

**Willingness to Pay Assessment of Visitors
to the St. Thomas East End Reserves (STEER),
St. Thomas, US Virgin Islands**

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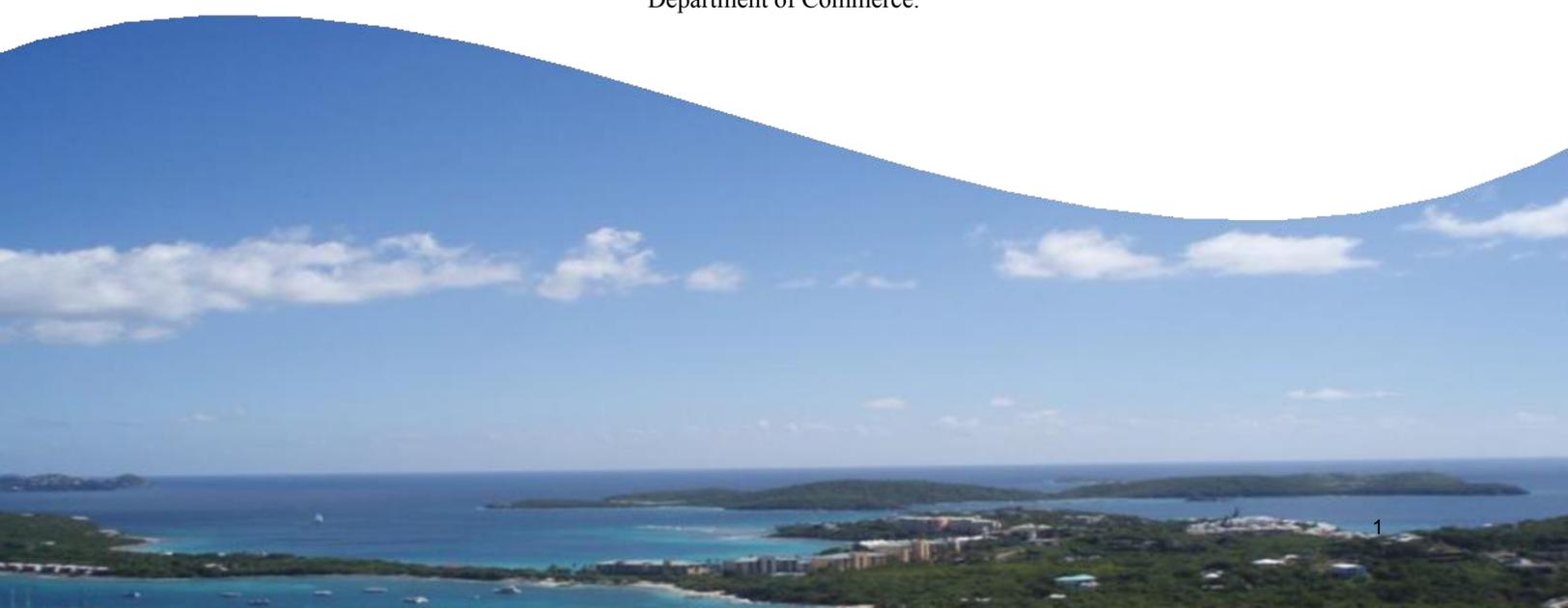
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Executive Summary

The St. Thomas East End Reserves (STEER or “Reserves”) has been under protection for approximately 20 years, but only in the last several years have dedicated funding sources been used to advance management goals for the marine protected area (MPA). The primary sources of funding are rotating federal grants to the Territory, universities, or non-governmental organization partners working in STEER, or through projects conducted by the Environmental Protection Agency and the National Oceanic and Atmospheric Administration. Developing longer-term sustained financing mechanisms for the MPA is a priority goal for STEER. The purpose of this Willingness to Pay Assessment of Visitors to STEER is to determine if visitor contribution to conservation efforts in STEER is a viable option for revenue generation. In the summer of 2013, a 17 question survey was administered to 400 visitors during or after their recreational activity in STEER. Visitors were asked about their experience, interests, and preferences pertaining to STEER. This assessment determined the dollar amount visitors were willing to pay, as well as their preferred method of contribution. Distinctions were made between resident and non-resident visitors as well as visitors entering the territory via airplane versus cruise ship. In addition to their willingness to pay, results from this assessment can also inform educational and marketing materials based on answers to demographic and interest questions.

