties) which would allow the zone limit of 55 dB during the day and 45 dB at nights for residential areas to be exceeded by not more than 5 dB and for not more than two hours. This would have to be carefully monitored by the local police or environmental wardens.
- The Authority will suspend or revoke beach licences where there have been breaches of the Noise Abatement Act (1997) by licensees.

Squatting

The problem of squatting on beaches cannot be allowed to continue unabated. There is need to address the problem as a matter of urgency wherever it occurs. The relevant agencies should establish a detailed administrative procedure that permits quick action to terminate the capture of new lands.

Objective 4

Protection of the traditional rights of fishermen to access to the foreshore and the sea, and navigation and beaching rights on their return from sea.

New legislation will be enacted and there should be closer attention paid to the to the management of fishing beaches. The Fisheries Division of the Ministry of Agriculture will license all fishing beaches.

Management of Fishing Beaches

Fishermen will be encouraged to establish co-operatives and these co-operatives will be encouraged to assume management responsibilities for sections of the coast designated as fishing beaches.

The Fisheries Division in collaboration with other relevant agencies will determine the ownership, size and boundaries of all designated fishing beaches.

Minimum standards also have to be established for fishermen's beaches. With the necessary infrastructure in place at Government fishing beaches, it may become necessary to charge fishermen a user fee to maintain the facilities.

This fee would be payable to the management authority. The fee structures for use of the beach would be set in consultation with the relevant parties.

Squatting on fishing beaches should be stopped.

The Public Health Department, the NRCA and the Fisheries Division will continue to monitor fishing beaches and ensure that appropriate sanitary conditions are in place.

Preservation of the Rights of Fishermen

The rights of fishermen to beach their vessel on any beach during an emergency will be preserved. In addition, where fishermen have enjoyed rights to engage in fishing as a trade, and/or have used any part of the foreshore or the beach prior to June 1, 1956, this right will be preserved. Where fishermen have enjoyed the use of, or access to the beach and the foreshore for fishing as a trade or recreation without obstruction, or as stipulated under subsections 1 and 2 of section 14 of the Beach Control Act, such rights will be preserved.

Mariculture

The growth of the mariculture segment of fisheries has generated questions regarding the regulation of the use of the water column and seabed for commercial purposes. A draft mariculture policy has been prepared by the NRCA and the executing agency will be the Fisheries Division.

Areas will be delineated and licences will be issued for the types of activities that can be allowed within such areas by the relevant authorities. The extent of the "licensed area" will be carefully considered so as not to impede the activities of traditional fishermen.

Guidelines for the development and management of mariculture activity in Jamaica will be included in a management plan for the mariculture industry to be prepared by the Fisheries Division and the appropriate legislation will be enacted as well.

Objective 5

Management of coastal wildlife, mangroves, cays and marine areas

The main strategies will involve assessment and evaluation of coastal wild life resources, mangroves, cays and marine areas and preservation and protection of those resources through the development and implementation of management plans and policies and the enforcement of legislation.

Protection of Wildlife

A comprehensive survey of coastal wild life and their habitat (such as crocodiles, turtle nesting sites, coral reefs, etc.) will be undertaken, the results of which would make it possible to formulate policies - for example, designation of certain

areas where access by people will be restricted during specific times of the year.

Coastal vegetation provides important nesting habitats for turtles and other wildlife (for example, crocodiles, birds and manatees) and offers natural shielding for the beach from the artificial lighting of shoreline development. As far as is practical, the NRCA will require that the natural vegetation above the mean high water mark should be preserved as a buffer.

Sources of artificial light distract turtle hatchlings so that they turn away from the sea and crawl landward. Where nesting sites have been identified and development is proposed, the Authority will seek to ensure that appropriate lighting is used. It is essential that artificial light does not directly illuminate certain areas of the beach where nesting is occurring.

The Authority will ensure that laws relating to the protection of endangered species will be enforced and awareness programmes implemented for the general public and persons involved in the enforcement of these laws.

The use of beach seines destroys the marine habitat, catches large amounts of small fish indiscriminately and may result in many incidental turtle catches. The Authority in collaboration with the Fisheries Division will seek to ensure that seines of the appropriate sizes and types are used. Public education programmes on the proper use and disposal of fishing equipment will be conducted jointly with the Fisheries Division and will be done on a continuous basis. Community Based Organisations will be involved in the monitoring of activities on fishing beaches.

A Jamaica Coral Reef Action Plan and Coral Reef Policy has been prepared and is being implemented. A National Policy for the Conservation of Seagrasses has also been drafted and complements the goals and objectives of the coral reef policy.

Mangrove Protection

The modification of mangrove areas is regulated by the NRCA, with activities such as harvesting or reclamation of mangroves requiring a permit. The management of mangroves has also received some preliminary attention with the development of the "Mangrove and Coastal Wetlands Protection Draft Policy and Regulation (October 1997)" by the NRCA. Some important areas of mangrove have received protected status through the establishment of protected areas in Jamaica.

