Information Sheet on Ramsar Wetlands (RIS)

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DD MM YY
Designation date | Site Reference Number

2. Date this sheet was completed: July 2005

3. Country: Trinidad and Tobago

4. Name of the Ramsar site: Buccoo Reef/Bon Accord Lagoon Complex

5. Map of site included:
Map of ecosystem types and land use.

a) hard copy: *yes* ☒ -or- *no* ☐ will be mailed

b) digital (electronic) format: *yes* ☒ -or- *no* ☐

6. Geographical coordinates (latitude/longitude): 11° 10′ N, 60° 57′ W,

7. General location:
The wetland is located on the leeward coast of south-western Tobago (Figure 1), approximately 6 miles (in a straight line) from the administrative town of Scarborough, which is in the parish of St. Andrew. Adjacent to the wetland are the villages of Buccoo and Canaan/Bon Accord which are considered population growth poles in Tobago (IMA, 1996).

8. Elevation:
Mean sea level to 30 m below sea level

9. Area: 12.87 km² (1287 ha)
Mangroves account for 1.3 km² (130 ha)
of which 0.1 km² (10 ha) are ponds and 0.5 km² (50 ha) are seagrass beds (Figure 2).

10. Overview:

Buccoo Reef/ Bon Accord Lagoon are the best example of contiguous coral reef, seagrass bed and mangrove swamp in the south eastern Caribbean. This Ramsar site covers an area of 12.87 km², and is characterised by five emergent carbonate platforms to the north, shallow sandy lagoon with a patchy distribution of coral communities, and the mangrove-fringed Bon Accord Lagoon with a seagrass community (Laydoo *et al.*, 1998) (Figure 2). Some freshwater marsh is located on the eastern side of the site adjacent to the mangrove forest. The five platforms arc seaward of the reef lagoon from Pigeon Point in the west to Sheerbird's Point on the east, and are known as Pigeon Point Reef, Western Reef, Northern Reef, Outer Reef, and Eastern Reef. Sand bottom channels separate the reef flats, the widest and deepest being the Deep Channel. A 50 m buffer zone is included from the edge of the mangroves.

Turtle Grass, *Thalassia testudinum* Banks ex König is the dominant species in the lagoon, comprising 80% of the community (Juman, 2004). Smaller areas of *Halophila decipiens* Ostenfeld and *Halodule wrightii* Ascherson

are also found interspersed among the turtle grass. The dominant algal species were from *Acanthophora*, *Dictyota, Halimeda, Padina. Bryopsis, Codium* and *Caulerpa* genera.

The mangrove forest in the Bon Accord Lagoon is a fringed-forest type, dominated by red mangrove, *Rhizophora mangle.* White mangrove *Laguncularia racemosa*, black mangrove *Avicennia germinans*, and buttonwood mangrove *Conocarpus erectus* trees are interspersed along the landward zone of this system. The fringe covers 0.9 km² of which 0.1 km² are open ponds, and varies in width from 20-70 m (Juman, 2004)

11. Ramsar Criteria:

(1) • (2) • (3) • (4) • 5 • 6 • 7 • (8)

12. Justification for the application of each Criterion listed in 11. above:

Criterion 1: The Buccoo Reef/Bon Accord Lagoon is the best example of a contiguous coral reef, seagrass bed and mangrove swamp in Tobago. All three wetland types and their associated ecosystems (coral reefs, seagrass beds and mangrove forests) are considered as under-represented by the Ramsar Convention, and those to which parties should assign special priority when designating new sites.

