

2008

STRATEGIC ACTION PLAN FOR THE CLIFTON HARBOUR, UNION ISLAND, ST. VINCENT AND THE GRENADINES



Union Island Environmental Attackers

Floyd Homer and Katrina Collins

For

Union Island Environmental Attackers

4th December, 2008

**THE TRUST FOR
SUSTAINABLE
LIVELIHOODS**

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Strategic Action Plan for Clifton Harbour, Union Island, St. Vincent and the Grenadines

Floyd Homer and Katrina Collins
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INTRODUCTION

This management plan is based on a series of consultations with stakeholders in Clifton, Union Island, St Vincent and the Grenadines. The preparation of this plan was led by the non-governmental organization Union Island Environmental Attackers, whose mission is to promote the sustainable use of natural resources in Union Island. This plan is expected to serve as a guide for action to address some of the major environmental and socio-economic problems particularly around Clifton Harbour.

RESOURCE DESCRIPTION

Name of Area and Location: Clifton Harbour, Union Island

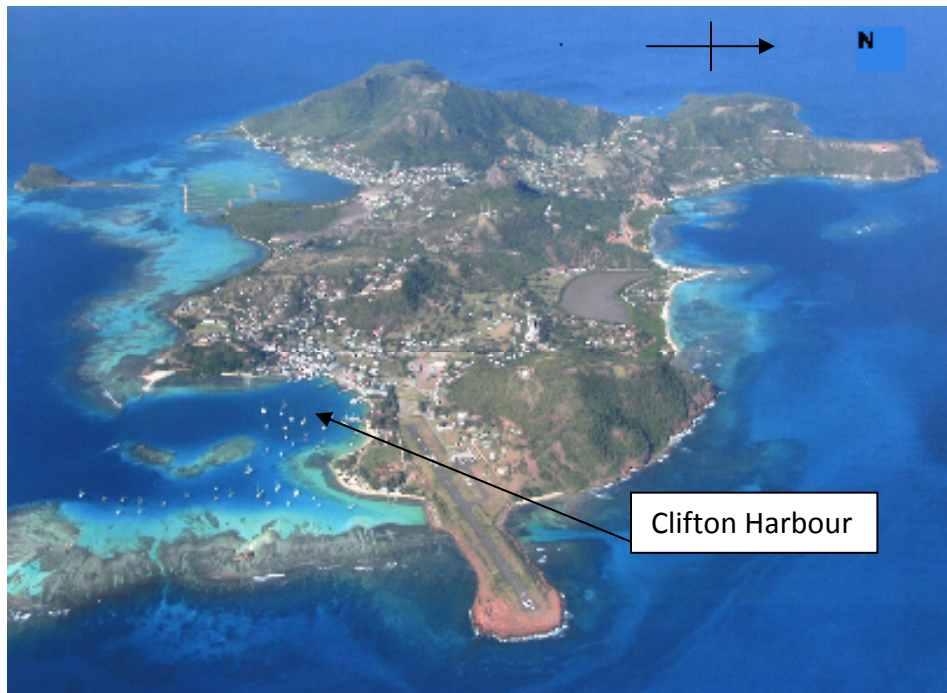


Figure 1. Photo of Union Island

Physical Features

The island of Union is volcanic in origin and about 838 hectares in area (2,070 acres or about 13.7 square miles), making it the largest in the St Vincent Grenadines. The landscape of Union is undulating, comprised mainly of dry scrub forests, some coastal mangroves and a large brackish pond. The north-south mountain range which crosses the western part of the island has the highest peaks (211 m, 241 m, 262 m,) with Mount Parnassus (286 m) and Tabor (305 m) being the highest points. The dorsal ridge of the eastern part of the island has lower peaks (between 104 m and 226 m). The smooth slopes of some hills were planted with cotton in the past, but extensive cultivation caused high erosion and a deterioration of the soil over many years.

There are no water courses on the island, but after a torrential downpour of rain, temporary streams are common, many of which feed into the Belmont Pond. The silt (from erosion) that is retained by the adjacent mangroves has created the flat bottoms of Basin, Ashton Harbour, and Richmond Bay. Around the island there are about 1,800 to 2,000 metres of coral sand beaches the most popular of which is Chatham Bay on the west of the island. The three others in the north are Bloody Bay, Breakaway and Belmont. Small sandy bays such as Basin and Clifton Flat Reserve are found on the south.

Climate

The tropical climate is one of the major year round attractions of the Southern Grenadines. There is little temperature change, with only slight variations between minimum and maximum. A minimum of 22.5 degrees centigrade (usually December to March) to a maximum of 32.7 degrees centigrade (July to September) has been recorded. The averages for the last eight years were: - 30 degrees Maximum; 25 degrees Minimum; and 27.5 degrees average. The sea temperature along the shores changes even less than the land temperature-28 degrees in July and 26 degrees in March.

The wet and dry season are generally very clearly defined, the dry season being in the first five months of the year. Rainwater is often collected and stored in cisterns to supplement the domestic supply of potable water.