The draft wetland policy needs to be finalized and legislation put in place,

geared towards sustainable management of our mangrove and wetland resources. Surveillance and enforcement measures need to be made a priority so as to curb the exploitation of mangroves resulting from harvesting for timber and filling as part of development projects.

Cays

The expansion of human habitation to unoccupied cays is an ever-present threat. Activities on the cays need to be regulated: the removal of persons residing on the cays is a sensitive issue and therefore would require a cautious approach. The Authority in collaboration with the relevant agencies and entities will ensure that the cays are protected and managed for low impact uses. A carrying capacity survey will be done by NRCA in consultation with the other relevant agencies.

Studies shall be undertaken of the cays, including resource evaluation with a view to developing management plans/guidelines to regulate their use according to the following categories:

- Fishing-related activities
- Recreation/attraction involving non-permanent structures
- Conservation areas
- Scientific research

Marine Protected Areas

The Government of Jamaica (GOJ) in 1997 presented a policy framework for the National System of Protected Areas. This system was an expression of its commitment to protecting its environment and resources including marine areas that are of national and international importance.

The Government has so far declared five areas as MPA's, however only two of them have any management body in place, namely the Montego Bay Marine Park and Negril Marine Park. The other three have only been declared, but are under no management by any group. Declaring an area as a MPA is only the beginning, they need to be effectively managed to prevent, regulate and/or eliminate threats such as pollution, overfishing, introduction of exotic species and inappropriate coastal development.

The Government is conscious of the need to work in partnership with coastal communities, marine stakeholders and the public in the identification, establishment and management of MPA's. In the development of a MPA Strategy, it is intended to contribute to sustainability in our marine

environments, with emphasis on conserving ecosystem functions and processes and marine diversity. This will provide for a healthy and productive marine environment while embracing economic and recreational values and areas of rich cultural heritage.

Objective 6

Management of coastal resources in the light of their vulnerability to the effects of climate change and natural disasters.

Planning, zoning and development control within specified areas will be the main means of protecting coastal resources.

Management of the foreshore and beach

The foreshore and beach represent vital public resources, which serve multiple purposes, including fishing, recreation and wildlife habitat. The Beach Control Authority sought to ensure that these areas were managed in the public interest.

The foreshore in providing protection from natural disasters requires special consideration in the light of possible sea level rise associated with global warming.

The criteria for defining the beach depend on the configuration of the coast and on physical factors, which vary from place to place. Accordingly, it is proposed that a declaratory amendment be made to the Beach Control Act to define the beach as the zone of unconsolidated material (sand or gravel) that extends from the low water mark landward to the vegetation line, or to the crest of the primary dune, or to a line of debris deposited by wave action (usually the effective limit of storm waves), or a combination of such factors. It is further proposed that the declaratory amendment define a section between the foreshore and a distance of approximately 15m landward of the high water mark, which will be subject to regulatory control in order to provide for management of coastal zone resources.

The Beach Control Act will be amended to define 'beach' and an area 15m landward of high water mark that will be subject to regulatory control.

The following action is proposed to achieve management of the foreshore and beaches in the public interest:

- I. the development and implementation of management plans for all

foreshore space based on the above declaratory amendment.

2. an evaluation of the impact of sea level rise.

Coastal Erosion

Coastal vegetation stabilizes the beach and offers protection against erosion by wind, waves and surface runoff. As far as is practical, the NRCA will require that the natural vegetation above the mean high water mark and within the near shore should be preserved as a buffer.

There are several measures that can be taken in response to coastal erosion in Jamaica. These measures include:

- (1) controlling activities such as sand extraction, that can accelerate erosion;
- (2) protecting natural features, such as mangroves and reefs that can retard erosion;
- (3) constructing jetties, groynes, seawalls, and revetments;
- (4) nourishing beaches; and,
- (5) directing developments away from erosion hazard areas.

Although some of these measures are already established in Jamaica, more information is needed about the causes and seriousness of coastal erosion. As part of a Coastal Zone Management Programme an inventory of areas with severe erosion e.g. in Negril, needs to be conducted. Furthermore, a comprehensive study of the causes and damage caused by coastal erosion, and the costs and benefits of implementing mitigation and control measures needs to be done. Such a study should include investigation of the erosion consequences of sand extraction within river channels and at their mouths. It should also investigate beach nourishment opportunities (if any).

Measures will be taken to minimize human activities, which lead to the erosion of beaches e.g. sand mining, misplaced coastal structures and the destruction of coral reefs and seagrass ecosystems.

Adaptation to beach erosion is as important a policy response to the effects of climate change as are mitigative measures. The adaptation strategies of “protect, retreat and accommodate” are approaches to be adopted and implemented. While hard engineering will be encouraged, more emphasis will be placed on a precautionary or non-structural approach, which include: increasing building setbacks, land use regulations, and building codes.

