

CHAPTER I INTRODUCTION AND PURPOSE

1. Setting

The US Virgin Islands (USVI) is a territory of the United States. It lies in the northeast Caribbean (Figure I-1), in the subtropics at 18° north and 65° west. It consists of four major islands, St. Thomas, St. John, St. Croix and Water Island, and about 50 cays (Figure I-2). St. Thomas and St. John, part of the northern Virgin Islands, lie on the Puerto Rico Bank that extends from western Puerto Rico to eastern Anegada in the British Virgin Islands. St. Croix, the largest of the US Virgin Islands, is 40 miles to the south and is separated from the Puerto Rico Bank by a deep trench. The USVI is politically and administratively separated into two districts, St. Thomas/St. John District and St. Croix District.

Figure I-1. Map showing the location of the Virgin Islands in the Caribbean

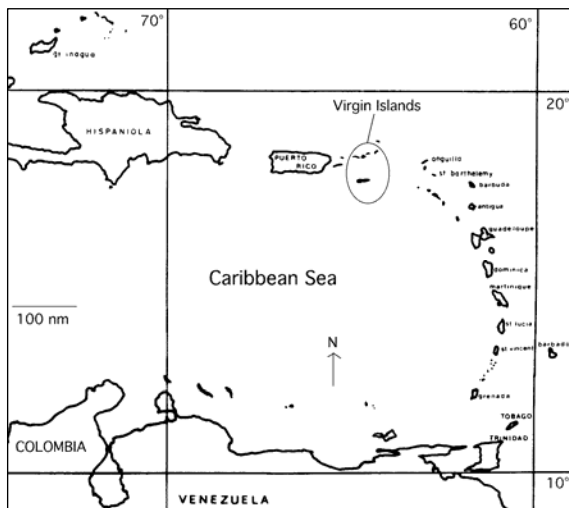
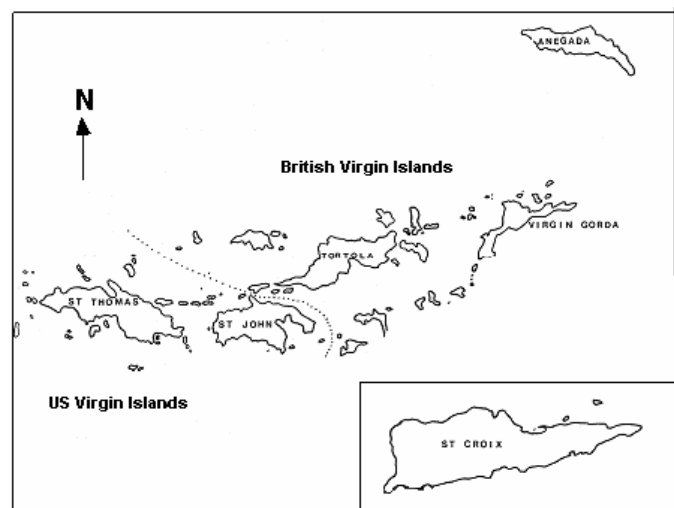


Figure I-2. Map of the Virgin Islands.



The U.S. Virgin Islands have many natural resources and contain examples of tropical ecosystems such as coral reefs, seagrass meadows, salt ponds, algal plains, and mangrove forests (Adey 1975; Adey et al. 1977; Aley et al. 1989; Smith et al. 1997; Garcia Sais 2004; Goenaga and Boulon 1992; IUCN 1988; IRF 2002; Ogden 1974; Olsen et al. 1981; Stengel 1998; Tetra Tech 1991a; U.S. Coral Reef Task Force 2002; and USGS 1994). These habitats provide food and shelter for a large variety of marine and terrestrial life (Adams and Ebersole 2002; AFS 2004; Boulon 1992; Dennis 1992; Gladfelter 1988; Hay 1984; Munro 1984; Ogden 1980; Ogden and Zieman 1977; Ogden and Lobel 1978; Philibosian and Yntema 1977; and UNESCO 1983). There are resident populations of fish and wildlife. In addition, a variety of fish and wildlife migrate through the USVI annually (Dixon 1994; Friedlander 1995; Norton undated; O'Connor 1991; and Oxenford and Hunte 1984).