Criterion 2: This site is important since it supports threatened ecological communities in the coral reef and seafloor ecosystems, such as staghorn coral (*Acropora palmata*), brain corals (*Diploria labyrinthiformis* and *D. strigosa*), starlet coral (*Siderastrea siderea*) and Queen Conch (*Strombus gigas*), all of which are included in CITES Appendix II. In addition, the site also provides habitat and feeding ground for IUCN Red-Listed species such as the critically endangered Hawkbill turtle (*Eretmochelys imbricata*); the endangered green turtle (*Chelonia mydas*) and Nassau Grouper (*Epinephelus striatus*); and the vulnerable Queen triggerfish (*Balistes vetula*), Hogfish (*Lachnolaimus maximus*), Lined seahorse (*Hippocampus erectus*), Mutton snapper (*Lutjanus analis*) and rainbow parrotfish (*Scarus guacamaia*).

Criterion 3: This wetland supports a diversity of organisms within its biogeographical region (See table below).

Number of marine species of various taxa recorded for Buccoo Reef/ Bon Accord Lagoon (compiled from IMA, 1994; Juman 2004)

TAXON	# of Species
Algae	10
Seagrasses	3
Mangroves	4
Corals	42
(Stony corals)	27
(Horny corals)	14
(Black coral)	1
Sponges	2
Hydrozoan	3
Zooanthids	2
Anemones	4
Annelids	5
Crustaceans	8
Echinoderm	9
Mollusc	24
Ascidian	2
Reptiles	5
Fishes	119

Criterion 4:
The wetland acts as a nursery, shelter and feeding ground for several organisms including commercially important species such as Queen Conch (*Strombus gigas*), Spiny Lobster (*Panulirus argus*), Blue crab (*Callinectes sp*), Mangrove crab (*Cardisoma guanhumi*), Hairy crabs (*Ucides cordatus*) and fishes (*Lutjanus sp, Haemulon spp., Ephinephelus*).

Bon Accord Lagoon supports mangrove, seagrass/algal and plankton communities, provides habitats for aquatic and terrestrial organisms, supports aquatic primary and secondary productivity, and provides organic matter to associated ecosystems. The proposed area is sheltered and provides refuge during storm conditions.

Criterion 8:
One hundred and nineteen (119) fish species were reported over Buccoo reef and in the Bon Accord Lagoon in 2000 (Juman, 2004); of these 102 species were recorded over the reef and 45 species in the mangrove and seagrass beds. These include both adult and juvenile for the species. Approximately 32 fish species were found in more than one habitat (reef, seagrass, mangrove swamp). Beside fish species, a number of adult and juvenile invertebrates, including commercially important species are found within the wetland.

13. Biogeography

a) biogeographic region:
The Bon Accord Lagoon/Buccoo Reef ecosystem is located on the southwest coast of Tobago, which is located 32 km northeast of Trinidad, in the southeast Caribbean. The wetland falls within the Orinoco bioregion.

b) biogeographic regionalisation scheme(include reference citation):
Trinidad and Tobago mangroves fall within the Amazon-Orinoco-Maranhão mangrove complex in the Orinoco bioregion using the Dinerstein et al, 1995 classification for ecoregions.

14. Physical features of the site:

Geology and Geomorphology: Buccoo Reef is a Holocene formation (ca 15,000- 18,000 years B.P) lying on a Pleistocene carbonate platform (Figure 1). Bon Accord Lagoon is a shallow semi-enclosed, well-flushed marine coastal lagoon that is protected by Buccoo Reef. Based on its geomorphology, it can be termed a restricted lagoon since it exhibits two entrance channels (Deep Channel and Blind Passage) from the ocean, has a well-defined tidal circulation, is strongly influenced by winds and is vertically mixed (Juman, 2004).

Hydrology: The wetland receives land-based run-off from a watershed of 7.7 km^2 in a built-up part of southwestern Tobago. The 50% water turnover time is mostly affected by the 0.7 m tides, and is only somewhat longer than one day (Juman 2004). There is no riverine inflow, merely ephemeral steams and surface drains, and the average annual freshwater discharge rate from surface runoff only measures 0.1 $m^3 s^{-1}$ (Juman 2004).

The area has a limestone base which makes it porous. Flow from the catchment into the wetland is also via groundwater, however this has not been quantified.

