

Palisadoes - Port Royal

Protecting Our Natural
And
Cultural Heritage

A Community Discussion Booklet

April 1997



NATURAL RESOURCES CONSERVATION AUTHORITY

A

Prepared by The Natural Resources Conservation Authority

The NRCA would like to thank the citizens of Port Royal and the following organizations which have supported this initiative by sharing their needs, helping to identify issues and possible improvement projects, and making a commitment to the conservation of the Palisades and Port Royal

Airports Authority of Jamaica
Centre for Marine Science, UWI
Community Environmental Resource Centre
Commissioner of Lands
Fisheries Division
Institute of Jamaica
Jamaica Gypsum
Jamaica Environment Trust
Jamaica National Heritage Trust
Jamaica Maritime Institute
JAMPRO
JDF Coast Guard
Kingston & St Andrew Council
Lime Cay Catering
Ministry of Environment and Housing
Ministry of Local Government and Works
Ministry of Public Utilities and Transport
Ministry of Tourism
Morgan's Harbour Hotel

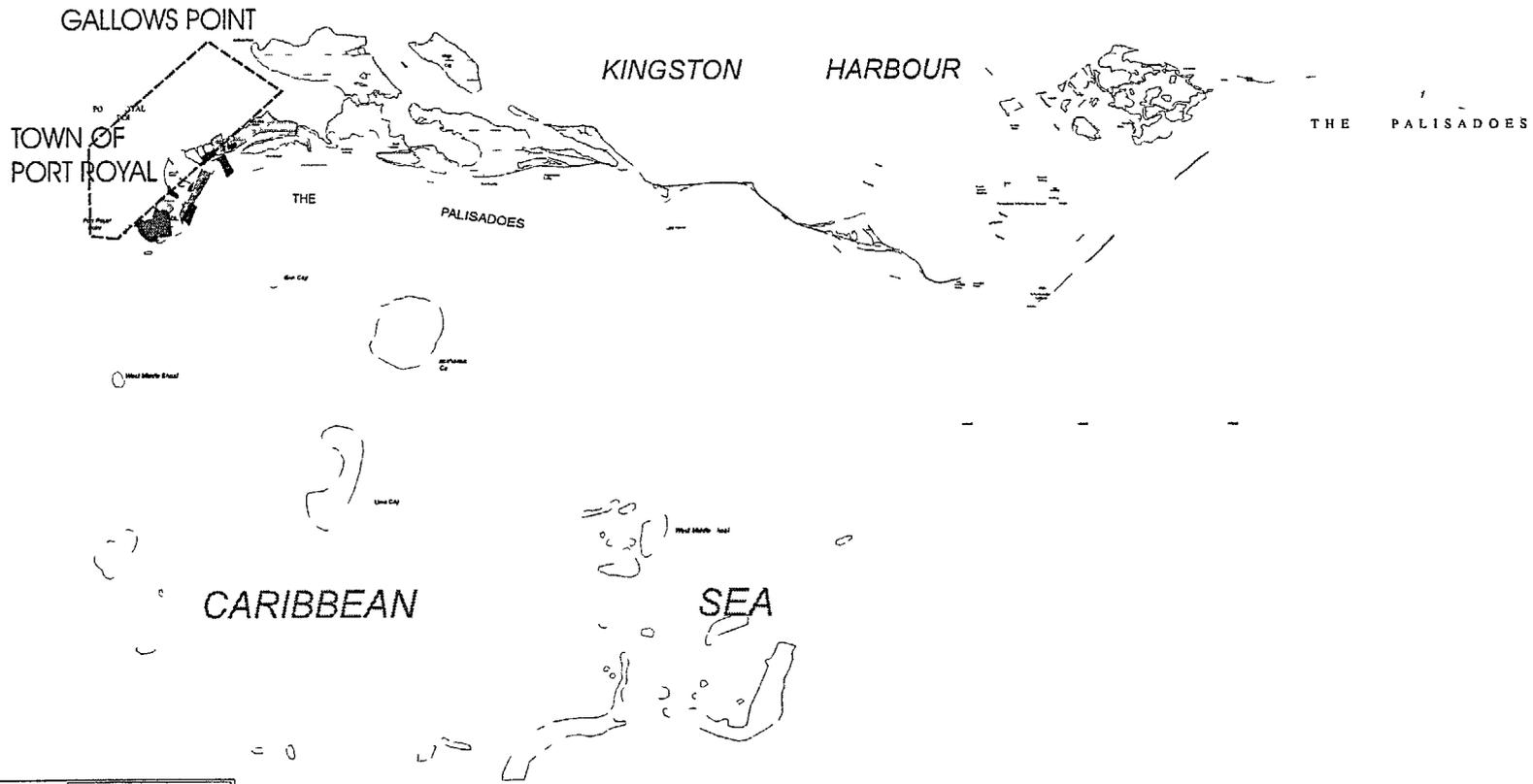
National Water Commission
National Environmental Societies Trust
Office of Disaster Preparedness &
Emergency Management
Planning Institute of Jamaica
Port Royal Brotherhood
Port Royal Citizens' Association
Port Royal Environment
Management Trust
Port Royal Fisherman's Cooperative
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Tourist Product Development Company
Town Planning Department
University of the West Indies
Urban Development Corporation

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Palisadoes - Port Royal Area



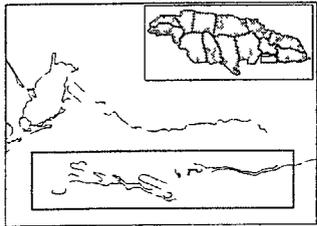
KEY

-  Open Space
-  Educational
-  Recreational
-  Commercial
-  Housing
-  Government Institution
-  Religious
-  Mangrove
-  Beach Control Act Protected Area(1967)
-  Main Road
-  Other Road
-  Parish Boundary
-  River
-  Lagoon
-  Building

SCALE



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The Purpose of This Booklet

The Natural Resources Conservation Authority has launched an effort to establish a Palisadoes-Port Royal Protected Area and to help the citizens of Port Royal and individuals, businesses and government agencies with an interest in the Palisadoes (stakeholders) establish their role in supporting the declaration and effective management of a protected area

This booklet was developed through meetings with the area's stakeholders, who shared their plans and concerns for the local environment. Some 45 stakeholder interviews and numerous informal meetings with members of the Port Royal community have taken place since November 1996, guided by an introductory pamphlet "Protecting Our Natural and Cultural Heritage"

This booklet aims to guide discussion and assist decision-making during community meetings. Decisions will be made concerning

- What type or types of protected area(s) is appropriate for the area?
- What are the ideal boundaries of the protected area?
- What are or will be the roles and responsibilities of each stakeholder organisation in the area's management?

- What will be done to address the most immediate threats to the area's environmental health?