The prevailing easterly trade winds are usually constant blowing at 8 to 12 knots (15 to 22 km/h). The regular winds (except sometimes from December to February- Christmas winds (where the speed can peak at 30 to 40 km/h) have shaped the form of the shrubs and bushes in the eastern side of the island since the beginning of time. Occasional hurricanes which pass through the southern Caribbean can generate winds of 120 to 160 km/h.

Natural resources

Union Island has a rich and varied coastline. The south coast of the island is protected by an unbroken stretch of outer reef crests that enclose the large Ashton lagoon where sea grass beds, patch reefs and mangroves are found. At the southwest corner of the lagoon is a small, uninhabited island- Frigate Island.

A smaller lagoon, Clifton lagoon, lies on the east coast of the island. It is protected by well developed fore reef crests. It is protected by Newlands Reef. This reef extends southward of Red Island from approximately one kilometre providing an effective barrier against the westerly winds and oceanic waves. This reef ends at the entrance of the harbour. Towards the runway extension where the water is shallow, small beds of turtle grass can be found. In the centre of the lagoon is a large patch reef that rises within 0.2m of surface. Numerous juvenile fish can be found there (Price and Price 1994).

Along the north coast of the island are three bays, two of which, Richmond Bay and Belmont Bay, have well developed fringing reefs. The west coast has no reefs except at Fullmoon Rock where a small fringing reef has remained healthy (Price and Price 1994).

Mangroves on the islands occur in Richmond Bay, Ashton Harbour, Belmont Salt Pond, Petit Bay, Clifton Pond, Clifton Bay Reserve, Murray Estate and Queensbury Point. Only Ashton Harbour and Richmond bay can be considered “operational ecosystems”. The others are small and spotty in distribution. Belmont Salt Pond is of interest as it is a small area where the entire salt pond is enclosed by a narrow belt of White Mangrove (*Laguncularia racemosa* [L.] Gaertn. f.) and Black Mangroves (*Avicenia germinans* L.) with a few small islets of Red Mangrove (*Rhizophora mangle* L.) in the pond. (Weekes¹ 1996).

The most important species of mangrove on the island is the Red Mangrove. It occurs in the seaward side and is almost continually covered with water. The Black Mangrove occurs inland from the fringe where the water is shallow or inundated a few times a years. The White Mangrove and Button Mangrove are found in association with the Red and Black Mangrove on the island. According to Weekes² 1996, the White and Button Mangrove do not appear to play a significant role in the mangrove areas of the island due to their spotty distribution.

¹ Weekes, N. 1996. Assessment of Union Island mangrove areas. Unpublished MS, Forestry Division, St. Vincent and the Grenadines. 18 pp.

² Weekes, N. 1996. Assessment of Union Island mangrove areas. Unpublished MS, Forestry Division, St. Vincent and the Grenadines. 18 pp.

Resource Use

Clifton harbour is the major port on the island, handling cargo, ferries, fishing boats, visitors and yachts. The harbour also provides safe anchorage for local boats and visiting yachts and serves as a fishery landing site. Several businesses are located along the waterfront, including government offices, shops, restaurants and small hotels/guest houses.

The ECLAC report³ (2002) indicated that more yachts clear Customs and Immigration at Union Island than anywhere else in St Vincent and the Grenadines. The report indicated that fifty percent of the yachts cleared customs in Union Island. Yachts visiting the Tobago Cays often call at Clifton harbour for services and other facilities not available elsewhere in the Southern Grenadines.

Water pollution in the harbour, inadequate facilities to handle cargo and visitors, break-ins and theft on yachts are some of the major challenges in the use of Clifton harbour.

Conservation Status

Local conservation projects have been undertaken in the past, including the quarterly Clean-Up Campaign, the Adopt- a- tree project, education programmes focusing on the schools, and voluntary patrols to protect nesting turtles during the closed season. There are no designated conservation areas in or around Clifton.

HISTORY AND DEVELOPMENT

Written and Oral History

Amerindian tribes from South America used Union Island as a stop-off point on their journey further up the chain of islands. Archaeological discoveries have established that they settled here from as early as 5400BC and remained until the 1750s when the Europeans arrived.

The first European colonists of note were two Frenchmen, Jean Augier and Antoine Regaud, who settled in Union before 1763 with 350 slaves. After their departure, Samuel Span, a wealthy merchant from Bristol, England set up trade as S & J Span & Company. Although the Span family was involved in general maritime trade they were also heavily active in the slave

³ UNECLAC. 2002. St. Vincent And The Grenadines: The Yachting Sector General: LC/CAR/G.707, 8 November 2002. ECLAC, Port of Spain, Trinidad and Tobago. 66 pp.

trade. They brought with them hundreds of slaves who most likely originated in Cameroon and Angola. The Span's were the first owners of Union Island.

