

St. Eustatius Marine Park: A Case of MPA Problems and Solutions in the Caribbean

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ABSTRACT

The St. Eustatius Marine Park is relatively obscure in comparison to sister-island Marine Parks, Bonaire, and Saba, partly due to its young status. The Marine Park did not become actively managed until 1998. The park surrounds the island of St. Eustatius from the high water mark to the 30 meter depth contour, and contains two reserves. The park's basic infrastructure is in place, with over thirty (30) dive and yacht moorings installed and maintained, and regulations and user fees are in force. The creation and implementation of the Marine Park occurred without input from the local dive shops, fishers, and other stakeholders. Therefore, STENAPA has many stakeholder challenges to face and community awareness and education are now a primary focus of the Marine Park. Cooperative management and empowerment of stakeholders are slowly being integrated into the park's management scheme. User fees are not sufficient to sustain the Marine Park due to a lack of substantial tourism, and scarcely cover the cost of two (2) full-time employees. Consequently, a worldwide volunteer program was established in order to carry out many of the tasks needed to manage the park effectively. Volunteers use the two (2) to six (6) month experience as an internship or practical training for their university. Although the volunteer program is successful, it does not preclude the need for donors to increase funding availability for permanent staff and, in particular, overhead. Carrying capacity is far from being reached, therefore promotion of the St. Eustatius Marine Park as a dive destination is imperative in order to realize self-sufficiency. The St. Eustatius Marine Park has excellent potential given its young status combined with a fairly comprehensive infrastructure. If effectively managed, it will achieve its goal of resource protection that will allow appropriate sustainable uses.

KEY WORDS: Reserves, STENAPA, volunteers

Parque Marino De San Eustaquio: Un Asunto De Los Problemas y Las Soluciones Del Parque Marino En El Caribe

El Parque Marino de San Eustaquio es desconocido en comparación con los Parques de las islas hermana Bonaire y Saba en parte causado por su juventud. El Parque no estaba bien administrado hasta 1998. El Parque Marino envuelve la isla de San Eustaquio desde la marca de marea alta hasta la profundidad de 30 metros; además contiene dos reservas. Existe la infraestructura básica con más de treinta ancladeros de submarinismo y de yates establecidos y mantenidos. Preceptos legales

y contribuciones financieras están en vigor. El Parque Marino de San Eustaquio ha sido redactado y autorizado sin participación de los buceadores profesionales, ni de los pescadores ni otros participantes. Se considera El Parque Marino como una dictadura. Por lo tanto el Parque Marino considera que es importante desarrollar la conciencia de la sociedad así como la educación. En este momento se está introduciendo la administración compartida y participación de los interesados en el sistema de administración.

Las contribuciones financieras no alcanzan para sostener el Parque Marino por falta de turismo esencial, tampoco cubren los gastos de los dos empleados. Por consiguiente se organizó una campaña mundial con el fin de entusiasmar a voluntarios para administrar en realidad los sitios. Los voluntarios aprovechan su práctica interna de dos o seis meses como prácticas para sus estudios universitarios. Aunque vinieron más voluntarios de lo que había esperado, eso no excluye la necesidad de encontrar a unos patrocinadores para que se pueda mantener la plantilla fija y especialmente los gastos generales.

Una campaña publicitaria es necesario para conseguir que el Parque Marino pueda valerse por sí mismo. Tomando en consideración el poco tiempo de su existencia, El Parque Marino tiene un potencial excelente combinado con una infraestructura bastante amplia que con una gerencia eficaz alcanzará sus objetivos de proteger los recursos.

PALABRAS CLAVES: Parque marino, San Eustaquio

INTRODUCTION

Socio-economic, Geopolitical, and Historical Background

St. Eustatius (commonly referred to as "Statia") is one of five islands within the Netherlands Antilles. Curacao, Bonaire, St. Maarten, Saba, and St. Eustatius, together with Aruba, which has separated itself from the Netherlands Antilles, form part of the Kingdom of the Netherlands (Figure 1). The Central Government resides in Curacao, but there exists a trend towards greater decentralization of government to the respective Island Territories, which decentralization has de facto also included environmental issues. A Lieutenant Governor who is appointed by the Governor General on behalf of the Queen, and who chairs the elected Island Council as well as the Executive Council, heads each Island Territory. The Island Council has legislative powers (Van't Hof 1991).