6. ROLE OF COMMUNITY-BASED ORGANIZATIONS

Community-based organizations will have a crucial role to play in the implementation of this policy. Their input is vital in any consultation process in designing and implementing local beach management programmes. They can assist in the gathering of data and distribution of information and their involvement in monitoring could result in the reduction in the need for enforcement. Involving them in the management of beach resources will lead to greater community stewardship due to a sense of ownership.

Community-based organizations will be encouraged to take on operational functions, public education, monitoring and outreach activities.

7. IMPLEMENTATION AND REVIEW PROCESS

It is proposed that a beach management council reporting to the Authority be set up for a period of five years. The Council will be formed with the participation of the tourism sector, private landowners, fishermen and NGOs and communities involved in beach management to assist in the implementation of the policy.

The Government is committed to the position that the foreshore is a part of the heritage of the people of Jamaica and cannot be alienated.

It is recognised that the implementation of the new policy will require fundamental changes and additional demands on human and financial resources. Implementation of the new policy for beaches will have to be on a phased basis and the aim is to achieve this over a period of ten years.

In several areas, work has already been started to put the policy into effect. There is a programme for the development of public beaches, which has been prepared and is being implemented on a phased basis by the NRCA and other Government

agencies.

Discussions between the NRCA and the tourist industry will commence at an early date.

Local Government authorities will be requested to participate in the management of beaches and seek to obtain assistance from the private sector and NGOs in their parish to this end. Discussion between the NRCA and Parish Councils will take place at an early date.

At all levels of beach operation there will be financial implications particularly at beaches owned and/or operated by parish councils. Government through the NRCA will set up procedures through which funds generated by leasing beaches for commercial operation can be used to assist in the development and management of parish beaches.

All lifeguards will need to be trained to meet new beach safety standards.

The NRCA will apply sanctions where regulations are being breached. Existing legislation will be reviewed and new legislation introduced to ensure that the NRCA has the authority and the capacity to monitor and enforce regulations pertaining to beach and coastal zone conditions and access.

A priority for the Authority will be to identify access roads, which have become overgrown and seek to have them reopened.

Education and awareness about public access will be promoted.

The NRCA will monitor the implementation of this policy and will issue progress reports on implementation and evaluation from time to time.

GLOSSARY

Beach: the zone of unconsolidated material (sand or gravel), whether natural or manmade or that extends from the low water mark landward to the vegetation line inland, or to the crest of the primary dune, or to a line of debris deposited by wave action (usually the effective limit of storm waves) or a combination of such factors.

Cay: a small, low insular bank sand or coral, etc as one of the islets off the coast of Jamaica.

Carrying Capacity: the level of use that can be sustained by a natural resource without endangering the quality of that resource.

Coast: the general region of indefinite width that extend from the sea inland to the first major change in terrain features.

Coastal Zone: that area which extends from the edge of the coastal shelf to the 40-meter contour line inland. It consists of both marine and terrestrial environments, which exert an influence on each other.

Commercial Recreational Beach: a beach licensed to operate on a commercial basis whether for payment of an entrance fee and/or for use of the facilities.

Common Law: law derived from custom and judicial precedent rather than statutes.

Coral Reef: a community of corals that form a bank or ridge.

Exclusive Licence: a licence which gives the property owner the sole right to use an area to the exclusion of others.

Mangrove: a tropical tree with interlacing prop roots, confined to low-lying brackish areas.

Mariculture: the cultivation of plant and animal species in an underwater environment.

Policy: a course or principle of action adopted or proposed that sets forth general management procedures and guidelines.

Prescriptive Right: the right given for the continued use or possession of a property by virtue of uninterrupted use of the same for an extended period of time (usually 20 years or more by law).

Public (beach) access: the ability or opportunity to reach, pass through, or utilize the beaches (of Jamaica).

Public Bathing Beach: a beach that is used by the general public for which there is either free entrance or on the payment of a fee.

Spikes: the situation in which the level of a contaminant present in the water is abnormally high.

Tar Balls: tiny balls consisting of weathered oil with dust or dirt condensed therein.

Traditional rights: those rights of use of the shoreline that are part of the traditional-historic life of Jamaicans, for example fishing rights.

Water Column: the water body between the surface and the seafloor.

Wildlife: a general term for animal or plants found in their natural state.

REFERENCES

Beach Control Act (1956)

Draft White Paper "Towards Sustainable Coastal Development in South Africa", March, 1999.

Facing Management Challenges on the Barbados Coastline: the Problem of Coastline Access

Natural Resources Conservation Authority and the Ministry of Environment and Housing: Green Paper No. 2/97 Towards a Beach Policy for Jamaica 1997

Natural Resources Conservation Authority (NRCA) 1998. Public Beach Rehabilitation Programme, Draft Document.

Office of Coastal Zone Management, National Oceanic and Atmospheric Administration, U.S. Dept. of Commerce: Puerto Rico Coastal Management Programme and Draft Environmental Impact Statement.

Office of Coastal Zone Management, National Oceanic Atmospheric Administration: The Virgin Islands Coastal Management Programme and Draft Environmental Impact Statement.

Report on the Results of the Impact Study of the Beach Policy (unpublished) 1999.