The Morse 1778 report⁴ states that the population of Union was comprised of 16 Europeans (10 French and 6 English) and 430 African slaves. The colonists grew cotton and their substantial harvests yielded 250,000 pounds per year.

Slavery was abolished in 1834, and sixteen years later Span sold Union Island to Major Collins from St. Vincent. Collins himself did not engage in any trade on Union and leased the island, for £150 per annum, to a Scotsman, Charles Mulzac. Sharecropping replaced the regime of slavery but life changed very little for the people in Union. Apart from a limited trade of poultry, turtle shells and wood to neighbouring islands, most inhabitants relied on subsistence farming for survival.

In 1893 Mulzac died and his son Richard took over the leases. Richard's son, Hugh, was the pride of Union in 1940 when he became the first black man to command a ship of the American Navy, the "Booker T. Washington."

The 1898 hurricane, coupled with a poor cotton harvest, forced Mulzac to sell Union Island to a Vincentian, Mr. Richards. His ownership was not a successful one and the protests caught the attention of the British Crown, who bought the island in 1910 and set up the Union Island Land Settlement Scheme.

The island was divided into two and four-acre parcels and sold to the local population at exceptional credit rates, bringing the subjection of the people of Union to a definitive end. People began to build their own homes which, at that time, were huts with straw roofs.

In 1939, a steady flow of emigrants headed towards the USA and the larger neighbouring islands. Union Island men earned a reputation as excellent seamen and money earned was used to build homes and develop economic activities.

The island's first car was unloaded in 1956, the first secondary school was opened in 1972 and the airport was opened in 1974. Today, the island with its dramatic landscape in the midst of some of the best sailing and diving waters in the western hemisphere, is attracting an ever increasing number of tourists to its shores.

⁴ Morse. S.V. 1778. Report on the Grenadines to Lord MacCartney. 12 pp.

Recent Developments

A new secondary school and the Pan against Crime, Pan Yard is under construction. A Learning Resource Center and Tourism Bureau are being completed. An increase in police presence (Rapid Response Unit) to curb the increase in criminal activities and an education and awareness program on radio by the Union Island Environmental Attackers are recent attempts to manage these social problems.

Access

There is a good road network across the island. Clifton has both paved and unpaved roads. The harbour and wharf provides for access of goods, services and people. The small airport at Clifton is able to accommodate small aircrafts only, with daily scheduled flights from St Vincent and the southern Grenadines.

Administration

Administratively, Union Island is under the jurisdiction of the Office of the Prime Minister – Grenadine Affairs. On island, the District Officer has the local responsibility and reports to department of Grenadine Affairs. However, the operations at Clifton harbour may also be under the jurisdiction of the Ministry of National Security - Seaport Administration (Port Authority) and the Immigration and Customs Departments. The extent of responsibilities of the government agencies represented on Union Island seems unclear in terms of the management of Clifton harbour.

KEY RELEVANT POLICIES

National Environmental Strategy and Action Plan (NEMS)⁵

The NEMS was adopted in 2004 and was structured around the major principles contained in the St George's Declaration of Principles for Environmental Sustainability in the OECS (SGD). Fifty strategies with accompanying activities were identified for priority attention in the short term. The following strategies are directly relevant to Union Island:

Strategy 3: Formulate, promote and implement integrated development policies, plans and programmes to ensure that environmental management is treated as an integral component of planning processes in pursuit of sustainable development.

Strategy 5: Adopt measures to restore environmentally degraded areas and to ensure the sustainable use of natural resources in a manner which recognizes the intricate linkages between ecological systems in small island states, and between these systems and human activity, and which reflect the principles of island systems management.

Strategy 6: Clarify and rationalize, as appropriate, the roles of national, regional and international environmental agencies, networks and institutions to maximize efficiency and accountability in managing the environment and natural resources, and to reduce duplication and maximize cost effectiveness.

Strategy 8: Support and enhance the capacity of non-governmental and community-based organisations for environmental management.

Strategy 10: Create and strengthen existing legal and institutional frameworks that allow for the effective participation of the relevant public, private, non-governmental and community-based organizations in environmental management.

Strategy 20: Ensure that where pollution occurs the polluter shall be accountable and shall bear the expenses mandated by law and/or duly established authorities to return the environment to a generally acceptable state.

Strategy 31: Adopt and implement appropriate measures to adequately manage solid and liquid waste, including hazardous waste, and atmospheric pollutants.

⁵ Homer, F. and D. Shim. 2004. St. Vincent and the Grenadines Environmental Management Strategy and Action Plan, 2004-2006. April 16th 2004. 50 pp.

Strategy 35: Design, promote and implement measures to prevent, mitigate and control degradation of aquatic, terrestrial and atmospheric environmental quality and processes conducive to desertification.