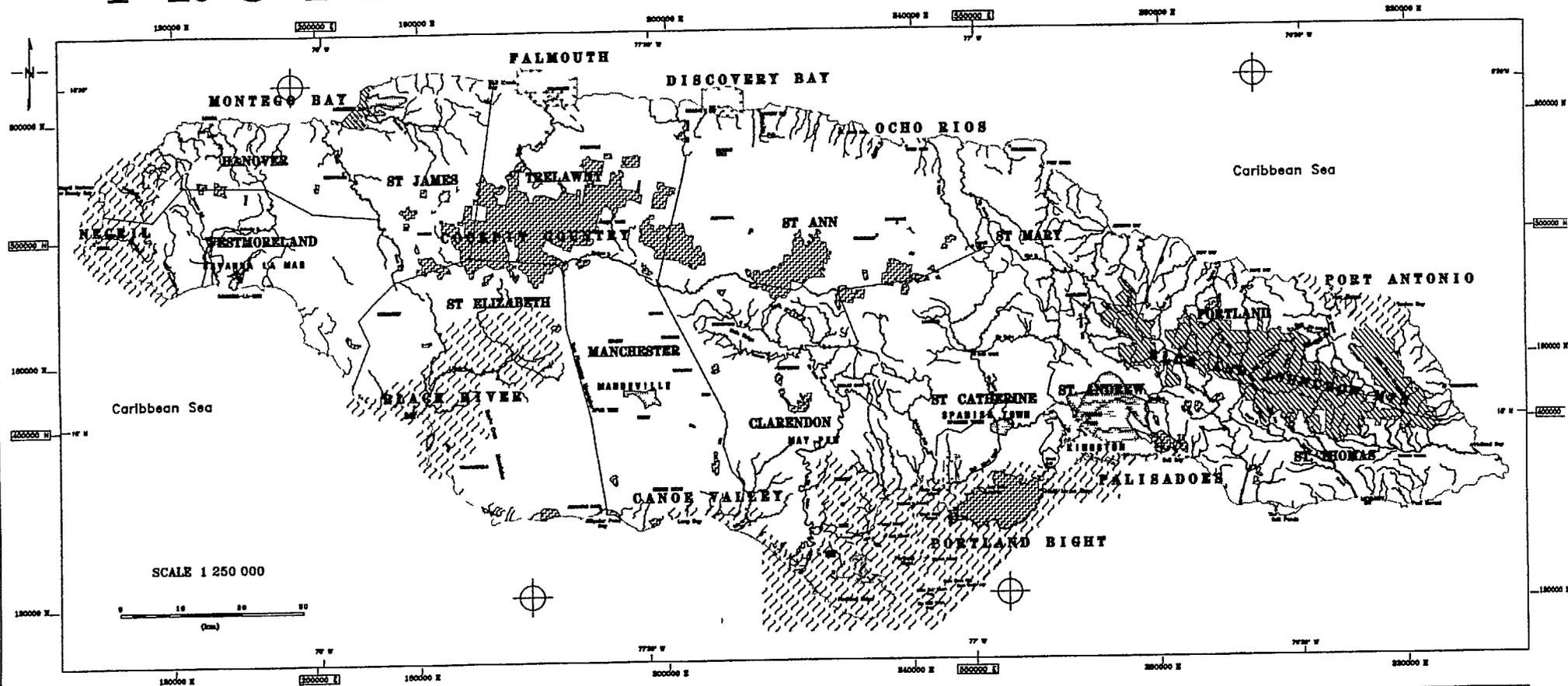
Stakeholders will be encouraged to exchange information and ideas on all these topics and to participate in developing

- 1 A shared vision of what the Palisadoes-Port Royal Area should look like and how it should be managed,
- 2 A plan of action that addresses the problems that face the area, and
- 3 Formal agreements among stakeholders, particularly those with a pivotal role in maintaining environmental quality, to ensure that the action plan is implemented

This booklet was developed based on input from Palisadoes - Port Royal stakeholders, who have provided invaluable help in identifying critical issues and sharing their ideas and plans with the NRCA

This booklet provides space for you to record additional information or correct what is presented. Please record your views. They will provide vital input to the development of a policy framework for the management of a Palisadoes-Port Royal Protected Area

PROTECTED AREAS SYSTEM



National Parks

These are lands and/or sea managed mainly for the conservation of the ecological integrity of ecosystems. They are also managed for scientific research, education and recreation.

Protected areas

An area of land and/or sea dedicated to the protection and maintenance of natural and cultural values and managed through legal or other effective means. These areas do not necessarily exclude industrial or any other type of economic activity.

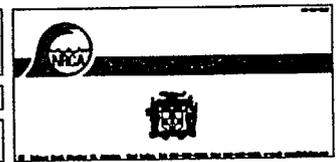
National Parks 
 Forest Reserves 
 Proposed Protected Area 
 Proposed Protected Area Wetlands 

Roads 
 Parish Boundaries 
 Water Courses 
 Major Town or City 
 Town 

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1. INTRODUCTION

The Palisadoes tombolo is of critical importance to Jamaica

- It functions as a major gateway to the Island
- It provides protection for Kingston Harbour
- Its mangrove forests, cays and beaches have recreational, educational and economic significance for Jamaicans and visitors
- Its historic/archaeological sites are among the most important in the Caribbean

The Government, recognising that the Palisadoes - Port Royal area faces serious threats to the integrity of its natural, social, and cultural resources, has assigned a high priority to declaring it a national protected area

- Pollution, both sewage and solid waste, fouls Kingston Harbour and washes up on the Palisadoes' shores
- Gunboat and Buccaneer Beaches, once popular recreation areas, are run down and underused
- The mangroves and dune vegetation, which protect the delicate tombolo from erosion and in turn protect Kingston Harbour, are affected by pollution and are cut, bulldozed, or trampled to serve human needs
- The road to Port Royal is marred by garbage and construction waste
- The cays and reefs, popular weekend destinations, are being degraded by

overcrowding, littering, spear fishing, coral collecting and improper boat mooring

- Port Royal's world-renowned cultural heritage resources are suffering the consequences of years of neglect

To support establishment of the protected area, the NRCA is facilitating a community participation process which promotes stakeholder involvement in planning and decision-making. Through recent stakeholder interviews and upcoming community meetings, the NRCA aims to help interested groups and individuals shape the future of this unique area

Do you agree that the Palisadoes - Port Royal area should be declared a protected area? Why or why not?

This booklet is meant to help stakeholders and the NRCA work together toward the declaration and management of a Palisadoes - Port Royal protected area. Please take it home with you, read it, and use the space provided to write down your ideas and comments. Your input during community meetings will help to shape the future of this area.

2 PROTECTED AREAS: WHAT THEY ARE AND WHY THEY ARE ESTABLISHED

Protected areas belong to all Jamaicans. Their purpose is to conserve precious resources for sustainable use and enjoyment by present and future generations.

A **protected area** is an area of land or water that is managed for the protection and maintenance of its ecological systems, biodiversity, and/or specific natural, cultural or aesthetic resources. Establishing a protected area does not necessarily restrict all use of natural resources within its boundaries, on the contrary, it is a mechanism for ensuring that those resources can continue to be used for the benefit of residents and non-residents on a sustainable basis.

Legislative Framework The Natural Resources Conservation Authority Act of 1991 provides for a system of national protected areas. The Act places responsibility for overall development, management, and enforcement of regulations in protected areas with the NRCA. Specifically, the Act empowers the Minister to declare protected areas, and to arrange for the management of areas so designated.

Goals The NRCA facilitates the establishment of protected areas to

- promote environmental protection and enhancement,
- conserve resources for sustainable use by present and future generations,
- help expand and diversify economic development,
- contribute to public recreation and education

Benefits Protected areas can provide significant benefits to local communities, parishes, the nation, and the world. Specific benefits of good protected area management include

- increased employment from sustainable tourism,
- community control of recreational areas and natural resources,
- larger fish and shellfish population,
- control of illegal and destructive activities,
- preservation of scenic landscape,
- enhanced local and national reputation

By working towards the declaration of the Palisadoes - Port Royal Protected Area, stakeholders can help ensure that increased monitoring and needed improvement projects will occur. Furthermore, by participating in the planning and management of the protected area, those whose businesses and livelihoods depend on the quality of the area and its resources can be assured of a more sustainable and profitable future.

What are some other benefits that protected areas provide?

3 TYPES OF PROTECTED AREAS

Protected areas can be established for many reasons and serve many purposes. The NRCA, recognizing that different areas have different needs, has defined six types of protected areas for the Jamaican National Parks and Protected Areas System, all of which have distinct management regimens to meet varied national and local requirements.

National Nature Reserve/Wilderness Area This type of protected area encompasses lands or waters with outstanding or representative ecosystems, unique, endangered or threatened plant and animal species and/or geological or physical features. It requires the strictest management of all the protected areas, and use is limited to scientific research, education and restricted ecotourism.

Selection Criteria The area should be large enough to ensure the integrity of its ecosystems, it should be free of human intervention and capable of remaining so, and maintenance of the area's biodiversity should not require active management or habitat manipulation. *The Palisadoes' natural habitats have been significantly disturbed by human activities. The degraded conditions in certain areas will require intensive management and long-term environmental improvement projects. It is therefore unlikely that Palisadoes - Port Royal would meet the criteria for this type of protected area.*

National Park, Marine Park These parks are established to protect the nation's most prominent natural areas such as the Blue/John Crow Mountains. National Parks are intended to protect major biodiversity and ecosystems for use by present and future generations for education, recreation, scientific research, and tourism. Uses of National Parks or Marine Parks must not adversely affect the area's natural resources.

Selection Criteria The area should contain a representative sample of major natural regions, features or scenery where species, habitats, or ecosystems are of special scientific, educational, recreational or tourist significance and should be large enough to encompass entire ecosystems and ensure that ecosystems contained in the park will not be altered by human activity. *The Palisadoes' rich marine resources would benefit from the restrictive management structure of the Marine Park classification. However, the area's marine resources are significantly impacted by human activities such as the unrestricted flow of sewage and solid waste into both the harbour and the sea from numerous sources. Montego Bay Marine Park has similar problems, but is striving to improve conditions. Palisadoes - Port Royal could follow Montego Bay's example.*

What type of protected area would be most appropriate for the Palisadoes - Port Royal area? Please write down any questions or comments.