Summary of Issues raised in Comments on Green Paper No. 2/97 (unpublished) 1998.

APPENDIX I

CONDITIONS OF A BEACH LICENCE

1. Any member of the Natural Resources Conservation Authority or any officer of the said Authority authorized in writing by the Authority in that behalf may during the continuance of this Licence make such periodical inspections of and investigations concerning the area in respect of which this Licence as may be necessary for the purpose of ascertaining whether the terms and conditions of this Licence are being observed or not.
2. This Licensee may be renewed annually by forwarding the appropriate fee to the offices of the Natural Resources Conservation Authority.
3. The fees set out in the Third Schedule hereto shall not be altered without the previous written consent of the Natural Resources Conservation Authority.
4. The premises hereby licensed shall remain open to the public daily during the term of this Licence.
5. The Licensee or its agent shall give the public adequate notice and shall previously obtain the consent of the Natural Resources Conservation Authority if for any reason wishes to close the beach to the public temporarily.
6. The Licensee or its agents shall keep the area prescribed in this Licence and structures thereon in a clean and sanitary condition.
7. The Licensee or its agents shall not remove or permit the removal of sand from the area prescribed in this Licence except by permission of the Natural Resources Conservation Authority previously obtained in writing.
8. The Licensee or its agents shall not permit the discharge of waste or sullage water or effluent waste into the sea unless the same is first treated in a manner satisfactory to the Natural Resources Conservation Authority and to the Medical Officer of Health.
9. The Licensee or its agents shall provide proper facilities for changing and adequate sanitary conveniences.
10. The Licensee or its agents shall provide the following safety facilities; a minimum of four lifeguards, certified by the Natural Resources Conservation Authority, at least three on duty at all time, a first aid kit, a surf board for assisting with rescue, a first aid station, three life rings, four whistles for use by the lifeguards and three lifeguard stands.

11. The Licensee or its agents shall provide such basic first aid equipment as may be directed or approved by the Authority.
12. The licensee or its agents shall not deny any person admission to or eject any person from the area prescribed in this Licence provided such person is properly attired and behaves in an orderly manner and is not a nuisance to other patrons.
13. The Licensee or its agents shall take every precaution to ensure that no water skiing, trawling or towing by boat or spear-fishing takes place within the area for which this Licence is granted and shall mark the seawards limits of the said area by buoys.
14. The Licence or its agent shall erect signs at vantage points warning non-swimmers not to proceed beyond a depth of the demarcated area.
15. The Licence or its agents shall ensure that all safety measures and procedures are enforced during the swimming hours.
16. The Licensee or its agents shall issue tickets bearing the name of the beach, Number, price of admission and the date of issue to patrons.
17. The Natural Resources Conservation Authority may in its sole discretion revoke or suspend this Licence for breach of any of the above conditions.
18. The Natural Resources Conservation Authority reserves the right to alter, amend or introduce new conditions during the periods of this Licence.
19. The Licence shall exhibit at a vantage point a copy of the Beach Control (Hotel, Commercial and Public Recreational Beaches Regulations, 1978).
20. The Licensee shall observe and comply with the Beach Control Authority (Safety Measures) Regulations, 1956 and the Beach Control (Hotel Commercial and Public Recreational Beaches), Regulations, 1978.
21. This Licence is granted subject to any existing legal rights of third parties.
22. No sign or notice may be erected or placed upon or in the area covered by this Licence unless the Natural Resources Conservation Authority thereof has previously approved the size, wording and location in writing.
23. No sign or notice may be erected or placed upon or in the area covered by this Licence unless the size, wording and location thereof have previously been

approved in writing by the Natural Resources Conservation Authority.

APPENDIX 2

SEA LEVEL RISE AND COASTAL EROSION

Extract from "Evaluation of Coastal Hazards" April, 2000 - A Collaborative Project of the H. John Heinz III Center for Science, Economics and the Environment

Observed rates of sea level rise

Global mean surface temperature has increased by between about 0.3 and 0.6 °C since the late 19th century. Over the past 100 years, global sea level has risen between 10-25 cm (about 6 inches), primarily in response to thermal expansion of the oceans and melting of mountain glaciers. The mean trend for global sea level rise was about 1.9 mm/year. Regional sea level changes differ from the global mean value for many reasons, such as tectonic uplift or subsidence of the land surface.