Tourism is an important source of revenue in St. Eustatius, but it has not been aggressively marketed to reach its potential. Because SCUBA diving offers the greatest potential for sustained revenues, tourism will depend to a large extent on the quality of the marine environment (Van't Hof 1991).

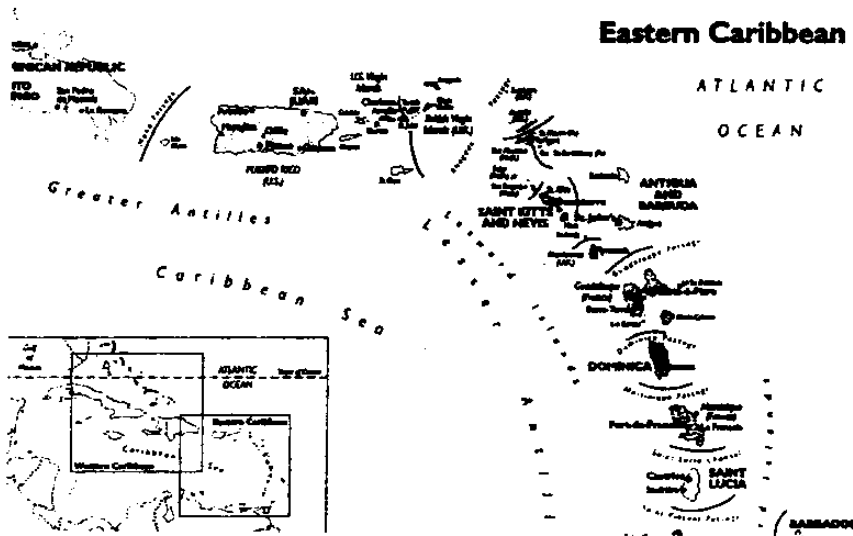


Figure 1. Location of St Eustatius

The first proposal to establish a Marine Park in the Netherlands Antilles dates back to 1971 (Van't Hof 1991). The actual establishment of the first Marine Park did not take place until almost a decade later in Bonaire. The Central Government in Curacao recognized the absence of Governmental agencies that could deal effectively with the planning, establishment and management of Marine Parks, and island governments were asked to appoint a non-governmental agency to develop and manage parks. The St. Eustatius National Parks Foundation (STENAPA) manages the Statia Marine Park, which was created through the Marine Environment Ordinance St. Eustatius in 1996, but did not become actively managed until 1998. STENAPA also manages the terrestrial Quill National Park and is developing a Botanical Garden on St. Eustatius (Figure 2).

Specific Challenges Faced

- i) Until March 2001, Marine Park boundaries had been misinterpreted as two small, disjunct areas. STENAPA now manages all the waters surrounding the island of St. Eustatius from the high water line to 30 meters in depth, and the two small areas previously thought to be the Marine Park, are actually Reserves within the park (Figure 2.). Although this realization increased management capabilities, the discovery also posed some problems. Regulations regarding fishing, dive shops, permits, coastal development, etc. stipulated within the Marine Environment Ordinance now apply to all waters surrounding St. Eustatius, not just those within the reserves. This created alarm among stakeholders.