Water Quality: Buccoo Reef / Bon Accord Lagoon complex is a receiving water body for land-based sources of pollution, including partially treated sewage. There are two sewage treatment plants within the watershed of the wetland.

Reports of high turbidity, nutrients and a high chlorophyll-*a* concentration were most likely related to the input of organic matter from the mangrove swamp, a cattle farm, and a fish processing plant adjacent to the

lagoon (IMA, 1994). Also, phosphorus loading of this coastal area was estimated at 2.6 t annually (IMA, 1992).

John 1995 recorded high turbidity, high nitrite, ammonia and chlorophyll-*a* concentrations in Bon Accord Lagoon and in Milford Bay, and high nitrite and ammonia concentrations in Buccoo Bay, which she attributed to organic pollution mainly from sewage discharge. John (1995) also reported high total and faecal coliform concentrations in water samples from Buccoo Bay, in agreement with earlier studies by IMA (1994). She also stated that septic tanks were the major method of domestic sewage disposal in the drainage area.

Water Depth: The water depth in the Lagoon varies from less than 1 m to about 6 m; to 1 m below sea level on the reef crest.

Tidal Variation: Tidal circulation is primarily responsible for instantaneous currents, transport and exchange in the Bon Accord Lagoon. The tide is mixed, mainly semidiurnal with a significant diurnal inequality (Kjerfve 1981), i.e. a large difference in high and low water level peaks within any one day. The average spring tidal range equals 0.78 m, and the average neap tidal range equals 0.4 m. The lagoon is on average 2 m deep and is well-flushed, with a reasonably high rate of tidal exchange between the lagoon and the adjacent coral reef (Juman 2004). Gravitational circulation is insignificant as freshwater discharge is too low to create pressure gradients. The lagoon is usually well mixed, except for periods of extreme rainfall when it has been observed to become stratified with a thin upper layer of less saline water (IMA, 1993).

Currents and Circulation: Water circulation within the wetland is wind driven, mainly by the northern and north-eastern winds. Residual currents within the Lagoon move westerly at a speed of 10-111 cm/s^{-1} resulting in a flushing time of 2-3 days (IMA, 1993). Residual currents over the Reef move in a westerly and north-westerly direction at a speed of 20-60 cm/s^{-1}, resulting in a flushing time of 3-16 hours (IMA, 1993).

The oceanic current flow in the vicinity of Trinidad and Tobago is influenced by the North Brazil Current (NBC), a western boundary current that influences the entire Caribbean. Tobago lies south of the hurricane belt, and thus only occasionally experiences tropical storms and hurricanes.

Climate: Bon Accord Lagoon is a tropical, marine lagoon with surface water temperatures mimicking ambient temperatures; ranging from 25.2º C in February 1998 to 31.8º C in August 1998. Tobago like most other Caribbean islands is classified as tropical (Tropical moist climate: *Am*) according to Köppen's Classification, (1936), as mean annual temperatures are relatively high (≥ 25º C), and the diurnal range of temperature exceeds the annual range. It is classified as dry marine since it averages less than 1500 mm / yr of rainfall (Snow, 1976)

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15. Physical features of the catchment area:

Geology and Geomorphology: Buccoo Reef (Holocene formation from ca. 15,000-18,000 years B.P) lying on a Pleistocene carbonate platform) characterises the adjacent terrestrial geology of southwest Tobago, from Little Courland Bay in the north to Little Rockly Bay in the South. This low-lying region is a coralline limestone formation (Quaternary), which is porous and re-crystalised, and consists of broken fragments of corals and molluscs (Maxwell, 1948) (Figure 1). The algal- limestone within Southwest Tobago is highly fractured, faulted, and facilitates chemical dissolution (IMA, 1996). These geological properties, together with wave action, make the coastal areas very unstable. The high porosity and transmissivity of the coral-algal limestone terrain renders it unsuitable for liquid effluent/ sewage disposal. Geological studies have shown that Southwestern Tobago is susceptible to earthquakes and ground motion. In addition, loose alluvial and coastal sands and gravels are susceptible to liquefaction and ground settlement (IMA, 1996).