The National Physical Development Plan (2002-2022) – Tourism Sector Policy

The over-riding goal of the plan is to promote the integrity of the physical environment for sustainable development and provide a framework within which citizens can achieve desired social and economic objectives. The Tourism Sector policy objectives, includes among other things the following items relevant to Union Island:

- Local Area Plan to be prepared for Union Island and the Tobago Cays
- Recognises the "economic vulnerability associated with the ecological fragility" of the Grenadines which will continue to be the main focus of the industry. Further tourism development must be "consistent with social and environmental capacity and objectives".
- Plans to further develop the yachting and cruise-ship sub-sectors by provision of infrastructural facilities aimed at attracting a greater number of marine-oriented tourists to the island.
- Adequate provision must be made for the collection and disposal of solid waste including from sea-going vessels.
- Facilities must be put in place for the disposal of sewage and waste water to ensure that untreated effluent is not disposed into the marine environment.
- Cruise-ship and yachting activities need to be regulated, particularly in the Tobago Cays Marine Park.
- Legislation must be enforced to minimise impact on sensitive ecosystems.
- Buildings and other structures should be placed a sufficient distance away from the high water mark to ensure that they do not interfere with the natural movement of sand along beaches or otherwise disrupt natural ecological processes.
- The social impacts of tourism need to be addressed (carrying capacity, use conflicts, incentives to local enterprise, beach access)

LEGISLATION

There are several pieces of legislation that are directly relevant to the management issues at Clifton Harbour, including:

- Beach Protection Act (1981) was developed to protect beaches and to prohibit the removal of sand, corals, stones, shingles, gravel and other materials from the shores of Saint Vincent and the Grenadines and sea beds adjoining.
- Maritime Areas Act (1983) makes provision for the definition of Internal Waters (sec.3), the Archipelagic Waters (sec.4), the territorial sea (sec.5), the Contiguous Zone (sec.6), the Exclusive Economic Zone (sec.7), and the Continental Shelf (sec.8). Provisions of sections 10-22 specify for each of these maritime areas sovereign rights, prohibited and allowed activities, and regulation making powers of the Minister. (23 sections)
- Fisheries Act (1986) is meant for the promotion and management of fisheries and other related matters. This focuses on fisheries management and development- plan committee, agreements licences, fees, charges and royalties, fish processing establishments; marine reserves and conservation measures, priority areas, restricted activities-methods, and gear, research; registration of local fishing vessels and enforcements-designation and powers of authority.
- St. Vincent and the Grenadines Port Authority Act (1987) was to provide for the establishment of an Authority to be known as the St. Vincent and the Grenadines Port Authority; to provide a coordinated and efficient system of port facilities and services; and for the purpose of providing duties and powers of the Authority and for the transfer to, investing in the Authority of functions, assets and liabilities of the Port and Marine Department and St. Vincent Port Authority established under the Port Authority Act, 1975 and other matters related to this.
- Oil in navigable waters Act (1990) makes provisions against the discharge or escape of oil into the territorial waters of St. Vincent and the Grenadines.
- The Environmental Health Services Act (1991) under the Ministry of Health is a revision of the Public Health Act. The Ministry of Health has the power to regulate various environmental aspects directly related to human health. The legislation provides for an Environmental Health Board, which shall be responsible for advising the minister as to any matter relating to environmental health.
- The Litter Act (1991) provides for the abatement of littering (litter includes refuse, animal remains, bottles, paper, plastics, containers, soil, rubble, derelict vehicles, noxious liquid, waste matter, or any other matter likely to deface, make untidy, obstruct

or cause a nuisance), legal action against littering – serving notices for clean-up, charging and Local Authorities responsible to designate areas for receptacles, provide and maintain receptacles and define type of litter that can be deposited.

- Wildlife Protection Act (1991) was developed to provide for the protection of wildlife and matters in the country of St. Vincent and the Grenadines. The first part looks at wildlife management, protection and control through the establishment of a Wildlife Conservation Advisory Committee, the establishment of the reserve, closed seasons and penalties, licences for residents in reserve, special hunting licences and the importation and exportation of wildlife. Part 2 focuses on enforcement, power to search seize and arrest, punishment while Part 3 provides regulations for the prohibited hunting methods. A list of wildlife to be protected (e.g. St. Vincent Parrot) and details on licences for special hunting and keeping the St. Vincent parrot.
- Town and Country Planning Act (1992) remains the principal legislation for land use and planning for the state. An Act to enable the orderly and progressive development of land and the proper planning of town and country areas, to make provision for the control of development, and for matters incidental to the foregoing and connected therewith.
- The Solid Waste Management Act (2000), which created the Solid Waste Management Authority and the Integrated Solid Waste Management Strategy. The Waste Management Authority has general responsibility of the management of solid waste management generated in St. Vincent and the Grenadines. This includes operating facilities for treatment and disposal of solid, non-hazardous and quarantine waste and the management of those wastes; the provision of closure, post-closure and remediation of waste management facilities and also implementing programmes of public education on waste management.
- Dumping at Sea Act (2002) is unique as it aims to control dumping at sea via a detailed system of licensing procedures regarding substances being deposited, vehicles/crafts used to deposit materials and incineration of such materials.
- Oil Pollution Damage Act (2002) is an Act for the implementation of the 1992 International Convention on Civil Liability for Oil Pollution and 1992 International Convention on the establishment on an International fund for Oil Pollution.
- Management of Ship-Generated Waste Act (2002) also to be administered by the Solid Waste Management Authority provides for the powers and jurisdiction in relation to pollution of the sea from ships, prevention of pollution from ships, prevention of pollution by solid waste.