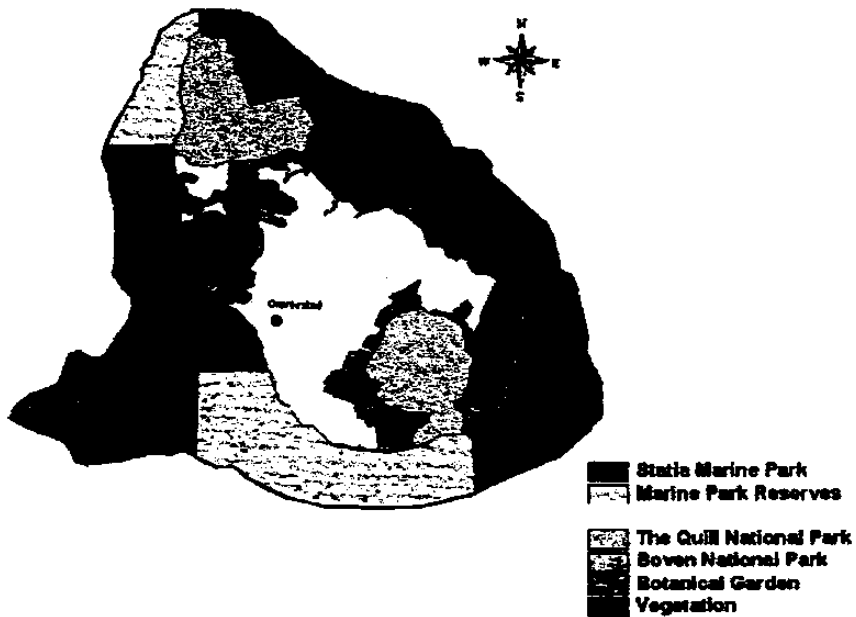


Figure 2. Areas on and around St. Eustatius managed by STENAPA

- ii) User fees are in place, but a lack of substantial tourism prevents the Marine Park from achieving self-sufficiency through user fees (Figure 3). The only source of steady income for the Marine Park derives from park entry fees (dive fees) and yacht fees (overnight moorings), but these do not generate enough income to pay 2 full-time employees, and falls short of covering any materials and equipment needs or overhead.
- iii) Dive shops were not entirely compliant with regulations and Marine Park entry fees.
- iv) Conservation is a fairly new concept for the people of St. Eustatius, and many islanders resist conservation initiatives.
- v) Communication with fishers is difficult. Regulations and information regarding beneficial results of marine reserves are posted, but many fishers cannot read and others vowed to never support the Marine Park at its onset. One fisher was taking between 100 and 500 Queen Conch (*Strombus gigas*) per week and fishers were placing fish traps (pots) inside reserve boundaries. Both acts are in violation of the Marine Environment Ordinance.
- vi) Regulations are in place, but enforcement is minimal and sometimes non-existent. The Marine Environment Ordinance states that the Marine Park will be given a "non-governmental law person," but the Inspector of the

Police Department is apprehensive about giving law enforcement authority to the Marine Park.

- vii) Scientific research has played an important part in the development of the St Eustatius Marine Protected Area (MPA). It has served as the basis for surveying and designating the Marine Park reserves and for some of the legislation and regulation involved in protecting the marine environment. It is imperative that scientific interest is maintained to closely monitor the health of St Eustatius Marine Park and to understand the limits and needs of the local environment in order to legislate accordingly.

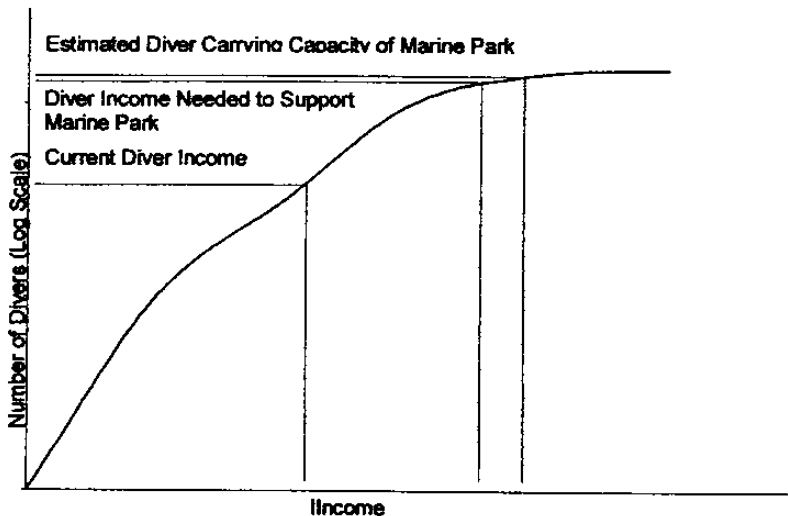


Figure 3. Diver income and carrying capacity of St. Eustatius Marine Park

METHODS USED TO OVERCOME CHALLENGES AND RESULTS

Lack of Funding for Staff

A worldwide volunteer program was established in September 2001 due to a lack of funding and need for Park employees. Seventeen volunteers (from Germany, France, U.S., England, Finland and Austria) have completed from two to six month internships or practical training for universities to work in the Marine Park, the Quill National Park, and the Botanical Garden. The Botanical Garden facilities were converted into a communal living area for volunteers. Volunteers make effective, comprehensive management possible by:

- i) Helping maintain the mooring system,
- ii) Diver supervision,
- iii) Coordinating the sea turtle tagging and monitoring program,
- iv) Bi-weekly clean-up of Zeelandia beach,
- v) Assisting the Snorkeling Club, an educational program for local school children that provides the children with skills and knowledge to enjoy the marine environment,
- vi) Implementing educational projects such as the school coloring contests and marine science lessons,
- vii) Creation and distribution of educational and promotional materials,
- viii) Improving STENAPA's image through involvement with the local community,
- ix) Erosion control and maintenance of Quill National Park trails,
- x) Creating trail leaflets,
- xi) Website design and maintenance,
- xii) Reestablishment and improvement of the "Friends of Stenapa" Program,
- xiii) Assisting in creation of the first employee workbook,
- xiv) Helping to write proposals,
- xv) Assisting Park manager with office tasks, freeing up management to focus on larger objectives,
- xvi) Improvement of greenhouse by propagating more indigenous plants and repairing material damaged due to previous neglect and poor planning,
- xvii) Improving living conditions at the Botanical Garden for future volunteers,
- xviii) Helping to create draft plans for the Botanical Garden,
- xix) Creating an identification booklet of local flora, and
- xx) Maintaining grounds (mowing, weed-whacking, etc.).

The volunteer program also creates problems such as increasing workload for management, primarily due to more supervisory responsibilities. Also volunteers are generally motivated and ambitious, leading to ideas for new projects which require funding. However, the benefits reaped through the volunteer program far outweigh these manageable issues.

Dive Shop Compliance

In December 2001, the Executive Council issued power to the Marine Park to issue permits that require divers to pay visitor fees as well as to provide accurate dive statistics. This permit serves three purposes:

- i) Provides a control mechanism in case growth of the dive industry needs to be limited (Van't Hof 1991),
- ii) Enables the Marine Park to set standards for safety and quality of the services rendered by the operator, and
- iii) Enables the Government to revoke or suspend permits of operators who do not adhere to those standards or do not comply with Marine Park regulations (Van't Hof 1991).

This provided the first requirement of dive shops to be responsible for assuring each diver in the Marine Park is aware of Marine Park regulations and that user fees are paid. Management cannot strictly rely on permits to insure Marine Park regulations are followed. The Marine Park places surveys at all island hotels, which are to be filled out by every guest. These surveys help to identify gaps in Marine Park awareness, dive shop compliance, and other information important for management effectiveness.

Public Relations and Education

Because the Marine Park was established without stakeholder input, public relations and education are now the primary focus of the Marine Park. More than forty positive articles providing information on STENAPA activities have appeared in regional newspapers within the past eighteen months, informing the general public about activities conducted and provided by the Marine Park. Volunteers create and distribute a tri-annual newsletter. Monthly power-point presentations are given in all four island schools, educating local youth on conservation issues concerning the island, the Caribbean, and globally. Prizes are awarded to those students scoring highest overall on quizzes given at the end of each presentation. A STENAPA radio program will begin in January 2003, providing Stations information regarding local activities, regulations and environmental issues. The community is invited to beach clean-ups and to assist with the sea turtle tagging program. Schools collaborate with the Marine Park on special events. A weekly snorkel club program introduces children to the marine environment by teaching basic snorkel skills while providing a general knowledge of marine conservation. Graduates of the Club receive a PADI Skin Diver certificate. A school-organized work experience program enables high school students to gain experience in the workplace and develop a broader understanding of environmental issues.

Fishers

After reserve areas were outlined, action was taken to provide a new fishing ground for fishers as an alternative to the reserves. STENAPA Reef was created using small ship wreckage as an artificial reef for fishing. Of course, this artificial reef does not provide the same catch the two large areas of natural coral reef once provided, and fishers were not satisfied with the tradeoff. In early May, the detrimental harvesting of the threatened queen conch (*Strombus gigas*) was stopped by Marine Park management and with the support of the local police an arrest was made. The queen conch is a threatened species, and is protected by the Marine Environment Ordinance. Now that the true boundaries are finally recognized by the appropriate authorities, the Ordinance gave Marine Park management the power to see that the conch are protected not only in the Marine Park Reserves, but surrounding the island of Statia. The taking of hundreds of queen conch weekly had been ongoing before the Marine Park was established and five years after, until May of 2001. Fishers were alarmed and threatened Park management almost weekly, and once with a knife. Three meetings were held with local fishers in a six-month period

following the arrest in order to improve relations between the Marine Park and fishers, and to foster a better understanding of fishing restrictions and liberties. However, misinformation continued to spread among the fishing community. A fishers association was discussed, and encouraged, by the Marine Park in order to channel correct information but to date no association has been formed.

One year after the arrest and news of Marine Park boundaries, the Marine Park found that fishers react well by being shown through direct action that the Marine Park can be beneficial for them. Park management discovered that when corrective action must take place (e.g. removal of pots from reserves) it is best for the Marine Park to provide the fishers with some service while working along side one another (e.g. retrieving lost and abandoned traps). If these two acts are coordinated together, fishers tend to accept the arrangement more easily.