Summary of Findings

- Most visitors had not previously visited STEER (about 63%).
- 75% of respondents were unaware they were recreating in STEER.
- The non-resident respondents were split between 55% arriving via cruise ship and 45% by airplane, with very small percentages arriving on sailboat and ferry.
- The top three recreational activities visitors participated in were snorkeling, visiting beaches, and wildlife viewing. SCUBA, kayaking, and sailing were also popular.
- The top factors in choosing STEER according to responses were safety, followed by affordable prices, and opportunity to see wildlife.
- Visitor interest questions discovered that the quality of coral reefs, beaches, and parks are most important, while bird watching tours and camping are of little interest.
- Of all visitors, about 63% are willing to pay for conservation efforts in STEER
- About 82% residents are willing to pay while about 56% of non-residents are willing.
- More than three-quarters of airplane visitors are willing to pay, while about 38% of cruise ship visitors are willing.
- Slightly over half of the respondents are willing to pay between \$1 and \$5 for better protection of STEER. About 32% of STEER visitors will pay between \$6 and \$10. Based on the estimated number of visitors to STEER on an annual basis (approximately 15,000 pass through businesses that operate in STEER according to the Sustainable Tourism Plan of 2012), that could result in a revenue generation of \$15,000-\$150,000 towards a STEER conservation fund.

- A territory-wide valuation study found that overall, cruise visitors and overnight visitors are willing to pay on average \$19.05 and \$16.54, respectively, for the protection of coral reefs in general (van Beukering *et al*, 2011, p. 98). Based on an average number of cruise ship and overnight visitors, that can result in revenue generation for the protection of coral reefs of between about 8 and 28 million dollars annually (Sector, 2010).
- In the 2010 Sustainable Finance Plan for STEER, user fees and environmental entrance were ranked as medium priority in terms of feasibility to implement, the certainty or volatility of the revenue stream, and the potential revenue generation (Sector 2010).

In contrast, major findings from the 2012 STEER Sustainable Tourism Plan (Micuda, 2012) survey of the willingness of businesses that operate in STEER to participate in a revenue generation program or contribute financially to the conservation of STEER, we find:

- Willingness to pay from businesses was low overall because of perceived lack of benefits provided by STEER.
- If businesses in STEER were required to pay a mandatory fee, the benefits they would expect to see include establishment of a mooring system, enforcement of rules and regulations, and environmental protection.

Recommendations

- Collection of a cross-the-board mandatory fee for visitors would be challenging based primarily on the lower level of willingness of cruise ship passengers to contribute to conservation in STEER (38%), lack of single entry point to control access and monitor use, and lack of readiness of local businesses to participate in an entry or concessions collection program that would increase costs to tourists (Sector, 2010).
- Other high ranking mechanisms for revenue generation include government contribution, membership dues, concession fees, permits and licenses, private donations, and a protected area trust (Sector, 2010).
- Visitors to STEER should have an opportunity to donate funds such as through the STEER website, an add-on to tour ticket purchase, and at designated kiosks at airport and/or beaches.
- Outreach would need to be developed to clearly state the purpose of the MPA, the need for revenue and the precise use of the donated funds in attaining conservation goals that resonate with visitors (see page 17, below).
- The demographic of the sample respondents suggests marketing to a young, outdoorsy, budget conscious consumer base.
- Based on concerns raised by both STEER businesses and visitors, a STEER ranger position would be valuable in protecting resources as well as raising awareness of STEER boundaries and regulations.
- Collection of donations for the use of Christmas Cove moorings would meet the desires expressed by businesses and visitors, providing a mooring system that protects STEER resources.

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Willingness to Pay Assessment of Visitors to the St. Thomas East End Reserves, St. Thomas US Virgin Islands

Information regarding visitors' experiences and preferences pertaining to the St. Thomas East End Reserves is important for the management of the Reserves. In order to capture the full spectrum of opinions held by visitors to STEER, interviewees were surveyed after participating in a wide variety of activities at many locations. The results of the interviews provide much needed insight from one of the most influential stakeholder groups in STEER which may inform future endeavors. Thank you to Aqua Marine Dive Center, Island Sol, Ambassadors of the Environment, VI Ecotours, Red Hook Dive Center, Seablaster Tours, St. Thomas Yacht Club, and Cruise Ship Excursions for allowing us to survey their guests.