CURRENT HUMAN USE

Land Use

The population of Union Island is about 3,500 with about 1,500 persons living in and around the town of Clifton. Clifton also serves as the entry and exit point for all cargo and for passengers on ferries, yacht and cruise ship passengers. Much of the area along the Clifton waterfront is comprised of the wharf, restaurants, small hotels, shops, offices and homes.

Stakeholders Identification

| Stakeholder | Stake |
|----------------------|--|
| Customs | enforcement of duties on goods, revenue collection, control movement of people and goods |
| Shopkeepers | goods for sale to visitors and residents |
| Hoteliers | Use the area for business, condition of area brings in more business, receipt of goods |
| Vendors | sale of goods to visitors and residents |
| Fishermen | sale of fish and mooring of boats, refuelling of boats |
| Water taxi operators | mooring of boats, transportation of goods and people, sell food and souvenirs to visiting yachts |
| Tour operators | receive and drop-off passengers, refuel and park vessels |
| Immigration | control of movement of visitors, also collect some taxes |
| Yachters | mooring, restocking, over-nighting, refuelling, maintenance of boats, patronize restaurants and shops, disposal of solid and liquid wastes |
| Tobago Cays Staff | location of office and interpretation centre, mooring of boats, refuelling, collection of user fees |
| Ferries | transportation of people and goods, refuelling, over-nighting |
| Police | law and order supervision; and law enforcement. |
| Coast guard | base, mooring, surveillance, transport of prisoners, bring water in the dry season |
| Residents | all of the above, swimming, recreation, litter/garbage/solid waste disposal |

DESCRIPTION OF MANAGEMENT ISSUES

Resource Degradation

Degradation of the marine resource has affected once popular uses of the Clifton harbour e.g. fishing and recreational activities. Live coral in the harbour has significantly declined due to an increase in macro and filamentous algae. The increase in algal growth can be attributed to the increase in nutrient pollutants entering the harbours from activities such as disposal of sewage and waste water from yachts, hotels and restaurants. Other anthropogenic activities such as anchoring, pollution from fuel oil also have a negatively impacted on coral reefs and associated marine organisms. The lack of appropriate management systems for the wharf and anchorage, and poor infrastructure for waste collection and disposal are the indirect causes of resource degradation at the harbour.

Weak Institutional Capacity

The Clifton harbour is one of the most frequently used harbours in the St. Vincent Grenadines but it is not adequately managed to handle the volume of traffic passing through the harbour. Also there are no rules and regulations to which vessel owners must abide. The lack of control of use of the Clifton Harbour, ill-defined responsibilities among the key government agencies, lack of a coordinating mechanism for managing the harbour and enforcing the laws have contributed to the increase in break-ins and theft onboard yachts at the waterfront. Additionally, the current infrastructure at the wharf is inappropriate for efficiently and safely handling the increased volume of traffic.

Obstruction of Access and Use of Beach

The beach was once easily accessible by locals. However some private landowners along the beach were attempting to restrict local access and use of beach. Current legislation does not make provision for privatisation of beaches in Union Island.

MANAGEMENT ACTIVITIES

Goals

To improve the attractiveness and tourism appeal of Union Island by controlling the use of Clifton Harbour; including reducing pollution and managing waste at this major port of entry.

Objectives

The objectives of this management plan are to develop and implement measures to:

1. Increase stakeholder participation in the management of the harbour and regulation of activities
2. Implement strategies to improve water quality and reduce pollution in the waters of Clifton Harbour.
3. Encourage better waste management practices at Clifton through education and outreach.
4. Improve enforcement of laws and also security arrangements for yachts and other vessels at the wharf.
5. Preserve and protect the marine resources within the harbour.
6. Ensure and promote multiple use of the harbour.

These objectives are expected to be achieved within **three years** of implementation of this management plan.

Activities

The success of implementation depends on the support of many of the stakeholders and on the coordination mechanism that works best under local conditions. The following key activities are considered necessary for success.

Objective 1: Increase stakeholder participation in the management of the harbour and regulation of activities

Activity 1: Establishment of a Coordinating Committee

A Coordinating Committee for project implementation will be established to include at least one representative from each of the stakeholder groups identified under the section on Stakeholder Identification. The District Officer and the Union Island Environmental Attackers shall also be included on the Committee.

Participation on the Committee will be voluntary and the responsibility of Committee members will be to ensure that this management plan is implemented in fulfilment of its objectives and for the benefit of the majority of stakeholders.