Questions & Comments?

Natural Landmark/National Monument These protected areas can be sites, areas, or features of exceptional natural, historical, cultural or aesthetic significance. Uses of these protected areas can include research, education, tourism and recreation.

Selection Criteria Natural features that might qualify for this classification could include spectacular waterfalls, caves, coral reefs, cultural or historic features could include historic buildings and archaeological sites of special heritage significance. *Port Royal's cultural heritage resources are among the richest in the Caribbean. The historic buildings and the archaeological sites particularly the sunken city should be given special protective status in order to safeguard their integrity for the Jamaican people and the world.*

Habitat/Species Management Area This type of protected area is actively managed to maintain valuable natural habitat necessary to protect significant species or biological communities. Such areas can include nesting, nursery and feeding areas such as mangrove wetlands, seagrass beds and/or coral reefs, whose conservation depends on active intervention by a management authority. Habitat is managed to ensure the long-term health of species where these species require human intervention for optimum management, to promote the sustainable use of an area's resources and ensure long-term benefits for local populations, and for scientific research and environmental monitoring related to sustainable resource management.

Selection Criteria The area should play an important role in the survival of species. In these areas, protection and management of habitat helps to maintain or optimize species population. *Because of their deteriorated state and their value as nesting nursery and feeding areas, the Palisadoes reefs cays and mangrove areas could justify establishment of a Habitat/Species Management Area or Areas to help to recover degraded habitats and optimize healthy ones.*

National Protected Landscape, or Seascape A protected land/seascape is an area where harmonious interaction between people and nature over time has resulted in the development of significant cultural, aesthetic and ecological values. Management is geared toward the preservation of the area's natural and scenic values for recreation, education and tourism appropriate in type and scale to the essential qualities of the area. Objectives are to maintain or restore the harmonious interaction of nature and culture and to continue traditional land/sea uses, building practices and cultural features.

Selection Criteria These protected areas include undeveloped sections along coastal highways with high scenic quality, rich habitats and evidence of traditional land-use patterns. Such an area should provide opportunities for public enjoyment through recreation and tourism that do not disturb its traditional lifestyle and economic activity. *Present public use of the Palisadoes as a destination for recreation education and tourism activities make it a strong candidate for this type of protected area. There is also a need for a scenic and historic gateway to Jamaica.*

Managed Resource Protected Area These are lands and waters with important resource and environmental values that exist in a mainly unaltered state. Objectives include protection and maintenance of biological diversity, promotion of sound management practices for sustainable use of resources, protection of the natural resource base from detrimental land-use purposes, and contribution to national development. Uses can include sustainable forestry, fishing, tourism, recreation, research and education.

Selection Criteria These areas should be in a relatively natural state, although some human modification is acceptable. The area should be large enough to support sustainable use of resources without detriment to the ecology of the area. *The least-impacted reefs and cays could support the establishment of Managed Resource Protected Areas such as fish sanctuaries.*

Questions & Comments?

4 INTEGRATED PLANNING AND THE ENVIRONMENTAL POLICY FRAMEWORK

The EPF process gives all stakeholders the opportunity to participate directly in establishing environmental management policy for their area

Planning and managing a protected area calls for concerted actions by all the players, or stakeholders who affect or benefit from the area's resources. Government policies need to be formulated in an integrated manner to support protection of healthy ecosystems and restoration of damaged ones. The actions of public agencies and private industries and businesses need to be coordinated to avoid duplication, conflicts and environmental damage. Finally, residents, especially traditional users of the area's resources, need to protect their way of life and, along with local non-governmental organisations (NGOs), play a role in environmental improvement projects, monitoring, and environmental education to ensure that use of the area's resources is sustainable.

The NRCA has instituted the Environmental Policy Framework (EPF) process to involve all stakeholders in the establishment and integrated planning and management of a national system of protected areas.

Steps in the EPF process include

- The NRCA collects all **available information** on environmental, social, and cultural conditions,
- Interviews with stakeholders** are conducted to learn about their needs, development plans, and observations regarding environmental issues, current environmental initiatives, and possible environmental improvement projects,

- Stakeholder input is incorporated into a **Community Discussion Booklet** that guides community meetings and facilitates decision-making
- Community meetings** are held, during which the NRCA and stakeholders work together to reach decisions on protected area policy, priority actions, and appropriate management strategies, and
- A **draft Environmental Policy Framework Document** is developed based on decisions made during public meetings. This document is designed to guide development of a management plan for the area.

The outputs of the EPF process, to be included in the EPF document, should include

- the expression of a **collective commitment** to environmental management
- integrated policies** for managing and improving the environment of the proposed protected area and surrounding areas,
- an action agenda** for the protected area setting forth environmental improvement projects to address immediate threats,
- cooperative agreements** between the NRCA and communities, NGOs, government agencies, businesses and other groups

Benefits include

- stakeholders support the NRCA with input regarding protected area establishment,
- stakeholder **needs and visions** are incorporated into the planning process,
- threats to the environment or **environmental issues** are identified,
- laws and regulations** that are not being effectively enforced gain added visibility

The EPF process may be used to formulate policies and action plans for whole watersheds or ecosystems within which protected areas may be declared. In coastal areas, the process builds on the concept of integrated coastal area management which is now embraced by international environmental and donor agencies. By looking at the larger context, greater control can be exercised over activities influencing the protected area. In the case of Palisadoes-Port Royal, the larger context is being addressed as part of the Kingston Harbour Programme, while attention needs to be given to protecting the Hellshire Hills and beaches. The Kingston Harbour Programme is a relatively long-term effort. However, giving protected area status to the tombolo and its immediate surroundings is a clear and urgent need.

The EPF process will allow all interests, and especially area residents, to participate in deciding on an acceptable approach to environmental management of the Palisadoes. The remainder of this booklet presents information, options, and a format for further stakeholder input to help in resolving some of the key questions that need to be addressed in the Environmental Policy Framework, including

- What type or types of protected area(s) would be most appropriate to conserve the area's resources? (Sections 2 & 3)
- What are the area's lands, water and other natural and cultural resources that need protection and what policies should guide their use? (Section 5)
- How should the boundaries of the protected area(s) be determined and what options exist for management of the area(s)? (Section 5)
- Which organisations currently have roles and responsibilities in the area's environmental management and how can they coordinate actions to improve management? (Section 6)
- Which would be the most appropriate organisation (or organisations) to share environmental management responsibility with the NRCA? (Sections 6 and 7)
- What are the most immediate threats and what actions should be initiated to address them? (Sections 8 & 9)

Public discussion and debate on policy for the Palisadoes - Port Royal protected area will assist the NRCA and partner organisations to develop an environmental action plan that works for everyone

5 THE PALISADOES' ENVIRONMENTAL AND CULTURAL RESOURCES

The Palisadoes Tombolo is an asset to Jamaica. It helps to make Kingston Harbour one of the finest in the world. For centuries, the tombolo and the harbour have been an ideal trading center, a strategic point of defence, a fishing ground, and a shelter from storms.

In more recent years, the Palisadoes has served as a recreational area. Gunboat and Buccaneer Beaches were once crowded with weekend visitors relaxing, picnicking and swimming. Even today, despite pollution problems, the beaches from Harbour View to the lighthouse attract people who enjoy relaxing by the sea. The cays, particularly Lime Cay, are such popular destinations that they are frequently overcrowded. The reefs, which are still relatively healthy, provide excellent opportunities for snorkeling and SCUBA diving. The mangroves support a small local finfish, oyster and conch fishery and attract nature lovers and bird watchers.

Local residents and visitors alike depend on the health of the area's natural resources and the quality of recreational facilities for their enjoyment and livelihood. We have seen that when the condition of the environment and facilities declines, as in the case of Gunboat and Buccaneer Beaches, visitorship declines too. There are many things that can be done to help maintain and improve the Palisadoes' environment. The more we know about the environment, the easier it becomes to care for it.

The Palisadoes Tombolo is a strip of land, created over centuries through deposition of sand, gravel and debris from the Hope and Cane Rivers, which joins a

series of limestone islets, and encloses Kingston Harbour. The Palisadoes tombolo has rough seas and sandy beaches on the southern side. The harbourside shoreline is calm, sheltered wetland (predominantly mangrove). Vegetation on the seaside consists mainly of cactus, thorn scrub, sand dune and seaside plant communities.