Government and Enforcement Authority Relations

The relationship between STENAPA and the Executive Council has fluctuated over the years. Cooperation from the local Government is, of course, imperative in order to achieve certain goals. When relations were good, the Government granted partial salary for one Marine Park employee, granted authority to the Marine Park to issue permits, and allowed the Marine Park to place a sign at Zeelandia beach banning sand mining once an alternative was in place, making the beach a protected area for endangered sea turtles.

STENAPA has been unsuccessful in convincing the Executive Council to implement an Article in the Marine Environment Ordinance that requires ships to pay a fee based on tonnage for anchorage within the Marine Park. Vessels using Statia Terminals frequently anchor inside Marine Park boundaries and applying this fee would make the Statia Marine Park self-sufficient. STENAPA was perhaps too persistent in pursuing this issue, and this could possibly be the cause of a noticeable decline in Government interest. Subsequently, the Island Government has addressed serious issues regarding coastal development and waste management without input from STENAPA.

Although legal framework was in place during the early stages of establishing the Statia Marine Park the fluctuating political climate restricts the longevity of commitments made by governmental bodies. A solution might be to give presentations to newly elected government bodies describing the role and benefit of the Marine Park, and continue a policy of promoting the importance of MPA's.

The island's social and political environment occasionally makes it difficult for local law enforcement to honor the legislation outlined in the Marine Environment Ordinance. The Marine Environment Ordinance states that the Marine Park will be given a "non-governmental law person" either within Marine Park staff/management, or from the police force. In order to achieve law enforcement authority, Marine Park personnel must gain "special police" status. However, this has not yet been attained.

Once management realized the "special police" authority may not be attained in the near future regardless a compromise was reached: One enforcement officer

will accompany Marine Park staff on the Marine Park patrol vessel once per week in order to issue warnings to local users of Park waters (i.e. fishers and dive shops), and tickets to fishers from neighboring islands fishing illegally within Marine Park boundaries. This compromise allows some enforcement of regulations, without Marine Park personnel given enforcement authority.

Scientific Interest

Maintaining scientific interest in the Marine Park is necessary for St. Eustatius to insure the future of its unique marine environment and fulfill the socio-economic requirements of the island's tourist industry. The Marine Park recruits scientifically qualified volunteers to engage in marine research. These volunteers also generate ideas in terms of monitoring the environment and future study within the MPA. The St Eustatius Marine Park actively encourages scientific research from outside organizations and provides them with many of the tools necessary for their research. It is hoped that the knowledge gained from within the MPA will increase public and global awareness of the marine environment as well as promote the protection and enjoyment of the St. Eustatius Marine Park.

SUMMARY

Managing an MPA is a balancing act between the needs of the local community and the sustainable use of the marine environment. Regrettably, when the St Eustatius Marine Park was created it was without the co-operation and support of the local community, and as a result, much of the work of STENAPA is centered around the community in order to educate and involve local people in the conservation of their environment. Education of children is key to assuring the future success of the MPA and also gains community support by showing an active interest in the island by providing a variety of activities for children. A strong volunteer program provides a successful solution to a shortage of staff due to a lack of funding. Applying a more stringent system of collecting diver fees and assuring that divers are aware of the Marine Park and its regulations was necessary in order to gain dive shop compliance. Recognition that fishers need to see positive direct action taken by the Marine Park on their behalf, and that working along side them when dealing with fishing gear eliminates some ill feelings and proves to be a more successful strategy when communicating, than posted flyers of regulations and formal meetings. Improving the enforcement authorities' involvement through compromise was imperative in assuring MPA regulations are respected. The improving relationships with the stakeholders, government, and law enforcement allows the Marine Park to dedicate more time and energy to the study, conservation, and protection of the local marine environment and more active management of the MPA for sustainable use. The combination of funding through user fees, improving local relations, and a strong volunteer program enables the Marine Park to fulfill its commitment to the environment and community. However, the Marine Park is far from self-sufficient. Although some problems facing the St Eustatius Marine Park

have been solved, many steps need to be taken to develop solutions to ensure the future of the St Eustatius MPA.

The most effective tool in managing an MPA successfully, at least within the Lesser Antilles, seems to be the realization and application of flexibility and creative thinking when dealing with local Government, communities and stakeholders.

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