These natural resources are under pressure from a variety of user groups (Allen 1992; Ellison and Farnsworth 1996; Rogers and Beets 2001; Short and Wyllie-Echeverria 1996; Tetra Tech 1992; Thayer et al. 1975; and Turgeon et al. 2002). The marine waters are heavily fished by both recreational and commercial fishermen (Beets 1987, 1990, 1996, 1997a, 1997b; Bohnsack 1992; Coblenz 1997; Ditton 1978; Ditton and Stoll 2000; Garrison et al. 1998; Holt and Uwate 2004; Olsen and Wood 1982; Roberts 1995; Sheridan et al. 2003; and USVI Govt. 1987). Annually, thousands of tourists visit the USVI to go snorkeling and/or diving (Garcia-Moliner et al. 2001; Hawkins et al. 1999; Marion and Rogers 1994; Rogers and Garrison 2001; Rogers and Needham 1991; Rogers et al. 1988a, 1988b; and Tilmant 1987). In addition, economic development such as home and hotel construction continues to infringe on coastal environments (Gilliard-Payne 1988; MacDonald et al. 1997; Mannoni 1999; and Nemeth and Sladek-Nowlis 2001).

These natural resources are also under pressure due to the high residential population densities that exist in the Virgin Islands, which are comparable to urban areas in the continental U.S. and are long standing (territorial populations in Danish colonial days were over 43,000). St. Thomas, with an area of 32 sq. miles, has a population of approximately 51,300 (July 2004 estimate). St. John, with an area of 19 sq. miles (2/3 of which is national park), has a population of approximately 3,600. St. Croix, with an area of 84 sq. miles, has a population of approximately 53,375, and Water Island has a population of less than 500. This is a total population of 108,775 with a density of approximately 800 people per square mile (CIA 2004).

Agencies of the Government of the United States Virgin Islands

Constitutional provisions of the U.S. Virgin Islands are established by the U.S. Congress. The current version of that law is termed the "1954 Revised Organic Act of the Virgin Islands", amended in 1968-72 (CIA 2004). The Virgin Islands has a unicameral legislature of fifteen Senators; seven of whom are resident in St. Thomas or Water Island and are elected at large by voters resident in the district of St. Thomas/Water Island; seven of whom are resident in St. Croix and are elected at large by voters resident in the district of St. Croix; and one of whom is a resident of St. John, elected at large by voters from all islands.

The institution responsible for the management of marine resources in the U.S. Virgin Islands is the Department of Planning and Natural Resources (DPNR). Within territorial waters (less than 3 miles from shore), rules and regulations are codified in the Virgin Islands Rules and Regulations (VIRR), primarily within Title 12. Rules and regulations are enacted only by the executive branch. Laws are enacted by both the legislative branch and executive branch.

Fisheries and marine resource management suggestions can come from a variety of sources including local government agencies, the public, commercial fishermen, university scientists, the local Fisheries Advisory Committees (FAC), and the St. Croix Fishermen's Co-op. In recent years, most suggestions for the management of marine resources and fisheries have been initiated by the local Fisheries Advisory Committees, which are composed of representatives from government, marine scientists, commercial and recreational fishers, charterboat fishers, and dive operators. For example, the recent initiative to limit issuance of new fishing licenses was a St. Croix FAC initiative. The DPNR Commissioner typically requests a public hearing on a

recommendation. This allows the public to provide input into the management suggestions. Based on the results of public hearings, the advice of local government agencies (especially the Division of Fish and Wildlife, and the Division of Environmental Enforcement), and the range of authority of the DPNR Commissioner, the DPNR Commissioner may either issue a regulation or may suggest amendments or adjustments to the VIRR.

The role of the Division of Fish and Wildlife is quite varied and includes the following functions:

- 1) advise and support the local Fisheries Advisory Committees,
- 2) conduct appropriate research to assess the fisheries and marine resources,
- 3) review scientific literature and provide guidance based on the best available information, and
- 4) advise the DPNR Commissioner on fisheries and marine resource issues and management options.

Division of Fish and Wildlife (DFW) research continues in the USVI on a variety of natural resource issues relating to fish and wildlife (DFW 2003). It receives little local funding support. Funding is almost exclusively from two main sources: 1) Division of Federal Aid, U.S. Fish and Wildlife Service (USFWS), Department of the Interior, and 2) the National Oceanic and Atmospheric Administration Fisheries (NOAA Fisheries), Department of Commerce. As such, funded research projects are primarily ad hoc, and based on the priorities of each federal agency or grant program. These federal priorities may or may not be related to key resource priorities in the US Virgin Islands.