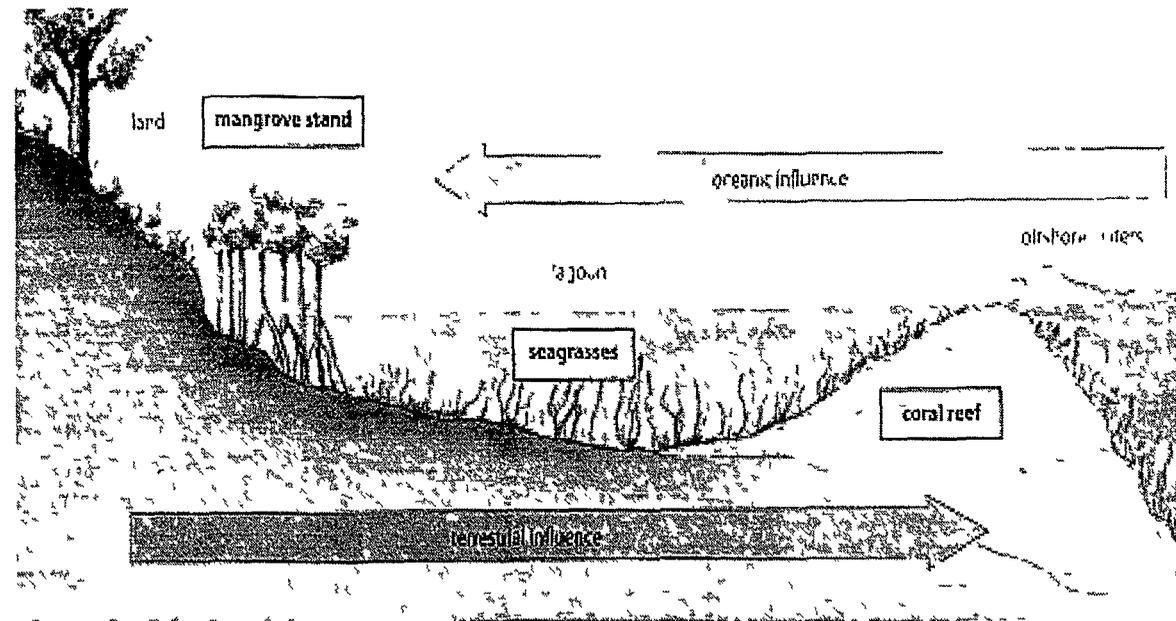
The Palisadoes Marine Environment encompasses several cays and extensive reefs and seagrass beds. The Port Royal Cays are limestone and sand outcrops located to the south of the tombolo. The approaches to the harbour are protected by a long barrier reef which encloses a shallow lagoon. The entire lagoon, reef system and cays cover an area of approximately 39 km². The shallower areas of the lagoon provide habitat for corals while the deeper sections are covered mainly with white sand. Seven major cays make up the group, Lime Cay, the largest, Gun, South, Southeast, Rackman's, Drunkenman's and Maiden Cays.

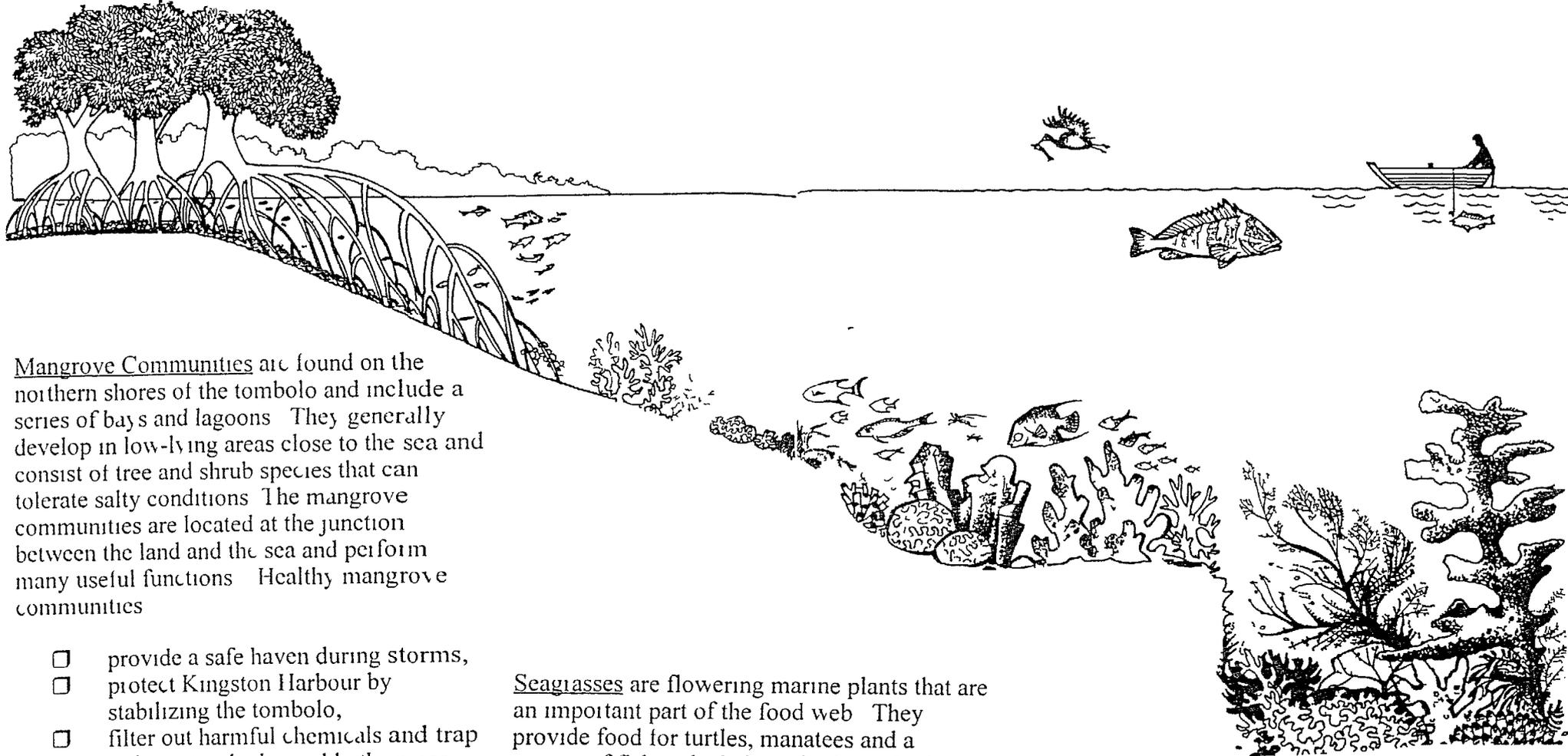
The Palisadoes Tombolo serves many important purposes: it protects Kingston Harbour, it serves as a gateway to the Island, and it is a popular recreation area. Its dunes, mangroves, cays, reefs, and seagrass beds provide homes and feeding grounds for marine and terrestrial life, and provide many economic, recreational, and educational benefits to humans.

The Coastal Ecosystem of the Palisadoes comprises terrestrial plant communities, mangroves, seagrass beds and coral reefs, four distinct but interdependent systems. There is a high degree of interrelation and exchange between these systems, the condition of each one influencing the well-being of the others. The mangrove habitat filters runoff to the seagrass beds and coral reefs and protects them from being smothered by silt. Coral reefs protect the shoreline from the full force of the sea and provide the beautiful white sand found on the beaches of the Port Royal Cays. The back reef provides the calm conditions required by seagrass communities which in turn provide a feeding ground for fish and shellfish. It is important to understand that if one component of the ecosystem, such as the mangroves, is damaged, the impact will extend to the reefs and seagrass beds.

The Land-based Vegetation of the Palisadoes plays an important role in maintaining the integrity of the tombolo. The grasses, sea-grape, and cactus found along the tombolo trap wind-blown sand and stabilize the soils, thereby reducing the possibility of erosion. The value of this vegetation is evident at several points along the tombolo where access by vehicles has reduced or destroyed natural plant cover. These areas are now flat and rocky instead of mounded and hilly and the sea and wind are slowly eroding the tombolo at these points.