Introduction

This project fills an information gap, identified in the STEER Management Plan (STEER 2011), on type, number, preferences and willingness to pay of the visitors recreating in STEER. This is the first time we have STEER-specific data on visitors. Both the STEER Sustainable Finance Plan (Sector, 2010) and the STEER Sustainable Tourism Report prepared by Marija Micuda in November 2012 (Micuda, 2012) called for a survey of visitors to STEER (Appendix B). At the time the Sustainable Finance Plan was written in 2009-2010, STEER-specific data was lacking, and so revenue generation was based on territory-wide numbers provided by the most recently available tourism reports at the time, from 2007. With the 2012 Sustainable Tourism study, a rough estimate based on information provided by local businesses indicates that approximately 14,775 residents and tourists visit STEER annually (Appendix C). STEER encompasses a 9.6km² region on the southeast side of St. Thomas full of sports, leisure, and educational opportunities, which are enjoyed by residents and tourists alike (Figure 1). Given the volume and diversity of visitors, their opinions as stakeholders are valuable in guiding the management of STEER. Visitors to STEER were surveyed and asked to identify the alluring aspects of STEER, their interest in additional recreation, willingness to pay, as well as preferred payment method, and demographic information.

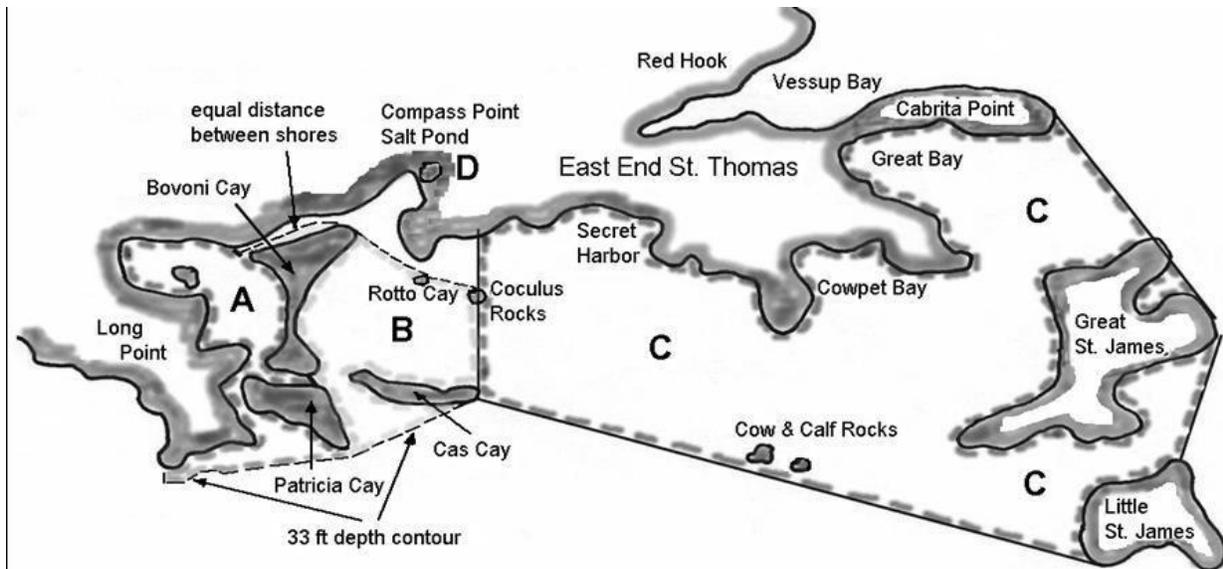


Figure 1: Map of STEER showing boundaries. STEER includes A: Inner Mangrove Lagoon B: Cas Cay/ Mangrove Lagoon C: St. James D: Compass Point Salt Pond.

Methods

A methodology plan for conducting the visitor surveys was provided in Appendix L in the Sustainable Tourism Report, referred hereafter as the methodology plan. The sampling was carried out based on this but, adapted slightly to increase the scope of the sample. Sampling was conducted at businesses that operate tours in STEER as the methodology plan suggests but, also included beaches, boatyards, and docks adjacent to STEER. The actual sampling schedule differed from the plan's schedule to meet logistical requirements such as tour scheduling and weather.

Data was collected through face-to-face interviews using a questionnaire (Appendix A). Sampling took place May 21, 2013 through September 7, 2013. The total number of surveys collected was 400. Non-residents completed 297 surveys and 103 surveys were completed by local residents while visiting STEER. These numbers were based on the target population calculated in Appendix I of the Sustainable Tourism Report (Appendix C). Appendix I also suggested a specific number of surveys to be collected at each venue based on their patrons that visit STEER (Appendix C). This approach was altered based on differing levels of business' cooperation and the strategy of reaching a more diverse user base. Rather than focusing on venue, the sampling was geared toward the activity that the venue provides *i.e.* roughly targeting 100 divers, 100 kayakers, 100 beach goers, and 100 snorkelers.