Within DPNR, there are other divisions that have responsibilities relating to the marine environment. The Division of Coastal Zone Management (CZM) requires a permit for any land or water disturbance that could impact territorial waters (within the first tier of the coastal zone, as designated by the CZM Act). The Division of Environmental Protection regulates discharge into territorial waters and issues earth change permits in the second tier of the coastal zone. The Division of Environmental Enforcement is responsible for enforcing regulations within USVI waters (Uwate 2002).

There are numerous other organizations conducting marine and fisheries related research in the USVI, including the University of the Virgin Islands (UVI), the Division of Coastal Zone Management (CZM), the Division of Environmental Protection (DEP), Island Resources Foundation (IRF), private consulting companies, the National Park Service (NPS), the United States Geological Survey (USGS), The Nature Conservancy (TNC), the Ocean Conservancy, NOAA Fisheries, the Caribbean Fisheries Management Council (CFMC), and individual researchers from universities outside of the USVI. Each organization has its own research priority and research interests.

2. NEED FOR CONSERVATION AND STRATEGIC PLANS

To date, there has been no comprehensive or strategic plan for the management of fish and wildlife resources in the U.S. Virgin Islands. Therefore, there is a need to compile such a plan.

As part of the Department of the Interior and Related Agencies Appropriations Act of 2002 (115 Stat. 414 Public Law 107-63–Appendix A), a State Wildlife Grants program was initiated “for the development and implementation of programs for the benefit of wildlife and their habitat, including species that are not hunted or fished”. A stipulation of the act was that “no State, territory, or other jurisdiction shall receive a grant unless it has developed or committed to develop by October 1, 2005, a comprehensive wildlife conservation plan”. Thus, to be eligible for future funding from congress under this Act, DFW must submit a comprehensive wildlife conservation plan that is approved by the USFWS, and which contains eight required elements outlined or listed in the Act, described in Chapter 2, section 1. Since the Division of Fish and Wildlife is nearly 100% federally funded, this is the main funding source that allows the Division to research and manage species that are not hunted or fished.

The final plan, to be submitted in 2005, is to incorporate both fish and wildlife (plants are subsumed within wildlife habitats). To achieve this goal, DFW decided to develop the plan in three phases: 1) a wildlife plan to be prepared by the Bureau of Wildlife and the Bureau of Environmental Education during the first year; 2) a fisheries and marine resources plan to be prepared by the Bureau of Fisheries and the Bureau of Environmental Education during the following 2 years; and 3) a comprehensive fish and wildlife plan to be integrated by 2005. However, due to the differences in funding sources, conservation requirements, overall priorities, and organizational constraints, DFW has since committed to producing two stand-alone documents: (1) a terrestrial wildlife comprehensive conservation plan, and (2) a fisheries and marine resources strategic and comprehensive marine wildlife conservation plan.

3. PREVIOUS USVI FISHERIES AND MARINE RESOURCES RELATED PLANS

Territorial Plans

Numerous plans have been written or drafted relating to management of fisheries and marine resources in the US Virgin Islands. These plans have focused on management of particular areas, issues, habitats, and species in the USVI.

For St. Thomas, site specific marine resource management plans exist for the St. Thomas mangrove lagoon area (Anon. 1980), Cas Cay Wildlife Sanctuary (Anon. 1983), Red Hook marine terminal (deJongh & Associates 1993), Magens Bay Area of Particular Concern (APC) (IRF 1992a), Vessup Bay APC (IRF 1992b), Botany Bay APC (IRF 1993a), Mangrove Lagoon/Benner Bay APC (IRF 1993b), Mandahl Bay APC (IRF 1993c), St. Thomas Harbor and Waterfront APC (IRF 1993d), Crown Bay (W.F. McComb et al. 1984), and St. Thomas National Marine Sanctuary (OCZM 1981).

For St. John, site specific marine resource management plans have been written for Enighed Pond/Cruz Bay APC (IRF 1992c), Chocolate Hole/Great Cruz Bay APC (IRF 1993e), Coral Bay APC (IRF 1993f), and Fish Bay (Watershed Planning Committee, no date).