Typical Coastal Ecosystem





Mangrove Communities are found on the northern shores of the tombolo and include a series of bays and lagoons. They generally develop in low-lying areas close to the sea and consist of tree and shrub species that can tolerate salty conditions. The mangrove communities are located at the junction between the land and the sea and perform many useful functions. Healthy mangrove communities

- provide a safe haven during storms,
- protect Kingston Harbour by stabilizing the tombolo,
- filter out harmful chemicals and trap sediments which would otherwise enter the sea,
- provide nutrients to the marine environment,
- provide a nesting area for birds,
- act as a nursery area and feeding ground for commercially important species of fish, oyster and conch,
- provide recreation areas for nature lovers

When mangroves are damaged by cutting or stressed by pollution, their ability to provide these services is diminished.

Seagrasses are flowering marine plants that are an important part of the food web. They provide food for turtles, manatees and a variety of fish and a habitat for filter-feeding organisms and foraging sealife such as sea urchins and sea cucumbers. Seagrasses are a nursery ground for shrimp, lobster, snapper and other sealife and stabilize the sea bottom by trapping sediments.

Coral Reefs are often called the “rainforests of the sea”. Healthy reefs support an amazing variety of life including commercially important fish and lobster. They also attract visitors who enjoy snorkeling and diving. The residents of Port Royal have traditionally used the reefs to their economic benefit.

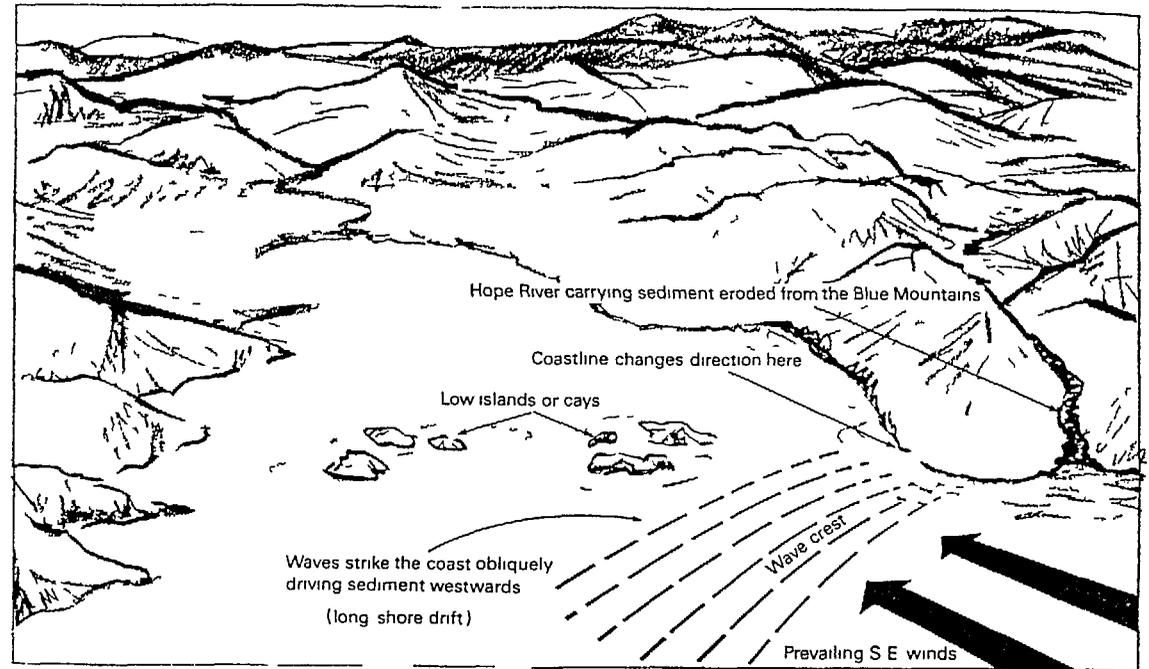
Local fishermen transport visitors to the reefs and set fishpots there. Port Royal’s restaurants serve fish and shellfish, freshly caught in reef areas. Reefs are delicate, however, and corals that have taken hundreds of years to grow can be destroyed in a matter of seconds as a result of human activities such as dynamiting, spear fishing, anchor damage and removal for commercial use.

The Surrounding Watersheds directly affect the Palisadoes Tombolo and the marine environment. The upper reaches of the Hope River watershed are generally very steep and its soils are sandy and delicate, making the watershed particularly susceptible to erosion. Inappropriate cropping patterns and techniques, deforestation and inadequate erosion control methods cause large quantities of soil and silt to be washed down the Hope and Cane Rivers with each rainstorm. The coarser eroded material in the lower reaches of the river is necessary to replenishing the tombolo, but intensive mining of sand along the river banks threatens this supply. The finer sediments that wash down from the upper watershed as a result of erosion impact the coral reefs. In addition, agricultural and industrial pollutants are carried down to the harbour by the Rio Cobre. Untreated sewage and solid waste enter the harbour via man-made gullies especially after heavy rains.

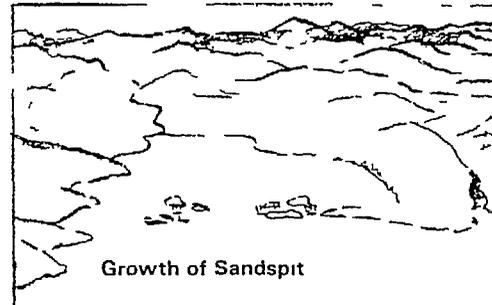
The Palisadoes Tombolo forms part of a larger area that stretches from Harbour Head to Portland Bight and shares many ecological commonalities. Deforestation, pollution from a number of sources, and overfishing are major contributing factors in the deterioration of the coastal and marine environment.

The ecological relationships between these areas are such that many of the environmental problems of each area cannot be solved independently. It may be desirable, through the EPF process, to identify a programme of actions that addresses shared problems.

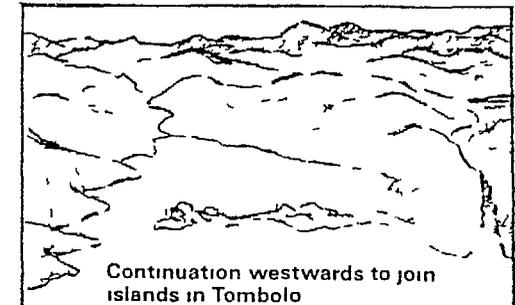
Conditions leading to the development of the Palisadoes



Stage I (Circa 1600)



Stage II

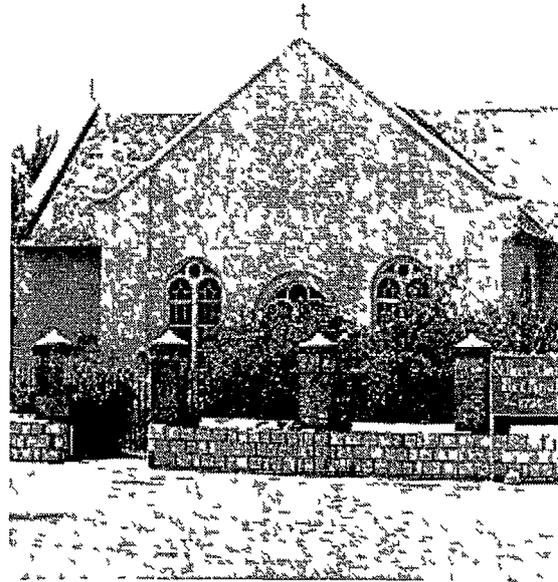


□ Sand and Silt □ Mangrove swamp

Cultural Resources Port Royal is a small fishing community located at the end of the Palisadoes tombolo. The town has a small population of approximately 3,000 and is presently economically depressed with a high level of unemployment. Most residents have lived in Port Royal all their lives and this has contributed to a strong, peaceful and mostly crime-free community. Most of Port Royal's residents depend to some degree on the fishing industry but are increasingly dependent on offshore fishing because of the levels of pollution in Kingston Harbour.