Projected rates of sea level rise

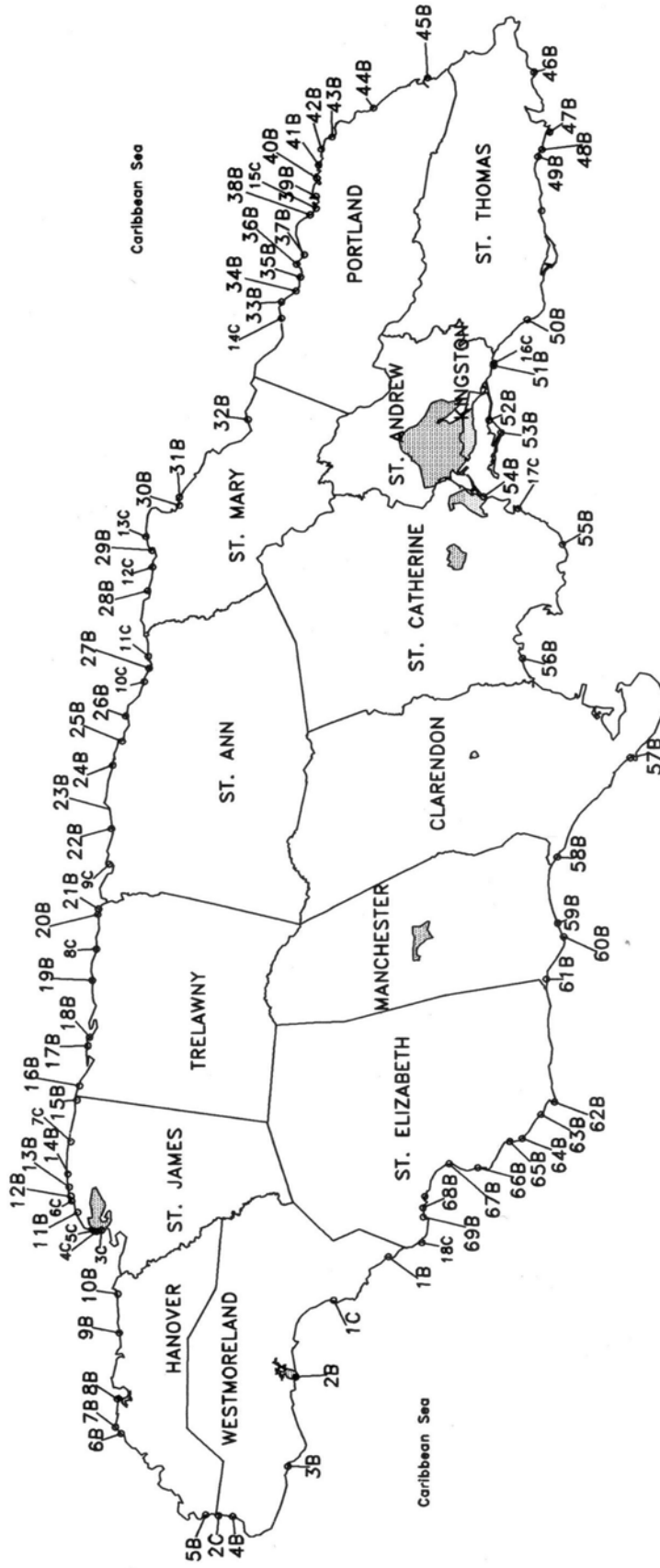
Average sea level is projected to rise somewhat more rapidly because of thermal expansion of the oceans and melting of glaciers and ice-sheets induced by greenhouse gases. According to the Intergovernmental Panel on Climate Change (IPCC) "business as usual" scenario, sea level is projected to rise by 20 cm by the year 2050, within a range of uncertainty of 7-39 cm (Houghton et al., 1996). The IPCC "business as usual" projection for global mean sea level rise for the next 50 years is roughly 10 cm higher than might be expected from the trends of the last 100 years. Most of the projected rise in sea level is because of thermal expansion, followed by increased melting of glaciers and ice caps.

Implications for erosion hazard areas

Sandy beaches retreat landward in response to sea level rise. On the Atlantic Coast, long-term shoreline retreat has averaged about 150 times that of sea level rise (Leatherman et al., 1999). Thus, a sustained rise of an additional 10 cm in sea level could result in 15 meters (about 50 feet) of beach erosion. Absent protective measures (e.g., shoreline armoring or beach nourishment), an accelerated rate of sea level rise would result in increased rates of inland shoreline retreat.

However, the forecasted rates of sea level rise are based on highly uncertain assumptions regarding rates of thermal expansion of the oceans, melting or accumulation of ice cover, and surface water and ground water storage. Tide gauge records show no statistically significant evidence suggesting global warming has accelerated sea level rise over the past 100 years (Douglas, 1992; Houghton et al., 1996). Short-term variations in sea level that endure for a decade or more can distort evidence of sea level rise acceleration.

MAP 1 PUBLIC BATHING BEACHES IN JAMAICA



PUBLIC BATHING BEACHES

WESTMORELAND

- 1BWhitehouse
- 1C Bluefields Beach Park
- 2B Fort
- 3B Little Bay
- 4B Negril
- 2C Long Bay Beach Park

HANOVER

- 5B Bloody Bay
- 6B Lances Bay
- 7B Bull's Bay
- 8B Watson Taylor Park
- 9B Tryall
- 10B Orchard

ST. JAMES

- 3C Walter Fletcher
- 4C Doctor's Cave
- 5C Cornwall
- 11B..... Sunset
- 6C Tropical
- 12B Ironshore
- 13B Mahoe Bay
- 14B Coral Gardens
- 7C Rose Hall Beach Club
- 15B Greenwood