For St. Croix, site specific marine resource management plans have been written for the east end of St. Croix APC (IRF 1992d), Great Pond Bay APC (Bacle 1992, IRF 1992e), Christiansted Waterfront APC (1993g), Frederiksted Waterfront APC (IRF 1993h), Salt River/Sugar Bay APC (IRF 1993i), Sandy Point APC (IRF 1993j), Southgate Pond/Cheney Bay APC (IRF 1993k), Southshore Industrial Area APC (IRF 1993l), St. Croix's coral reef system APC (IRF 1993m; Teyaud 1980), and management of the St. Croix East End Marine Park (The Nature Conservancy 2002). See Figures I-3 and I-4 for the locations of these APCs (areas of particular concern). The V.I. Government established its first marine park, the St. Croix East End Marine Park (EEMP), in January 2003. The EEMP is being developed as part of the National Action Plan to Conserve Coral Reefs. To ensure the long-term success of this newly established park, the Virgin Islands has decided to continue the bottom-up approach for developing conservation activities within the boundaries of the EEMP (USVI Govt. 2004). The V.I. Government has also decided that the EEMP will be the focal point around which development of the Local Action Strategies (LAS) will occur for the first 3-year period. The overall goal is to implement and expand the existing EEMP Management Plan, which is the result of 2 years of workshops that relied heavily on community input and expertise (USVI Govt. 2004).

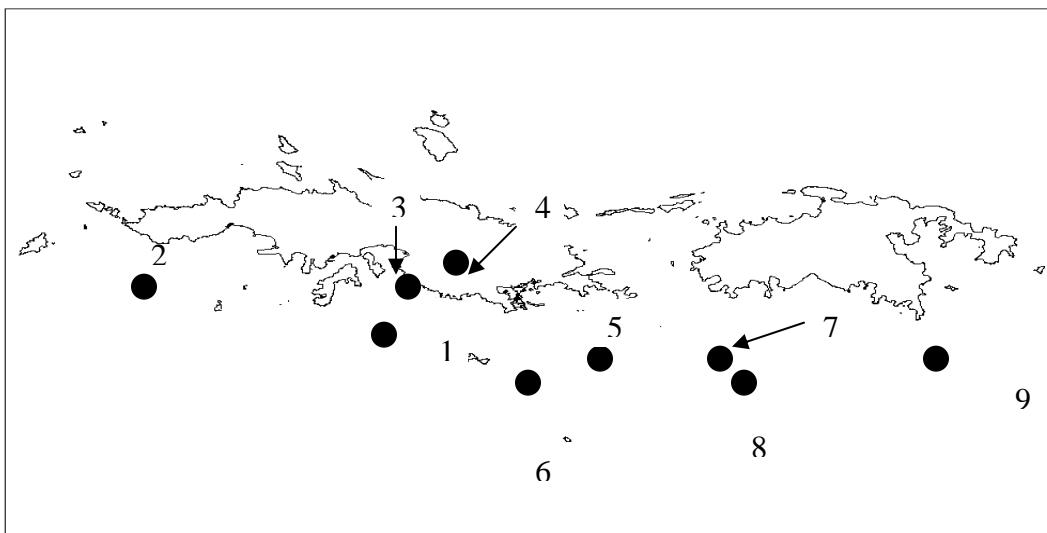


Figure I-3. Regional APC Map for St. Thomas and St. John. Adapted from OCZM 1988, and Island Resources Foundation 1993a.

St. Thomas:

- 1.) St. Thomas Harbor and Waterfront
- 2.) Botany Bay
- 3.) Magens Bay and Watershed
- 4.) Mandahl Bay
- 5.) Vessup Bay—East End
- 6.) Mangrove Lagoon—Benner Bay

St. John:

- 7.) Enighed Pond—Cruz Bay
- 8.) Chocolate Hole—Great Cruz Bay
- 9.) Lagoon Point—Coral Harbor