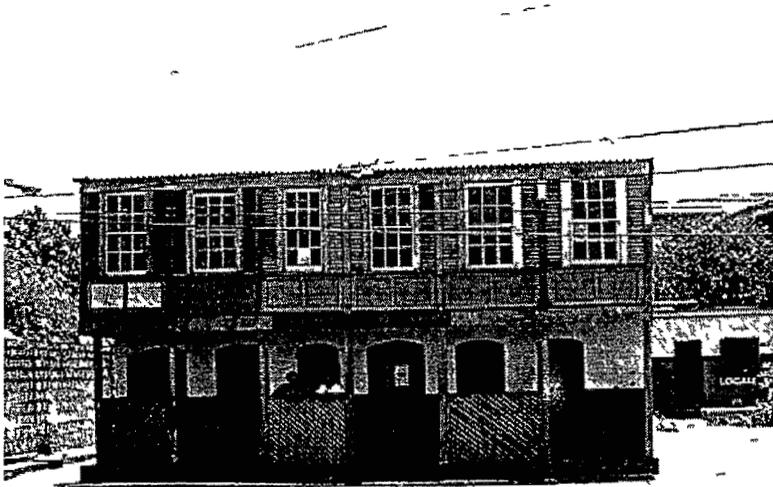
The town has had a turbulent history, beginning as a springboard for the Spanish and British occupations of Jamaica, through its stormy years as a pirate port and trading centre, when it developed into the largest and wealthiest city in the western hemisphere, to its dramatic demise in the earthquake of 1692 and its subsequent recovery as a military stronghold and once-again prosperous merchant port. Today, Port Royal has a mixture of historic buildings (Fort Charles, St Peter's Church, the Old Gaol, the Naval Hospital, the Naval Dockyard, gun batteries and remains of old streets and walls) and modern structures (houses, restaurants, JDF Coast Guard, UWI Marine Laboratory, and a fire station).

The sunken city of Port Royal belongs to a select group of internationally recognized archaeological sites which have been preserved almost intact after suffering a major catastrophe. Unlike most other historical sites, the buildings and artifacts have been preserved, providing material for extensive studies by archaeologists and historians.



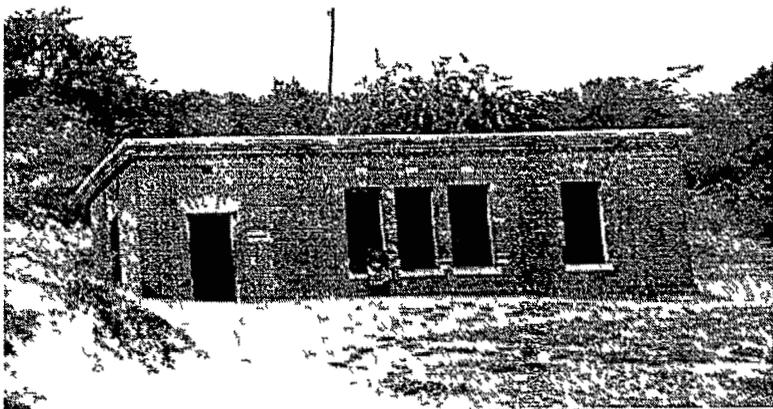
St Peter's Church

Port Royal's history as a trading port is unique in the Caribbean. The centre of early Caribbean commerce, it is said to be the first site in which Europe, Asia, Africa, and the Americas came together. The great wealth that accumulated as a result of this trading earned Port Royal a reputation as the wealthiest city in the hemisphere.

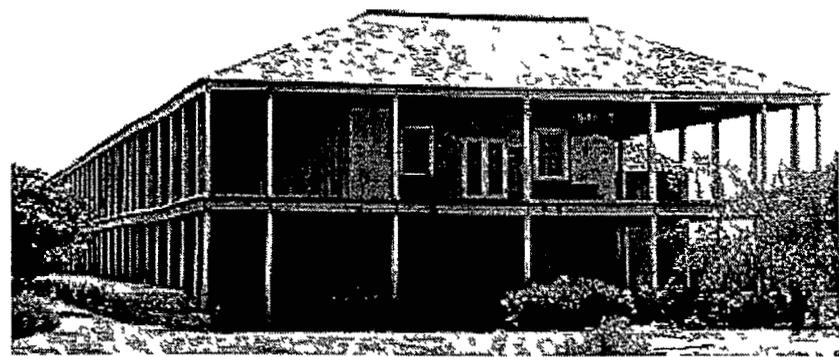


Some of Port Royal's well-known historic buildings

Angler's Club (Historic McFarlane's Bar)



Giddy House



Naval Hospital

6. ENVIRONMENTAL LEADERSHIP AND COORDINATION RESPONSIBILITIES

Planning and managing the Palisadoes-Port Royal Protected Area will require intensive and efficient coordination between and among government agencies, private entities, nongovernmental organizations and local groups as well as individual citizens. The following pages summarize the roles and responsibilities of several key agencies.

A cornerstone of the planning and management process is the **cooperative agreement**. Cooperative agreements can be established by

- clearly defining roles and responsibilities and strengths of each organization or group,
- establishing lines of communication, and,
- coordinating activities to accomplish objectives while avoiding duplication of effort.

Public Sector Agencies Public sector agencies must play a key role in the planning and implementation of the protected area. The NRCA and the Jamaica National Heritage Trust are the lead agencies. Other agencies whose active participation is needed in the area's management are listed on the facing page.

The Natural Resources Conservation Authority (NRCA) The NRCA exists to provide the management framework for the conservation, protection, and sustainable use of Jamaica's natural resources, in collaboration with its partners in the private and public sectors. Its responsibilities include pollution control and waste management, wildlife protection, permitting of development island-wide, special regulation and monitoring of activities in environmentally sensitive areas, as well as establishment and management of

protected areas. While the NRCA retains responsibility for overall protected areas management, it may **delegate management authority** to a local management entity based on the results of consultations with stakeholders.

To work toward the establishment of a Palisadoes - Port Royal protected area, the NRCA is enlisting the support of the local community and other key stakeholders. Through the Environmental Policy Framework process, the NRCA will coordinate a multi-stakeholder effort to establish and manage the protected area as a resource for present and future generations of Jamaicans and visitors.

Jamaica National Heritage Trust (JNHT) The JNHT's mission is to regulate, record, protect, preserve and procure the historical and cultural heritage of the Jamaican people and to inculcate in the Jamaican people a sense of pride, national identity, and an awareness of the importance of our heritage to national development.

The JNHT has primary responsibility for buildings, landmarks and other historical, cultural, and archaeological sites in Port Royal and along the Palisadoes. The JNHT considers the proper restoration and management of Port Royal's historic and archaeological areas to be a national priority.

To ensure the appropriate development of Port Royal's cultural resources, the JNHT is providing guidance to the Port Royal Development Company Ltd, and, together with the NRCA, has the power of review and approval to ensure that all aspects of the company's proposed development will be in keeping with local, national, and international objectives and in no way compromise Jamaica's cultural treasures.

OTHER PUBLIC AGENCIES

<p>Commissioner of Lands This entity is charged with managing Crown lands and is able to lease land to various organisations including other government agencies. The Commissioner has direct control over most of the land in the Palisadoes - Port Royal area</p>
<p>Fisheries Division The Fisheries Division has worked with and supported the Port Royal fishing community for years. The Fisheries Division is presently working with local groups, and should continue to play an important role in the management of the area</p>
<p>Jamaica Maritime Institute (JMI) JMI has been active in environmental conservation for many years. Students participate in beach cleanups and other environmental activities. The Institute has promoted many proposals for environmental improvement projects including a proposal to redevelop the Gunboat and Buccaneer Beach areas as an environmental education/recreation center that includes an aquarium and a boardwalk through the mangroves</p>
<p>Kingston & St Andrew Parish Council (KSAC) KSAC is responsible for approval of all physical development in the Parish. The KSAC is responsible for ensuring that proposed developments are in keeping with Town Planning Development Orders. In addition, the KSAC should inform prospective developers, as warranted, that they must consult with the NRCA and JNHT to ensure that they are in compliance with environmental and heritage regulations</p>
<p>Office of Disaster Preparedness and Emergency Management ODP is the national body responsible for preparing the Jamaican population to deal with disaster and emergency situations. ODP, working with other national and local bodies, is supporting the development of a disaster management plan for the area</p>

<p>Port Royal Brotherhood The Port Royal Brotherhood is not officially a government agency, but rather a statutory body created by government to address housing needs in Port Royal. The Brotherhood acts as a landlord, collecting small rents on its properties in Port Royal. The Brotherhood wishes to contribute to improving conditions in the town, particularly housing and infrastructure conditions</p>
<p>Port Authority The Port Authority's mandate is to develop and maintain Jamaica's shipping facilities. The Authority has supported the community of Port Royal through sponsorship of a health clinic and a basic school and other activities</p>
<p>Tourism Product Development Company (TPDco) TPDco strives to develop and improve Jamaica's tourism product by planning, implementing, or supporting improvement projects in resort areas. TPDco could contribute its support to the establishment of the protected area, the development of local management capacity and in the planning and coordination of related environmental improvement projects</p>
<p>Town and Country Planning Authority The Town and Country Planning Authority, through the Town Planning Department and in conjunction with other agencies, prepares Development Plans and Development Orders which guide development throughout the Island. The Department is presently drafting a new Development Order for Kingston and St Andrew that will include the Palisadoes - Port Royal area</p>

Other National and Local Public Agencies Other agencies including the Airports Authority Institute of Jamaica Ministry of Public Utilities and Transport JDF Coast Guard National Water Commission Urban Development Corporation and Metropolitan Parks and Markets have authority and/or responsibilities and interest in the integrity of the area's natural and cultural resources

What other NGOs or CBOs could contribute to the conservation effort?