Activity 2: Conduct regular meetings with stakeholders

The Committee will conduct quarterly meetings with stakeholder groups regarding issues related to harbour management. This will ensure their participation in management is a continual process.

Activity 3: Establishment of the Clifton harbour database

A database will be developed by the Committee with assistance from Customs/Immigration to monitor the number of vessels that enter the harbour and also those that dock at the harbour. Data on the physical condition and harbour setting are currently non-existent and should be collected. Such data will include the size of the harbour, distance of shoreline, water depth, number of anchorage sites and number of moorings. From this annual reports can be prepared by the Committee about the Clifton Harbour.

Objective 2: Implement strategies to improve water quality and reduce pollution in the waters of Clifton Harbour

Activity 1: Water quality monitoring and maintain water quality standards

Four sampling sites/ stations will be established around the harbour to conduct water quality analysis. Marine water quality will be assessed by measuring physical and chemical characteristics such as turbidity, temperature, salinity, dissolved oxygen. Annual reports will be prepared about water quality of the harbour. The water quality of the harbour should meet International water quality standards. This will be achieved over time.

Activity 2: Reduction of Water Pollution in the Harbour

Identification (what and where), quantification (how much - where possible) and documentation of point sources of pollution will be completed. Once this information is available, information on mitigating measures can be accessed from the Caribbean Environmental Health Institute (CEHI in St Lucia) or the United Nations Environment Programme – Regional Coordinating Unit (UNEP-RCU in Jamaica). The Coordinating Committee can then encourage the polluters to use available techniques or technology to reduce or eliminate the pollution.

Activity 3: Ensure that environmentally sound practices are being used for vessel maintenance activities

Objective 3: Encourage better waste management practices at Clifton through education and outreach

Activity 1: Public awareness and education in schools

Building public awareness on the management problems and potential solutions as well as developing education materials for the schools will assist in the control of pollution and waste management in the harbour. Key elements of the public awareness and education will include: data gathering through water quality and habitat monitoring; preparation and delivery of awareness materials for radio programmes, schools and stakeholders; school poster competition, meetings with local stakeholders; and engagement of selected senior Ministry officials in Kingstown.

Activity 2: Establish waste management guidelines for yachters

Yachters can be provided with brochures and flyers about good water management practices in the harbour when they clear with customs.

Activity 3: Educate yachters and boaters about environmental legislation

Brochure, flyers and signage can be used to illustrate activities that are prohibited in the harbour.

Activity 4: Improved Waste Management in the Harbour

Identification (what types and where found or dumped), quantification (how much - where possible) and documentation of sources of the waste will be determined. When this information is documented, assistance from the Solid Waste Management Authority in Kingstown can be accessed to develop an appropriate strategy for managing this waste. The Coordination Committee can then facilitate the implementation of the waste management strategy.

Objective 4: Ensure enforcement of laws and also security arrangements for yachts and other vessels at the wharf

Activity 1: Ensure enforcement of laws by increasing human capacity to patrol the harbour

A small boat with an engine and suitably trained personnel dedicated to patrolling the harbour and adjacent areas should be considered to assist in law enforcement. These patrol personnel could be under the jurisdiction of the Port Authority, Coast Guard or other appropriate agency.

Activity 2: Improving Security at the Harbour

Ensuring that boats are anchored in approved areas, regulating use of the wharf and minimising the risk of break-ins and theft on vessels in the harbour will require cooperation of the Coast Guard and the Police. A zonation plan for the harbour should be developed and clearly demarcated. The zonation plan will identify safe anchorage, no-anchoring areas, no-swimming areas, entrance and exit channel, waiting areas, loading/off-loading areas, etc. The Coordinating Committee, Coast Guard, Police and the Port Authority will collaborate in the development and implementation of the zonation plan.

Additionally, the deployment of closed circuit TV cameras (CCTV) at the wharf and strategically along the waterfront will assist in control of use of the harbour. These CCTVs can connect wirelessly to a dedicated computer or digital video recorder located at an agency in Clifton agreed by the Committee.

Objective 5: Preserve and protect the marine resources within the harbour

Activity 1: Develop an inventory of marine habitats

This inventory will assist in the development of a map indicating marine habitats such as coral reefs, sea grass beds and mangroves within and around the harbour.

Activity 2: Conduct a reef monitoring programme

Coral reef surveys can be conducted to monitor the health of the reefs of the harbour using the Reef Check methodology. Data collected will include reef site description, measure substrate types, and invertebrate and fish counts.

Objective 6: Ensure and promote multiple use of the harbour

Observations indicate that recreational activities and fishing are not popular in the harbour as in previous years due to degradation of the environment. Through activities that control pollution, improve water quality and protect and preserve the marine habitats and resources, multiple uses of the harbour can continue.