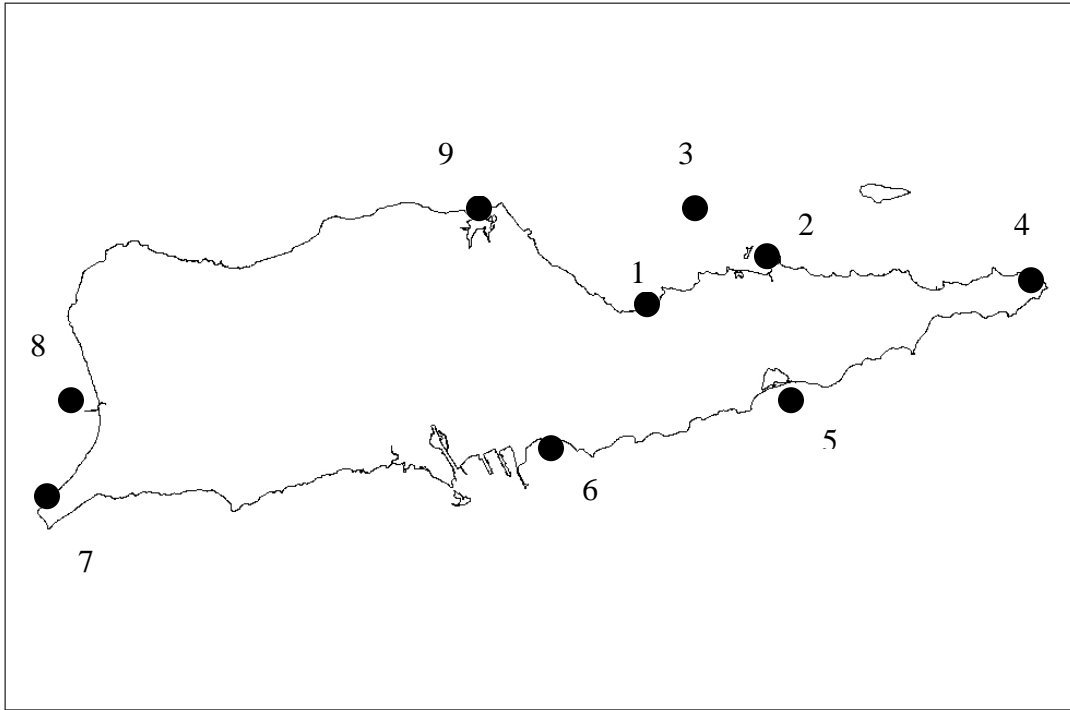


Figure I-4. Regional APC Map for St. Croix. Adapted from OCZM 1988, and Island Resources Foundation, 1993a.

St. Croix:

- | | |
|---------------------------------|--------------------------------|
| 1.) Christiansted Waterfront | 6.) Southshore Industrial Area |
| 2.) Southgate Pond—Cheney Bay | 7.) Sandy Point |
| 3.) St. Croix Coral Reef System | 8.) Frederiksted Waterfront |
| 4.) East End | 9.) Salt River—Sugar Bay |
| 5.) Great Salt Pond Bay | |

USVI marine resource management plans that deal with more general issues include: wetlands (Department of Housing, Parks, and Recreation 1988); sediment control and monitoring (Island Resources Foundation 1996); saltwater wetlands protection (Knowles 1997); the Territorial park system (Policy and Planning Unit 1980); vessel waste control (Wernicke and Towle 1983); recreation including marine recreation (USVI Govt. 1985); management of coral diseases (Davis et al. no date); aquaculture development and management (Anon. 1995); coral reef management (ReefKeeper 1993); recovery of marine turtle populations (Anon. 1993; Boulon et al. 1992; NMFS 1992); monitoring habitat destruction from hurricanes (Aubrey et al. 1991); artificial reef development (Beets 1992); land and water use (USVI Govt. 2000); implementing environmental protection laws including marine environment issues (DCCZP 1994; OCZM 1988; and UVI Cooperative Extension Service 2002); general fish and wildlife management (Bureau of Sport Fisheries and Wildlife 1972).

One of the more recent management plans, prepared by the Division of Fish and Wildlife at the request of the USFWS, was written in 2001 (Division of Fish and Wildlife 2001). This five year management plan included strategies for the conservation, enhancement, and restoration of USVI marine and wildlife resources. By so doing, DFW qualified for additional funding through the USFWS Strategic Wildlife Grant (SWG) Program.

Federal Plans

In addition to territorial efforts, there have been many federal plans written or drafted for management of marine habitats and species within federal waters, from 3 to 200 miles from the coastline. These waters are under the jurisdiction of the Caribbean Fisheries Management Council (CFMC) (NOAA Fisheries 2004). CFMC has been involved in developing fisheries management plans for the following species: spiny lobsters (CFMC/NMFS 1981); queen conch (Anon. no date a; and CFMC 1988, 1989, and 1999a); coral and reef associated plants and invertebrates (Anon. no date b, Anon. 1982, CFMC 1993a, 1993b, 1994a, 1994b, 1998c, and 1999b; and U.S. Govt. 1999).