Non-governmental and Community-based Organisations (NGOs and CBOs) A number of national, regional and local organisations can participate in or provide support to management of a Palisadoes - Port Royal protected area. NGOs and CBOs are critical to the successful management of protected areas because they can assist the NRCA as partners. The table below lists some of the organisations that can play a key role in improving and managing the Palisadoes' environment.

<p>Community Environmental Resource Centre (CERC) CERC is dedicated to encouraging community environmental initiatives. It has been active in promoting environmental improvement projects in the Harbour View and Palisadoes area.</p>
<p>Environmental Foundation of Jamaica (EFJ) The EFJ supports the protection of the environment and children's rights. The EFJ makes project grants to environmental and development NGOs and could provide funding to support environmental improvement projects in the Palisadoes - Port Royal area.</p>
<p>Jamaica Environment Trust (JET) JET is dedicated to environmental education and advocacy with an emphasis on solid waste management. JET has been active in promoting the conservation of the Palisadoes through beach clean-ups, awareness-raising programs, and setting of posts along the tombolo to discourage vehicles dumping garbage. JET has expressed interest in managing a Palisadoes protected area.</p>

<p>National Environmental Societies Trust (NEST) NEST was established as an umbrella organization which provides training, technical assistance and organizational development support to local NGOs and community-based organisations working on environmental issues. NEST could help to build local environmental management capacity.</p>
<p>Port Royal Citizen's Association (PRCA) The PRCA promotes citizen participation in activities aimed at improving the quality of life for Port Royal residents. Association members are concerned about the environment and would like to contribute to improvement projects.</p>
<p>Port Royal Environmental Management Trust (PREMT) PREMT was established to participate in the management of Port Royal's natural resources. It is a new organisation, but it hopes to play a lead role in the management of the proposed protected area.</p>
<p>Port Royal Fishermen's Cooperative This organisation, which provides various services to its members, is presently recruiting new members. Co-op members are concerned about the present state of the environment and have many ideas for environmental improvement projects.</p>
<p>Port Royal Heritage Foundation (PRHF) The PRHF supports the JNHT's mission to preserve Port Royal's cultural heritage sites. The Foundation also contributes to the town's economic development by organising activities that bring visitors to the town.</p>

Private Sector Organisations can also play an important role in caring for the environment. Firms such as Carib Cement and Shell have put in place programmes to reduce the impact that their activities have on the environment and in many cases have supported local environmental improvement initiatives.

<p>Lime Cay Catering This group of Port Royal residents has provided visitors to Lime Cay with food and drink for years. The company cleans the cay weekly and is initiating several environmental improvement projects.</p>
<p>Morgan's Harbour Hotel Morgan's Harbour, the only hotel on the Palisadoes Tombolo, recognises that its business is directly impacted by environmental conditions. The hotel, which offers boat tours to the cays and through the mangroves as well as snorkeling and SCUBA diving as activities for its guests, has participated in and led many beach cleanups and supports environmental initiatives.</p>
<p>Port Royal Development Company Ltd This company was formed to develop Port Royal's cultural heritage resources as a tourist attraction. The company has pledged that it will strive to work with the local community, the NRCA, and other agencies to ensure that their activities contribute to the sustainable development of the Palisadoes' and Port Royal's natural, cultural, and social resources. Achievement of this pledge will require the active participation and critical review of planning activities by all stakeholders.</p>

<p>Port Royal Restaurants One of Port Royal's significant income-generating activities is the restaurant trade. Many of the town's visitors come specifically to enjoy fish and bammy. The town's restaurateurs realize that they need a continuous supply of fresh fish, for which fishermen must go further and further out to sea, and a pleasant and clean environment if they are to continue to attract customers.</p>
<p>Royal Jamaica Yacht Club (RJYC) The RJYC provides boating facilities for many Kingston residents. Due to Harbour pollution, employees need to remove garbage from the marina on a daily basis. The RJYC's management and members are willing to work with other stakeholders to improve the condition of the Palisadoes' natural resources.</p>

What other private sector organisations are there that could help out?

7 ENVIRONMENTAL MANAGEMENT· NEEDS AND OPTIONS

Local Management Organization responsibilities can include assessment of potential development, patrolling, monitoring, education, fundraising, managing projects, and operating visitor facilities

Further Comments

Local Environmental Management Each organisation, governmental and non-governmental and private, has an important role in protecting the Palisadoes-Port Royal environment

However, for effective management of a protected area, at least one group must be identified or initiated that can provide day-to-day leadership and coordination. Local initiative and responsibility for planning, managing and funding protected areas is strongly encouraged by the NRCA. The functions of a local management organisation that is delegated authority for protected area management by the NRCA might include

- helping to examine development proposals for the area to ensure appropriate and sustainable development
- patrolling and monitoring to ensure enforcement of laws and regulations,
- raising levels of environmental awareness,
- contributing to the formulation of policies and the coordination of actions by other agencies,
- fundraising and obtaining grants,
- managing environmental improvement projects, and
- designing, operating and managing visitor facilities and programmes

The NRCA will assist the prospective local management organisation or organisations in preparing management plans for the Palisadoes-Port Royal Protected Area

Options for Environmental Management Stakeholders can contribute to the planning process by assisting in the selection of

- 1 the type of protected area or areas that would meet national and local needs and their ideal boundaries, and
- 2 the ideal structure of a local management entity or entities that could effectively manage the area or areas

Selection of Protected Area Type(s) The NRCA and its stakeholder partners must

- carefully analyse local ecological, social and cultural conditions and needs,
- discuss conditions and needs in relation to the various types of protected areas outlined in Section 3,
- decide which type of protected area or areas would adequately meet the Palisadoes - Port Royal area's specific protection needs,
- Recommend boundaries for the protected area or areas

Which local management organisation or organisations could assist in the management of the protected area? Why?

8. SETTING PRIORITIES

The Palisadoes - Port Royal area faces many environmental threats. This section summarizes a number of these threats that have been identified through interviews with area stakeholders. The purpose of this section is to allow concerned individuals to prioritize these problems and suggest

environmental improvement actions that may be initiated to solve them. Please use the space provided to add your ideas and comments. During public meetings, decisions on priority environmental improvement projects will be taken based on your input.

NATURAL RESOURCES	
AFFECTED RESOURCE VALUE/FUNCTION	PROBLEMS AND NEEDS
<p>MANGROVES</p> <p>Serve as a nursery for finfish and shellfish Serve as a filter for pollutants Provide shelter from storms and protection from erosion Provide nesting and feeding areas for birds Provide an area for ecotourism, education Others</p>	<p>Mangroves degraded close to harbour, healthier closer to shoreline Solid waste and sewage from harbour is affecting mangrove communities Cutting bulldozing to suit human needs causes irreparable damage Dumped garbage covers roots and contaminates water Fishing with fine mesh nets in nursery kills juvenile fish Use of dynamite for fishing kills juvenile fish and shellfish, damages mangroves Others</p>
<p>CAYS AND REEFS</p> <p>Serve as recreation areas for Jamaican and international visitors Provide fishing grounds for Port Royal residents Provide research areas for UWI and international students Reefs provide protection for tombolo, cays Port Royal residents earn income by transporting visitors and vending Others</p>	<p>Cays littered with garbage left by visitors Reefs damaged and degraded by boat anchors Fish population declining Lime Cay overcrowded on weekends Transport to cays unregulated and perceived as unsafe Boats moored on beach interfere with bathers Fishermen from other beaches destroy facilities Cays lack toilet facilities Fishermen using dynamite to fish in reef areas destroy reefs Fishermen using small mesh in fishpots kill juvenile fish Coral damaged by improperly set fishpots Sewage from Harbour View, Port Royal and the harbour affects reefs Others</p>