INSTITUTIONAL ARRANGEMENTS

Union Island Environmental Attackers will serve as the Implementing Agency and will arrange with organizations and businesses within Union Island to carry out the stated activities for the benefit of all stakeholders. Union Island Environmental Attackers is a non-profit, non-governmental organisation that was established in November 1999 at Clifton, Union Island. They have successfully completed many environmental, clean-ups and awareness projects in Union Island over the past 10 years and has built a strong relationship with governmental agencies, the business sector and community members.

MONITORING AND EVALUATION

Definitions⁶

The following definitions will help in clarifying the intent of the various components of a monitoring and evaluation exercise:

1. Monitoring - is a continuing function that aims primarily to provide the main stakeholders of an ongoing programme or project with early indications of progress or lack thereof in the achievement of programme or project objectives.
2. Reporting - is the systematic and timely provision of essential information used as a basis for decision-making at appropriate management levels. It is an integral part of the monitoring function.
3. Evaluation - is a time-bound exercise that attempts to assess systematically and objectively the relevance, performance and success of ongoing and completed programmes and projects.
4. Results – is a broad term used to refer to the effects of a programme or project. The terms outputs, outcomes and impact describe more precisely the different types of results.

Planning for Monitoring and Evaluation

For a programme or project to be effectively monitored and evaluated, the following tasks have to be completed during the formulation stage:

- Clarification of programme or project objectives;
- Recording the baseline conditions of the situation or capacity to be addressed;
- Establishing a set of indicators and benchmarks for monitoring and evaluating the programme or project results;

⁶ UNDP Programming Manual, Chap. 7 Monitoring Reporting and Evaluation. UNDP 2000.

- Agreeing on what kind of data will be collected and how that data will be obtained and used;
(One step is missing, i.e., storage and retrieval of data.)
- Specifying the reporting requirements (format, frequency and distribution), including the annual and final reports;
- Establishing the monitoring and evaluation responsibilities (coordination, data collection and reporting);
- Providing adequate human and material resources for monitoring and evaluation.

Criteria for Monitoring and Evaluation

The GEF Monitoring and Evaluation Unit specifies five criteria⁷ which are:

Impact: measures both the positive and negative, foreseen and unforeseen changes to and effects on society caused by the project(s) or program(s) under evaluation.

Effectiveness: measures the extent to which the objective has been achieved or the likelihood that it will be achieved.

Efficiency: assesses the outputs in relation to inputs, looking at costs, implementing time, and economic and financial results.

Relevance: gauges the degree to which the project or program at a given time is justified within the global and national/local environment and development priorities.

Sustainability: measures the extent to which benefits continue from a particular project or program after GEF assistance/external assistance has come to an end.

These criteria should be applied during the monitoring and evaluation of the implementation of the management plan for Clifton Harbour. The following categories for action in the plan are:

1. Establishing a Coordinating Committee
2. Public Awareness and Education
3. Reduction of Water Pollution in the Harbour
4. Improved Waste Management in the Harbour
5. Improving Security at the Harbour

⁷ Monitoring and Evaluation Policies and Procedures, the GEF, Washington D.C., 2002, Page 8

Recording the baseline conditions

For each of the five action categories above, the baseline situation in the target area should be recorded prior to the start of the prescribed activities that will lead to fulfilment of the objectives. Questionnaires, direct observation, existing literature, reports and water quality tests can assist in the compilation of the data.

Establishing a set of indicators and benchmarks

Most of the indicators are implicit in the activities and will include:

| Indicators | Means of Verification |
|--|--|
| Establishment of Coordination Committee | Reports and minutes of meetings |
| Awareness and education materials developed | Number and type Number of radio programmes Number of schools in receipt of materials |
| Water quality monitoring | Number and results |
| Habitat monitoring | Number and results |
| Stakeholders meeting | Number and reports |
| Engagement of senior Ministry officials | Reports |
| Assessment of water pollution in the harbour | Documentation and results |
| Mitigation measures developed | Documentation and plan |
| Dissemination of mitigation measures | Number of polluters receiving information |
| Assessment of waste generation /dumping in the harbour | Documentation and reports |
| Waste management strategy | Documentation |
| Stakeholders engagement in waste management | Number of meeting and documentation |
| Zonation Plan | Documentation and plan |
| CCTVs installed | Number and records |
| Patrol boat acquired | Patrol boat documentation |
| Patrol personnel recruited | Number and employment contracts |

During the documentation of the baseline conditions other indicators may emerge and these should also be added to the monitoring list.

Reporting requirements

Progress reports should be prepared quarterly over the three year period. Quarterly reports should specify, the achievements during the project period, the challenges and constraints

encountered, measures to alleviate these challenges/constraints, technical issues and budget expended. Annual reports may not be necessary for the implementing agency, but may be required by the donors. The annual report will summarise the quarterly reports for the period and give some indication of the extent to which the objectives have been achieved so far. A final report on implementation of the management plan at the end of the project period will be required. It should also address the project's impact, effectiveness, efficiency, relevance and sustainability.