Hydrology: There is no riverine inflow, merely ephemeral steams and surface drains. The area has a limestone base which makes it porous. Flow from the catchment into the wetland is also via groundwater, however this has not been quantified.

The largest contribution of freshwater input around Tobago comes from the Orinoco River (IMA, 1996). Muller-Karger and Castro (1993) using Coastal Zone Color Scanner (CZCS) imagery found that the Orinoco discharge has a profound effect on the pigment concentrations around Tobago, and during July-November on the plumes surround Tobago. The effects of the Amazon River are uncertain, but Muller-Karger and Castro (1993) suggest that some of the pigments observed in Tobago waters may be the result of eddies generated in the region of the North Brazil Current.

Climate: Tobago experiences a tropical climate with pronounced dry (January - April) and wet seasons (June to November) and a mean annual ambient temperature of 25.7° C (Berridge, 1981). May and December are transitional months between seasons. Southwest Tobago receives a mean total rainfall of 1415 mm yr^{-1}, 84% of which occurs during the wet season, based on rainfall statistics for Crown Point.

Winds in Tobago are reported to be consistently from the east-northeast during the entire year. Wind data are provided from the meteorological office at Crown Point Airport and from ship observations collected over 100 years, within 2º latitude by 2º longitude region (Canadian Climate Centre, 1988). The wind speed is between 2.5-10 m s^{-1} 90% of the time, and varies between 10-17 m s^{-1} 10% of the time (Canadian Climate Centre, 1988). Wind speeds are greatest during the months of December to June (average wind speed= 6.5 m s^{-1}), and lower between the months of July to November (average wind speed=5 m s^{-1}) (Canadian Climate Centre, 1988). Winds will exceed these ranges during the nearby or overhead passage of tropical cyclones and storms.

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16. Hydrological values:

The wetland system receives and absorbs land-based run-off and sources of land-based pollution. The mangrove and seagrass beds filter sediments and nutrients from land-based run-off. The reef acts as a barrier against wave action and creates a low energy, sheltered lagoon environment. The wetland stabilizes the shoreline and protects against coastal erosion.

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17. Wetland Types

a) presence:

Marine/coastal: A • (B) (C) D • E • F • G • H • (I) (J) K • Zk(a)

Inland: L • M • N • O • P • Q • R • (Sp) • Ss • Tp • Ts • U • Va •
Vt • W • Xf • Xp • Y • Zg • Zk(b)

Human-made: 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • Zk(c)

b) dominance:

C > B > I > J

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18. General ecological features:

The site contains a coral reef, seagrass beds, a mangrove swamp bordered by marsh/shrub vegetation

The forereef slopes gently to a depth of 20 m west of the reef flats, 15 m to the east and over 30 m to the north, and the fore reef was characterised by large scleractinian coral colonies (Laydoo, 1985). On the upper forereef area, staghorn coral, *Acropora palmata* was common, but as rubble and standing dead skeletons. Large colonies of brain corals, *Colpophyllia spp.* and *Diploria spp.*, starlet coral, *Siderastrea siderea*,

and the star corals, *Montastrea cavernosa,* and *M. annularis*, dominated the lower forereef area. Colonies of leaf coral, *Agaricia spp*., gorgonians and sponges were also common in the lower forereef. Smaller coral communities were found throughout the backreef lagoon and were characterised by one to a few species, dependent on location (Laydoo, 1985).

Coral patches in the northern areas of the backreef lagoon were mainly comprised of large boulder-like formations of star coral, *M. annularis* and the brain corals*, Diploria labyrinthiformis* and *D. strigosa*, in association with seafans, *Gorgonia ventalina*, and other octocorals (Laydoo, 1985). Numerous reef fish species were commonly encountered at this location, which is popularly known as the Coral Gardens, the most popular site on the reef for glass bottom boat tours. The composition (relative abundance) of the coral communities has changed in recent years.