CFMC also completed work on management plans for the following: regulatory requirements for management of coastal migratory pelagic resources including dolphin and wahoo (CFMC 1982), and the general fisheries resources within the US Exclusive Economic Zone around Puerto Rico and the USVI (CFMC 1983a, 1983b); the shallow-water reef fish fishery of Puerto Rico and the Virgin Islands (CFMC 1984, 1985, 1990, 1991, 1992, 1995, and 1996; and NMFS 1990); and essential fish habitats in the U.S. Caribbean (Anon. 2001; CFMC 1998b; and NMFS no date). CFMC has also completed work on amending relevant Caribbean fisheries management plans (CFMC 1998a, and 2001). Public response, and commercial fishermen's response in particular, to CFMC's management plans has been critical due to the perception that fisheries data from Puerto Rico are driving the push for more strict management measures in the U.S. Virgin Islands.

There are marine resource and fisheries management plans that deal with species in both territorial and federal waters around the USVI. These are for the highly migratory species such as Atlantic tunas, swordfish, sharks, and billfish (Anon. 1998; Highly Migratory Species Management Division 1998, and 2004; and NMFS 1999; for sharks see NMFS 1991; for billfish see NMFS 1998; for swordfish see NMFS 2000 and South Atlantic Fisheries Management Council 1990).

The National Park Service is initiating a major planning effort that will guide the future management of the Virgin Islands National Park, the Virgin Islands Coral Reef National Monument, and the Buck Island Reef National Monument. Virgin Islands National Park (VINP) comprises slightly more than half of the island of St. John and almost nine square miles of the waters surrounding St. John (VINP 2004). The new Virgin Islands Coral Reef National Monument (VICRNM) (12,708 acres) was established in January 2001 to expand protection of marine resources located near the Virgin Islands National Park in St. John. There was a V.I. Senate resolution opposing this action and the failure to follow NEPA-required processes. Also in 2001, the Buck Island Reef National Monument (BIRNM) in St. Croix was expanded more than twenty times in size (880 acres to over 19,000 acres) and provided full protection from extractive uses (NPS 2004). Both VICRNM and the expanded BIRNM were created by

Presidential Proclamations, calling for both areas to be administered as no-take marine reserves. The new VICRNM was established, and existing BIRNM expanded, largely to restore fish populations and protect reef ecosystems (NPS 2004). Each area is entirely no-take except for fishing for bait fish at Hurricane Hole, St. John, and rod and line fishing for blue runner via permit at VICRNM. Anchoring is not permitted. Regulations to implement the new Monuments took effect in April 2003.

In addition to the above planning efforts, various agencies have written marine resource management plans or guidelines that include or are related to the USVI (NOAA 2004; NOAA Fisheries 1996, 2003; NOS 1998; and UNEP 1996).

Success of Previous Plans

As presented above, there has been much written regarding plans. Some of these plans have been successfully implemented or at least partially implemented. However, many plans have been left by the wayside. Without adequate support, in terms of funding, resources, and political will, no plan can be successful.

The distinction between this plan and other plans, such as the CFMC plans, also needs to be made. This plan is a product of the territorial Virgin Islands government and predominately deals with management issues in territorial waters, from 0 to 3 miles offshore. Federal plans, such as the CFMC plans, deal with management issues in Federal waters, from 3 to 200 miles offshore. As such, area closures are primarily a Federal management issue.

4. BENEFITS OF A USVI STRATEGIC AND COMPREHENSIVE MARINE RESOURCES AND FISHERIES PLAN

The strategic and comprehensive marine resources and fisheries plan will consolidate and document all research and project work related to the status of USVI marine resources and fisheries. Based on the consolidation and review of these previous studies, an assessment can be made regarding these resources. Critical research and data deficiencies and needs can then be identified.

This plan also provides an opportunity to clearly state the objectives of marine resource and fisheries management in the USVI. These objectives should be compiled in consultation with government as well as private sector input.

This plan also provides a forum for public input regarding the priority issues of the USVI's marine resources and fisheries. Public input is critical to identifying priority issues. Finally, the plan will serve as a blueprint or nautical chart for addressing and resolving the priority issues concerning USVI marine resources and fisheries.

5. OBJECTIVE

The overall objective of this plan is to manage the fisheries and marine resources in a sustainable manner for the continued benefit of the people of the U.S. Virgin Islands.

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