Monitoring and evaluation responsibilities

The responsibility for the monitoring and evaluation of the implementation of the management plan will be the Implementing Agency – Union Island Environmental Attackers. Staff must be identified with clear responsibility for data collection and reporting.

Evaluation

There should be two evaluations, one at the mid-term of the implementation of the management plan and the other, within three months of the end of the implementation period. The execution period for the management plan is three years. The purpose of the mid-term evaluation is to assess whether the project is being implemented as planned and to assess progress in meeting the objectives. The purpose of the end of project evaluation (summative evaluation) is to assess the project's success in meeting the stated objectives. The summative evaluation collects and analyses information on outcomes (including unanticipated outcomes) and related processes, strategies and activities that led to them. It should also provide a clear understanding of the project's impact, effectiveness, efficiency, relevance and sustainability.

Methodology

The evaluation should be conducted by an experienced party that is independent and impartial from the policy making process of the government, and from the management of the project. The Terms of Reference (TOR) for the conduct of the evaluation should have inputs from the key stakeholders of the management plan to ensure that a range of interests are incorporated. The main elements of the TOR will be:

1. Introduction;
2. Objectives of the evaluation;
3. Scope of the evaluation;
4. Issues to be addressed by the evaluation;

5. Products expected from the evaluation;
6. Methodology or evaluation approach;
7. Composition and responsibilities of the evaluation team; and
8. Implementation arrangements.

The method to be employed should include:

- Analysis of existing data, project reports and other relevant information, gathered from desk reviews and field visits; and
- Interviews with key stakeholders, in particular project beneficiaries, community groups, NGOs and civil society organizations and the private sector.

Key questions that should be addressed during the end of project evaluation would include:

- What were the baseline conditions at the time the project was initiated, in the context of the capacity issues that the project was meant to address?
- What were the positive and negative, foreseen and unforeseen changes to and effects on the environment and stakeholders that resulted from the project?
- To what extent were the objectives achieved or likelihood that they will be achieved? (Include any challenges or obstacles encountered during implementation and measures to overcome these challenges).
- What were the outputs in relation to inputs, looking at costs, implementing time, and economic and financial results?
- What was the relevance of the project to national environment and development priorities?
- To what extent will the benefits or activities continue from the project after external assistance/donor funding has come to an end?
- What were the lessons learnt or lessons that should be learnt that emerged from project implementation?

The draft report of the evaluation should be shared with key stakeholders who must be encouraged to review the document and offer comments to improve clarity and accuracy. The final report should then be placed in the public domain with due notification, to ensure accessibility by all interested parties.

END NOTE

Other organisations in Union Island that should be engaged in the implementation of this management plan include:

1. Sustainable Grenadines Project
2. Friends of Union Island Tourism Inc
3. Union Island Environmental Attackers Inc
4. Young Striders 4 H Club
5. Southern Grenadines Basketball Association
6. Sea Scouts
7. Union Island Netball Association
8. Union Island Easter-Val Committee
9. Union Island Development Council
10. Union Island Water Taxi Association
11. Union Island Environmental Committee
12. Union Island Fisherman's Sport Committee
13. Union Island HIV/AIDS Awareness Committee
14. Union Island Cultural youth in Action
15. The Original Steel Orchestra
16. The Heart of a Sister
17. Union Island Museum and Ecological Society
18. Youths of Today
19. Clifton Pre-School Committee
20. Union Island Secondary School Steel pan
21. Union Island Pathfinder Club
22. Union Island Court Committee
23. Union Island Secondary Parent Teachers Associations
24. Stephanie Browne primary School
25. Mary Hutchinson Primary School

APPENDIX

Indicative Budget

| Activity | Year 1 Cost (EC\$) | Year 2 Cost (EC\$) | Year 3 Cost (EC\$) |
|---|--------------------------|--------------------------|--------------------------|
| 1. Establishing and facilitating the Coordinating Committee; Conduct regular meetings with stakeholders; Establishing a database for the Clifton harbour | 500 | 600 | 600 |
| 2. Conduct water quality monitoring and maintain water quality standards; Reduction of Water Pollution in the Harbour; Ensure that environmentally sound practices are being used for vessel maintenance activities | 60,000 | 20,000 | 20,000 |
| 3. Public awareness and education in schools; Establish waste management guidelines for yachters; Educate yachters and boaters about environmental; Improved Waste Management in the Harbour | 70,000 | 50,000 | 40,000 |
| 4. Ensure enforcement of laws by increasing human capacity to patrol the harbour; Improving Security at the Harbour | 25,000 | 15,000 | 5,000 |
| 5. Develop an inventory/ map of marine habitats in the harbour and conduct a reef monitoring programme | 10,000 | 20,000 | 10,000 |
| 6. Staffing | 30,000 | 50,000 | 50,000 |
| 7. Maintenance | 10,000 | 15,000 | 20,000 |
| 8. Evaluation | 0 | 20,000 | 30,000 |
| Sub-total | 205,500 | 190,600 | 175,600 |
| TOTAL | \$571,700.00 | | |