The mangrove forest that fringes the Bon Accord Lagoon measures 1.3 km^2 and is dominated by red mangrove (*Rhizophora mangle*). Some black mangrove (*Avicennia germinans*), white mangrove (*Laguncularia racemosa*) and buttonwood mangrove (*Conocarpus erectus*) are interspersed among the red mangroves especially in the landward side. A brackish marsh community dominated by sedges (*Eleocharis mutata*) borders the landward edge of the mangrove swamp.

Red mangrove above-ground biomass ranged between 2.0 and 25.9 kg (dry wt.) m^{-2}. Mean biomass was 14.1 ± 8.1 kg (dry wt.) m^{-2} yielding a standing crop of 11,318± 6,488 t. Litterfall rate varied spatially and seasonally. It peaked from May to August (4.2-4.3 g dry wt. m^{-2} d^{-1}) and was lowest from October to December (2.3-2.8 g dry wt. m^{-2} d^{-1}) (Juman, 2005a). Mean annual litterfall rate was 3.4 ± 0.9 g dry wt. m^{-2} d^{-1}. Leaf degradation rates ranged from 0.3 % loss d^{-1} in the upper intertidal zone to 1 % loss d^{-1} at a lower intertidal site flooded by sewage effluent. Mean degradation rate was 0.4 ± 1% loss d^{-1}. The swamp produces 2.8 t dry wt. of litterfall and 12 kg dry wt. of decomposed leaf material daily (Juman, 2005a)

The seagrass beds cover an area of approximately 0.5 km^2 and are dominated by turtle grass (*Thalassia testudinum*). Some *Halophilia decipiens* and *Halodule wrightii* were also observed among the *Thalassia*. These beds are interspersed with macro-algae species including calcareous green algae (*Halimeda*).

Thalassia areal productivity and turnover rates varied spatially, and seasonally. They were higher in the back-reef area than in the mangrove-fringed lagoon, and were lowest at locations near to a sewage outfall. *T. testudinum* coverage ranged from 6.6 % in the lagoon to 68.5% in the back-reef area while areal productivity ranged from 3.9 to 4.9 g dry wt m^{-2} d^{-1}. Areal productivity and percentage turnover rates were also higher in the dry season (January–June) than in the wet season (July–December). Areal productivity ranged from 3.0 in the wet season to 5.0 g dry wt m^{-2} d^{-1} in the dry season while percentage turnover rates ranged from 4.2% to 5.6% (Juman, 2005b).

A freshwater marsh area and pond is found on the eastern side of the Ramsar site within Buccoo Bay adjacent to the mangrove forest. Marsh Species recorded include *Eleocharis mutata*, *Cyperus ligularis*, *Cyperus oxylepis*, *Paspalum distichum*, *Fimbristylis spp*., and *Montrichardia arborescens*. This marsh area is used by a number of waterfowls including Green heron (*Butorides virescens*), Tricolored heron (*Hydranassa tricolor*), Great blue heron (*Ardea herodia*), Yellow-crowned night heron (*Nyctanassa violacea*), Great egret (*Casmerodius albus*), Anhinga (*Anhinga anhinga*), Stilt sandpiper (*Micropalama himantopus*), White-cheeked pintail (*Anas bahamensis*), Blue winged teal (*Anas discors*), Southern lapwing (*Vanellus chilensis*) and Black-bellied whistling duck (*Dendrocygna autumnalis*) (IMA data, unpublished)

19. Noteworthy flora:

The mangrove species are the four types described earlier. These trees provide organic material and habitats for a diversity of marine species, and play an important role as nursery and refuge areas.