TRELAWNY

- 16B Flamingo
- 17B Half Moon Bay
- 18B Victoria Park
- 19B Burwood
- 8C..... .. Silver Sands
- 20B Braco
- 21B Rio Bueno

ST. ANN

- 9C.....Puerto Seco
- 22B..... Cardiff Hall
- 23B.....Salem
- 24B.....Llandoverly
- 25B.....Priory
- 26BRoxborough
- 10 C..... Dunn's River
- 27B..... Sailors Hole
- 11C..... Turtle Beach

ST. MARY

- 28B.....Rio Bueno
- 29B.....Murdock
- 12C.....James Bond
- 30B.....Pagee
- 31B.....Frontier
- 13C.....Sonrise
- 32B.....Annotto Bay

PORTLAND

- 14C.....Orange Bay
- 33B.....Rodney Hall
- 34B.....Hope Bay
- 35B.....Hermitage
- 36B.....Wydah
- 37B.....St. Margaret's Bay
- 38B.....Bryan's Bay
- 15C.....Navy Island
- 39B.....Folly
- 40B.....Drapers
- 41B.....Blue Hole
- 42B.....Winifred's Rest
- 43B.....Boston
- 44B.....Long Bay
- 45B.....Innis Bay

ST. THOMAS

46B Rocky Point
47B.....Prospect
48B.....Retreat
49B.....Lyssons
50B.....Mezgars Run

ST. ANDREW

51B....Copacabana
16C.....Brookes Pen

KINGSTON

52B.....Gunboat
53B.....Buccaneer

ST. CATHERINE

54B.....Port Henderson
17C.....Fort Clarence
55B..... Hellshire Bay
56B.....Marine Terminal