WHAT IS BEING DONE NOW	OTHER POSSIBLE SOLUTIONS - SUGGESTED PROJECTS AND ACTIVITIES
<p>Ministry of Local Government and Works considering options for repairing ecological and aesthetic damage caused by road upgrade</p> <p>Others</p>	<p>Reforestation</p> <p>Prohibition or controlled management of cutting</p> <p>Enforcement of "No Dumping" regulation through patrols</p> <p>Establishment of a fish sanctuary, agreements on and enforcement of good fishing practices</p> <p>Community empowerment - local authority to act as environmental wardens and enforce regulations</p> <p>Install garbage receptacles and environmental posters on ferry</p> <p>Other</p>
<p>Weekly maintenance beach cleanup by Lime Cay Catering</p> <p>Periodic thorough beach cleanup by concerned users</p> <p>Awareness-raising T-shirt campaign in planning stages</p> <p>Mooring buoys set by concerned users</p> <p>Volunteer beach warden program for Lime Cay planned</p> <p>Others</p>	<p>Raise awareness-help visitors remember to remove their garbage</p> <p>Install more mooring buoys</p> <p>Increase patrol of reef areas to discourage dynamiting</p> <p>Conduct study to establish carrying capacity of Lime Cay, other cays</p> <p>Construct dry toilets, other visitor facilities on cays</p> <p>Improve Harbour View and Port Royal sewage treatment facilities</p> <p>Establish or elect organization to coordinate and regulate activities on the cays</p> <p>Others</p>

9 HOW DOES THE COMMUNITY MAKE THINGS HAPPEN?

How do you think you could contribute to the effort?

Do you have any special skills?

Could you volunteer some of your time to help out?

What should be included in the Environmental Action Plan? Please write down your thoughts on pages 29 & 30

The following are some of the steps that can be taken to support the successful establishment of protected areas and implementation of environmental improvement projects

1 Participate in Community Meetings

The single most important thing that we can do is participate in the decision-making process. By sharing our views in public meetings, we can ensure the Environmental Policy Framework takes stakeholder needs into account

2 Develop an Environmental Action Plan

Through community meetings, we can agree on the most pressing environmental issues facing the Palisadoes - Port Royal area. Once we understand the scope of the various problems, we can develop an action plan that outlines specific activities that will help to resolve those problems. An effective action plan will

Prioritize Issues to be Resolved - stakeholders discuss environmental issues and decide which should be resolved first

Outline Priority Environmental Improvement Projects - stakeholders help to develop effective projects that meet pressing needs and support protected area objectives

Outline Roles and Responsibilities
Local residents and groups, government agencies, NGOs, and other organizations commit themselves to participation, management, or funding of the protected area

Ensure That Development Proposals Are Examined Carefully
The suitability of all components of development proposals should be examined to determine the development's potential impact on the area's social, cultural, environmental and economic integrity

Contribute to Preparation of a Management Plan or Plans
The management plan should ensure that the Palisadoes - Port Royal area's environmental, social, and cultural integrity is retained or restored over the long term

3 Develop Local Fundraising Programs
Several local organisations already sponsor fundraising events. These groups could expand activities by coordinating with other groups

4 Access National and International Funding

The **US Agency for International Development** is already committed to supporting environmental improvement projects in the Palisadoes - Port Royal area. The Agency's Development of Environmental Management Organizations (DEMO) Project, through the Environmental Initiative for the Americas, is working with the NRCA to facilitate the establishment of the protected area and support small improvement projects.

Several other agencies and organisations could support initiatives in the area. The **Environmental Foundation of Jamaica** provides grants of up to J\$3,000,000 to NGOs for environmental projects. The **Canadian Green Fund** also provides financial support for small environmental projects. In addition, there are hundreds of **charitable foundations** based in the US, Canada, and Europe which provide funding for well-designed environmental and social improvement projects. Local groups can submit proposals to these foundations asking for financial and technical support.

5 Establish an Environmental Trust Fund A trust fund could serve as a depository for money raised through a variety of means. Monies kept in "trust" could be distributed to finance environmental improvement projects throughout the Palisadoes area. The fund could be financed by grants, fees charged to visitors, visitor and local donations, donations from large companies, local fundraising campaigns, sale of crafts and T-shirts, and many other sources.

6 Initiate Revenue-Generating Activities

Many protected areas around the world charge fees to visitors to cover the cost of maintaining and improving facilities or implementing improvement projects. For example, individuals that provide services to visitors to Lime Cay, the reefs and the mangroves (fishermen provide transportation, Lime Cay Catering provides food and drink) could charge visitors a small "user" fee that could be used to improve visitor facilities.

Many organisations and communities that live in and around protected areas raise money through the sale of merchandise such as T-shirts, posters, and crafts. Profits increase local income, with a portion going toward the management of the protected area.

7 Form Environmental Partnerships and Establish Cooperative Agreements NGOs, local volunteers, government agencies and private companies must coordinate activities in order to widen their support base, increase fundraising opportunities, and generally work together to accomplish goals that each organization might not be able to accomplish individually.

What other community-based initiatives would be appropriate for the Palisadoes - Port Royal protected area(s)?

Cooperative agreements and partnerships allow organisations and agencies to establish their respective roles and responsibilities in caring for the area's environment.

10 NEXT STEPS

First Community Meeting - Wed April 16 Port Royal Town Square

The objectives of this first meeting are to

- bring stakeholders together for a presentation and discussion of NRCA protected areas policy as it relates to the Palisadoes - Port Royal area,
- answer questions that stakeholders may have concerning protected areas,
- discuss the NRCA's Environmental Policy Framework process and other steps necessary to establish and manage a protected area,
- secure stakeholder (public, private and NGO) commitment to participate in the process

Information Expo - May 7 - May 11 Port Royal Town Square

Although public meetings are important and necessary to accomplish certain things, the NRCA recognises that there is not enough time in a public meeting for everyone to share views and ask questions. For this reason, the NRCA will be conducting an Information Expo

The Expo will provide a forum in which all stakeholders can share ideas and feelings, exchange information and generally contribute to the Palisadoes - Port Royal environmental planning process. It will consist of informational displays and will be manned by NRCA personnel from 12 noon - 6 00 PM daily

EVERYONE will be welcome

Through the Expo, the NRCA and stakeholders will work together to

- identify and prioritize critical environmental issues,
- recommend environmental improvement projects to address those issues,
- recommend the appropriate type(s) of protected area(s),
- recommend strategies for protected area management

Please take the time to visit the Expo and discuss your views with NRCA personnel. Your input is important!!

Stakeholder Workshops May 21 and May 28 Venue to be determined

Building on the prior community meeting and the Information Expo, these workshops will allow all stakeholders to work together to make informed decisions and come to agreements on critical issues

Follow-on Activities

Decisions and draft cooperative agreements stemming from the workshops will be incorporated into the draft Environmental Policy Framework Document (section 4, page 8). This document will be circulated for stakeholder review. After stakeholder comments are incorporated, the document, which will contain concrete recommendations for actions supporting the protected area(s), will be submitted to the Minister

About the NRCA....

NRCA is the official agency of the Government of Jamaica specifically charged with environmental protection and management of the nation's natural resources, as well as with enforcing environmental laws. NRCA's responsibilities include both land and sea habitats. NRCA is prepared to work in partnership local community-based environmental management organizations in reaching environmental goals and implementing programmes.

The function of the Natural Resources Conservation Authority is broadly defined in the 1991 Act under which it was established:

" to take such steps as are necessary for the effective management of the physical environment of Jamaica so as to ensure the conservation, protection, and proper use of its natural resources "

NRCA powers and responsibilities focus on:

- establishing and enforcing pollution control and waste management standards and regulations
- guiding environmentally appropriate development, through such tools as prescribing areas, requiring environmental impact assessments, and granting of permits and licenses
- maintaining a system of national parks and protected areas
- promoting broad public awareness through information, environmental education, and outreach activities
- monitoring and enforcing environmental laws and regulations outlined in the NRCA, Beach Control, Watershed Protection, and Wildlife Protection acts
- providing national environmental leadership, coordinating activities of other government agencies and supporting local non-government efforts at protecting and enhancing the environment

For More Information, Contact

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