Marsh species are mentioned in section 18. The marsh is used by a number of waterbirds. Apart from these species, the seagrass beds are intermixed with a variety of epiphytic and macro-algae that include the

following genera- *Halimeda, Dictyota, Padina, Codium, Caulerpa*, *Acanthophora, and Bryopsis.* Seagrass and macro-algal beds provide organic material as well as refuse and nursery areas for resident and transient marine species.

20. Noteworthy fauna:

Apart from the threatened species mentioned in Criterion 2 (section 12, above), there are populations of Spotted eagle ray (*Aetobatus narinari*), Yellowfin grouper (*Mycteroperca venenosa*), Mangrove crab (*Cardisoma guanhumi*), Seafans (*Gorgonia ventalina*), star corals (*Montastrea annularis* and *M. cavernosa*), Lemon shark (*Negaprion brevirostris*), Spiny lobster (*Panulirus argus*) and Hairy crabs (*Ucides cordatus*), among others.
A detailed species list is provided in Juman, 2004

21. Social and cultural values:

Buccoo Reef is a major tourist attraction with great economic and cultural significance. Tours by local guides to the reef date back to the 1930s. The major tourist-oriented activities that occur currently on the reef are: glass bottom boat tours to the Outer Reef flat, Coral Gardens, and Nylon Pool; reef walking and snorkelling on the shallow backreef areas of the Outer Reef flats, and occasionally sport diving at the forereef sites.

22. Land tenure/ownership:

(a) within the Ramsar site:

Buccoo Reef Marine Park is the under the control of the Tobago House of Assembly (THA). However, there are a number of private land owners along the mangrove fringe. These include CLICO, Angostura Ltd. Ansa Mc Al Mt. Pleasant Credit Union, Gibson and Sabeeny.

(b) in the surrounding area:

National Housing Authority, Private Owners – houses and hotels.

23. Current land (including water) use:

(a) within the Ramsar site:

Tourism, recreation, scientific research, and to a small degree, fishing.

(b) in the surroundings/catchment:

Mainly housing, cattle farming, fish processing plant, sewerage treatment plants, hotels and resort development. To a lesser extent coconut farming.

24. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

(a) within the Ramsar site:

Although Buccoo Reef was declared a restricted area more than thirty years ago, and a management plan was formulated some ten years ago, the Reef and the adjacent Bon Accord Lagoon continue to be stressed by human activities including those that affect water quality. The reef is impacted by physical damage from reef walking and dropping of boat anchor. As a result of nutrient loading mainly from sewage pollution, hard corals are being smothered by macroalgae, and there is a shift in the reef structure and composition. This stressed reef is now more susceptible to coral bleaching and disease, and to other pressures from global phenomena such as climate change. The Nylon Pool, once famous for it beautiful white sand, is now invaded by a shifting seagrass community. The once lush seagrass beds within the lagoon are now overgrown by macroalgae, and the mangroves bordering are threatened by encroachment from developers. This natural resource is now in danger of irreparable destruction if immediate measures are not taken to rehabilitate and manage it.

Tourism activities in and around the reef area have also contributed significantly to the physical damage to the reef. Corals have been trampled, crushed by falling anchors, and intermittent boat groundings (Kenny, 1976). Although fishing is prohibited on the Reef and in the Lagoon, it still occurs within the area.

(b) in the surrounding area:

Improper sewage treatment, agriculture, land clearing to facilitate housing and resort development

25. Conservation measures taken:

Buccoo Reef was designated a restricted area under the Marine Area (Restricted Area) Order in 1973, using the Marine Area (Preservation & Enhancement) Act of 1970. Under this Act, the regulations state that except with the written permission of the Minister, or a person duly authorized by him in writing to grant such permission, no person shall-

i. go in or alight upon a restricted area
ii. operate a boat or other vessel within a restricted area or cause or allow a boat or other vessel to enter such an area
iii. take or remove any fish (fish include corals, crabs, lobsters, shrimps, turtles, turtle eggs and any species of marine fauna) or birds from a restricted area
iv. take or remove any mangrove from a restricted area
vi. dig, dredge, or otherwise interfere with the seabed of a restricted area.