CLARENDON

57B..... Jackson Bay
58B..... Farquhars

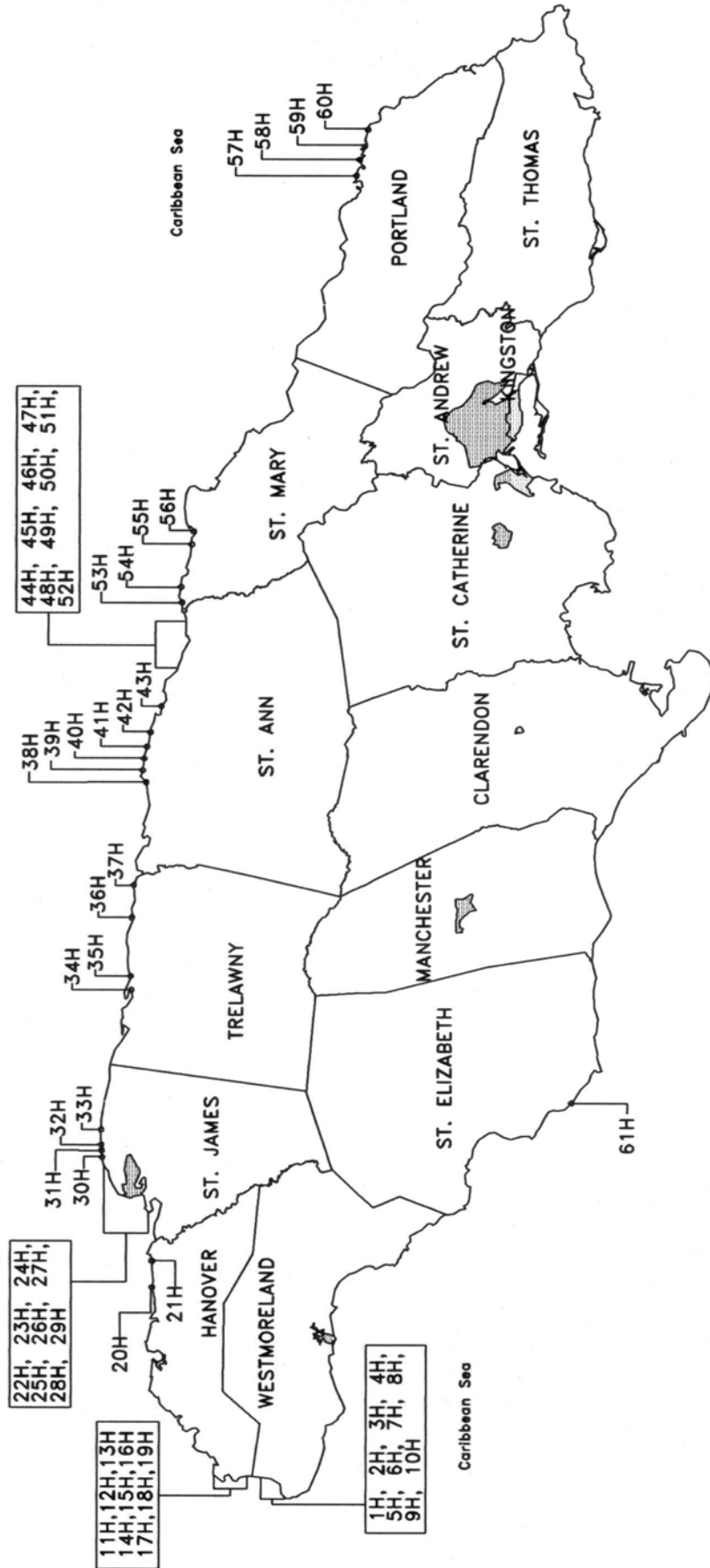
MANCHESTER

59B..... Guts River
60B..... Hudson Bay
61B..... Alligator Pond

ST. ELIZABETH

62B..... Great Bay
63B..... Calabash Bay
64B..... Billy's Bay
65B..... Fort Charles
66B..... Parottee
67B..... Fullerswood
68B..... Crane
69B..... Galleon
18C..... Font Hill

MAP 2 HOTEL BATHING BEACHES IN JAMAICA



HOTEL BATHING BEACHES

WESTMORELAND

1H.....Paradise View
2H.....Negril Beach
3H.....T-Water Beach
4H.....Sandi San
5H.....Negril Inn
6H.....Rondel Village
7H.....Charela Inn
8H.....Foote Prints on the Sand
9H.....Coral Seas
10H.....Beaches

HANOVER

11H.....Mahogany Inn

12H.....Point Village Resort
13H.....Swept Away
14H.....Breezes Negril
15H.....Poinciana Beach
16H.....Sandals Negril
17H.....Hedonism 111
18H.....Grand Lido
19H.....Couples Negril
20H.....Round Hill
21H.....Tryall Beach Resort

ST. JAMES

22H.....Reading Reef Club
23H.....Seawind Beach Resort
24H.....Casa Blanca
25H.....Jack Tar Village
26H.....Sandals Montego Bay
27H.....Sandals Royal Caribbean
28H.....Holiday Sunspree Resort
29H.....Coyaba Beach
30H.....Half Moon Beach Club
31H.....Ritz Carlton
32H.....Wyndham Rosehall
33H.....Sea Castle

TRELAWNY

34H.....FDR Cabins
35H.....Trelawny Beach
36H.....Sliver Sands
37H.....Braco Village

ST ANN

38H.....Club Ambiance
39H.....Eaton Hall Beach
40H.....Franklyn D. Resort
41H.....Breezes Runaway Bay
42H.....Club Caribbean
43H.....Headonism 111
44H.....Jamel Jamaica
45H.....Sandals Dunns River
46H.....Jamaica Grande
47H.....Hibiscus Lodge
48H.....Sandals Ocho Rios
49H.....Plantation Inn
50H.....Ciboney Ocho Rios
51H.....Jamaica Inn
52H.....Shaw Park Beach

ST. MARY

53H.....San Souci Lido
54H.....Couples
55H.....Boscobel Beach
56H.....Golden Seas

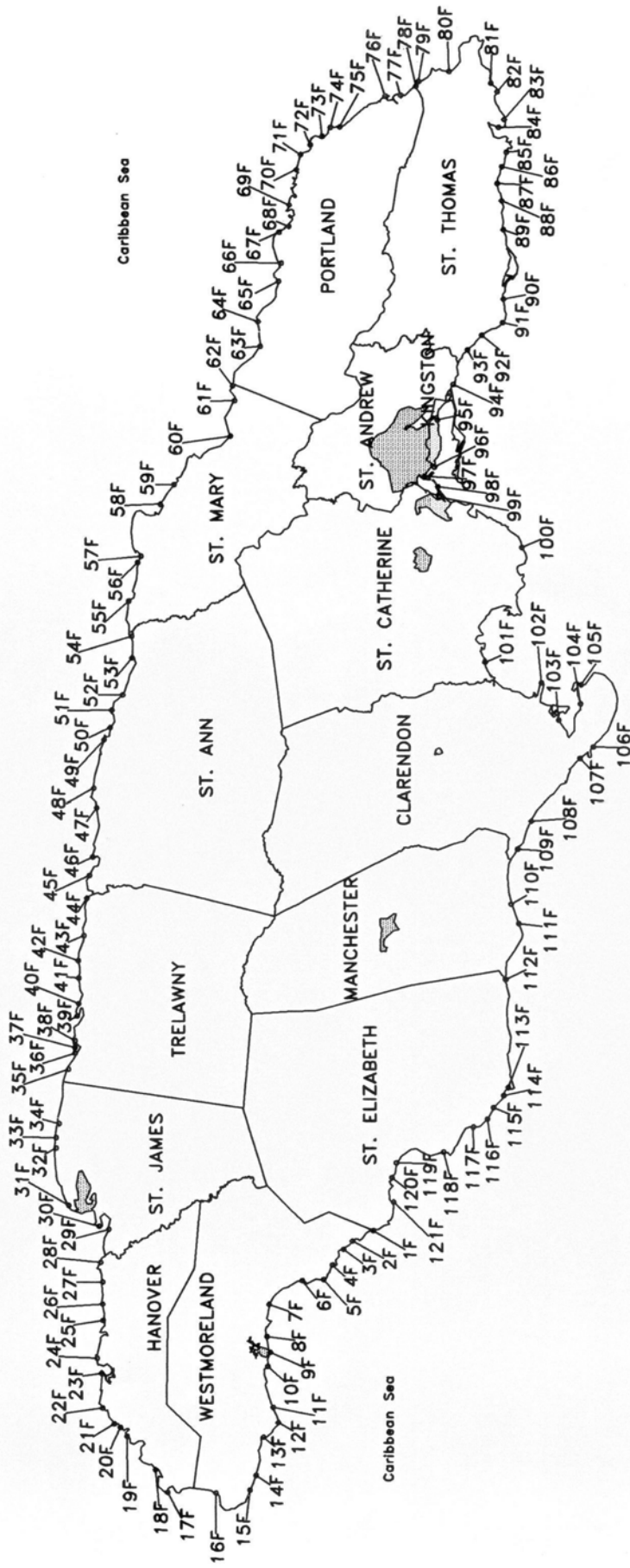
PORTLAND

57H.....Trident
58H.....Dragon Bay Villas
59H.....Frenchman's Cove
60H.....San San Villas

ST. ELIZABETH

61H.....Treasure Beach

MAP 3 FISHING BEACHES IN JAMAICA



FISHING BEACHES

WESTMORELAND

1F.....Scotts Cove
2F.....Whitehouse
3F.....Brighton
4F.....Auchindown
5F.....Mount Edgecombe
6F.....Belmont
7F.....Cove
8F.....St. Ann
9F.....Smithfield
10F.....St. Mary
11F.....Hope Wharf
12F.....Salmon Point
13F.....Little Bay
14F.....Orange Hill
15F.....Ironshore
16F.....Negril

HANOVER

17F.....Bloody Bay
18F.....Orange Bay
19F.....Green Island
20F.....Cousins Cove
21F.....Lances Bay
22F.....Orange Cove
23F.....Lucea Harbour
24F.....Paradise Cove
25F.....Sandy Bay
26F.....Hopewell
27F.....Orchard

ST. JAMES

28F.....Great River
29F.....Spring Garden
30F.....Railway Beach
31F.....Whitehouse
32F.....Rosehall
33F.....Success Farm
34F.....Grange Pen

TRELAWNY

35F.....Salt Marsh
36F.....Gentles
37F.....Seaboard Street
38F.....Charlotte Street (Victoria Park)
39F.....Rock
40F.....Coopers (Good Hope)
41F.....Stewart Castle
42F.....Silver Sands
43F.....Braco
44F.....Rio Bueno

ST. ANN

45F.....Old Folly (Alloah)
46F.....Discover Bay
47F.....Swallow Hole
48F.....Salem
49F.....Priory
50F.....Roxoborough
51F.....St. Ann's Bay (Brown;s Wharf)
52F.....Mammee Bay
53F.....Sailor's Hole

ST. MARY

54F.....White River
55F.....Rio Nuevo
56F.....Carlton
57F.....Oracabessa
58F.....Pagee
59F.....Robin's Bay (Marleys)
60F.....Annotto Bay
61F.....Stewart Town
62F.....Dover

PORTLAND

63F.....Buff Bay
64F.....Orange Bay
65F.....Hope Bay

66F.....St. Margaret's Bay
67F.....Bryan's Bay
68F.....Norwich
69F.....Port Antonio (East Harbour)
70F.....Drapers
71F.....Fairy Hill
72F.....Blue Hole
73F.....Priestman's River
74F.....Boston
75F.....Long Bay (Fair Prospect)
76F.....Sirocco Bay
77F.....Manchioneal
78F.....Innis Bay
79F.....Hector's Bay

ST. THOMAS

80F.....Holland Bay
81F.....Dalvey
82F.....Rocky Point
83F.....Pera
84F.....Port Morant
85F.....Prospect
86F.....Lyssons
87F.....Morant Bay
88F.....Duhaney Pen
89F.....White Horses
90F.....Yallahs
91F.....Grant's Pen
92F.....Cow Bay
93F.....Nine Miles

ST. ANDREW

94F.....Seven Miles
95F.....Rae Town
96F.....Greenwich Town
97F.....Hunt's Bay
98F.....Port Royal

ST. CATHERINE

99F.....Port Henderson
100F.....Hellshire
101F.....Old Harbour Bay

CLARENDON

102F.....Welcome
103F.....Mitchell Town
104F.....Barmouth
105F.....Barneswell
106F.....Jackson Bay
107F.....Rocky Point
108F.....Beauchamp
109F.....Farquhars

MANCHESTER

110F.....Guts River
111F.....Hudson
112F.....Alligator Pond

ST. ELIZABETH

113F.....Great Bay
114F.....Calabash Bay
115F.....Frenchman's Bay
116F.....Billy's Bay
117F.....Fort Charles
118F.....Parottee
119F.....Galleon
120F.....Black River (Heavy Sands)
121F.....Hodges