In 1974 the *Preservation and Enhancement Regulations* established legislation for the Buccoo Reef Restricted Area.

In 1994, the Institute of Marine Affairs (IMA) on behalf of the THA prepared a Management Plan for the proposed Buccoo Reef Marine Park. Although the plan was accepted by the THA, the only recommendation that was implemented was the appointment of a park manager to carry out day-to-day administration of the proposed park.

The Buccoo Reef/ Bon Accord Lagoon complex is also in the process of being designated an Environmentally Sensitive Area under the Environmental Management Act (2000).

26. Conservation measures proposed but not yet implemented:

The Government in an attempt to reverse the damage are in the process of declaring the Buccoo Reef Marine Park an **Environmentally Sensitive Are**a (ESA) under the Environmental Management Act of 2000.

The Buccoo Reef Management Committee (BRMC) was established in October 2004 to oversee the establishment of this ESA. The BRMC comprised government agencies, CBOs and NGOs. Some of the functions of the BRMC include reviewing and updating the management plan for BRMP, demarking the BRMP, installation of permanent moorings, public awareness and education, and training through workshops.

27. Current scientific research and facilities:

The IMA has been collecting productivity and physical data on the Buccoo Reef, Bon Accord mangrove forest and seagrass bed for the past 12 years through the Caribbean Coastal Marine Productivity Program (CARICOMP). CARICOMP is a regional scientific program and a network of marine laboratories, parks and reserves to study the land – sea interaction processes in the wider Caribbean Region. The program focuses on understanding and comparing the structure and function of mangroves, seagrasses and coral reefs- the three main coastal ecosystems in the Caribbean. The principal goals of CARICOMP are to determine the dominant influences on coastal productivity, to monitor for ecosystem change, and ultimately to discriminate human disturbance from long-term natural variation in coastal systems over the range of their distribution, using standardized synoptic ecosystem measurements. The IMA has established and is maintaining an ecological database, which will serve as a management tool for the wetland, seagrass bed and coral reef ecosystem. Through its Coastal Conservation project, the IMA also monitors beach dynamics (erosion and accretion) within the Ramsar site.

A Buccoo Reef Marine Trust was established in 2001, but no field station exists in the area.

Currently there are a number of Master's students from the University of the West Indies conducting research on the Buccoo Reef. A PhD student from the University of York is looking at marine valuation issues and a PhD student from Newcastle University is looking at coral diseases.

28. Current conservation education:

School visits, information visits, environmental videos, lectures by NGOs such as the Buccoo Reef Trust and Environment Tobago. The Department of Natural Resource and the Environment (THA) has also implemented an education programme for primary and secondary school. The department also has a fieldtrip awareness programme where schools visit wetlands of Tobago, and they have also installed signs.

29. Current recreation and tourism:

Buccoo Reef is the major tourist attraction in Tobago, and a site of great cultural and economic significance both to the people of Tobago and to the country as a whole. Reef tours on glass-bottom boats, scuba-diving, snorkelling, mooring of yachts, bathing. A user impact survey conducted in 1991 indicated a maximum of 9 boats visiting a location on the reef at peak time. The reef tour boats were mainly anchored or adrift (IMA, 1996). In addition, it was recorded that at times there were over 200 persons at a particular site. Estimated visits to the Reef were in excess of 40,000 - 50,000 per annum (IMA, 1994) with about 34,302 persons visiting the Reef in 1995 (IMA, 1996). Annual income generated by the reef tour trade exceeds TT$1 million (US $160,000), (IMA, 1994).

30. Jurisdiction:

Tobago House of Assembly – Department of Marine Resources & Fisheries
Department of Natural Resources & Environment

31. Management authority:

Director of the Department of Marine Resources and Fisheries
TLH Building
Milford Road
Scarborough, Tobago
Tel # (868) 639-1382

32. Bibliographical references:

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