Limitations

Difficulties in survey collection were linked to the tour operators' willingness to cooperate, tour scheduling, and weather. Some businesses were not accommodating despite verbal willingness to allow their patrons to be interviewed. The sampling time frame did not take place during peak season for the tour operators therefore, the groups were often smaller and tours were limited. The weather during the sampling period affected many dive operators chose to dive outside of STEER due to better conditions elsewhere. These difficulties were mitigated by a longer sampling period, persistence, and inclusion of a wider range of venues.

Results, Findings, and Interpretation

The results of the survey reveal the types of visitors to STEER (resident/nonresident, airplane/cruise ship arrival, and first time/seasoned visitor), activities, experience, reasons to visit, interests, willingness to financially support conservation efforts in STEER, preferred method of payment, and demographics of those visiting STEER. By using this information, tailor-made marketing tools, outreach vehicles, and plans for increased financial sustainability can be developed.

Visitor Type

A total of 400 visitors to STEER were surveyed; the sample was composed of 297 tourists and 103 local residents. Eight-nine out of 400 people were aware they were in STEER, which means that over 75% of those surveyed did not know they were in a marine protected area. Prior to the visit upon which visitors were surveyed, most had never been to STEER (Figure 2). Many comments left by visitors also expressed surprise with the knowledge that they were recreating in a marine reserve. Slightly over half of respondents sampled arrived on a cruise ship, with air travel a close second (Figures 3 and 4). Several of the tours that take place in STEER are offered as excursions through the cruise ships in addition to business from airplane visitors and some locals. Leisurely beach going within STEER is not only popular with airplane visitors but, it is common for taxis to bring cruise ship passengers to STEER beaches as well.

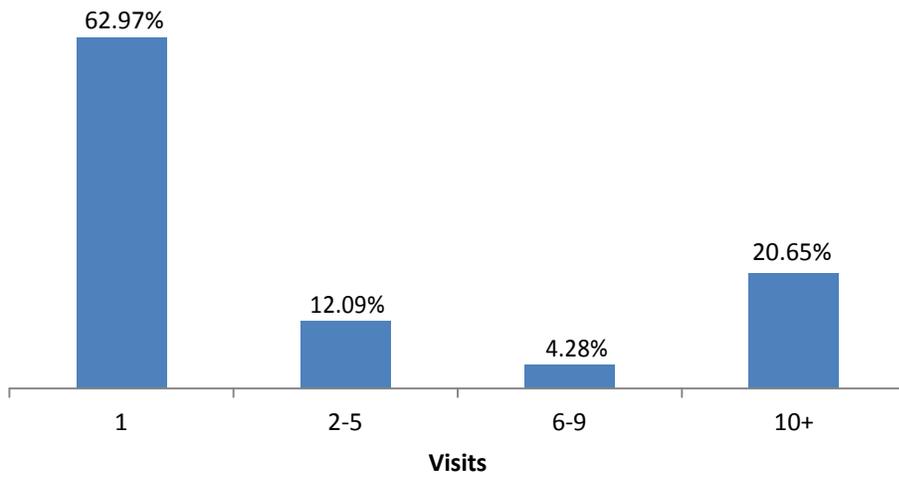


Figure 2: Number of visits to STEER by each visitor

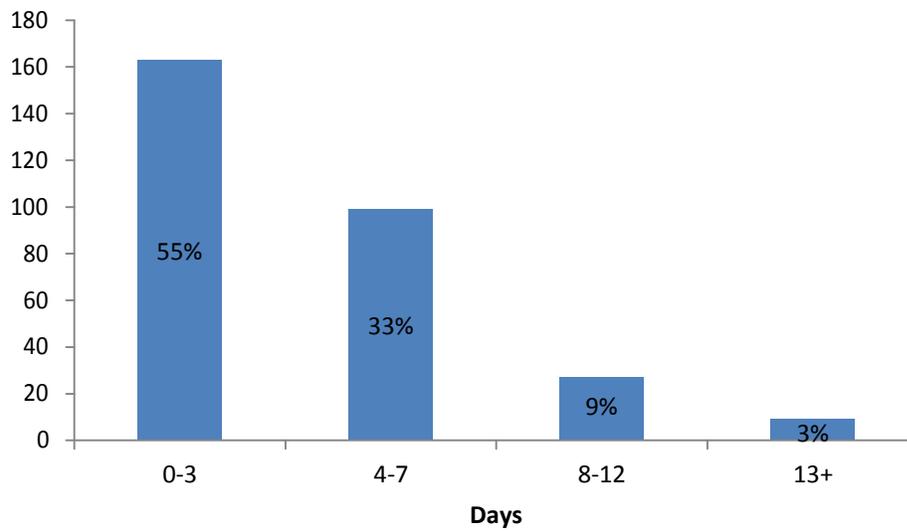


Figure 3: Length of vacation for non-resident visitors.

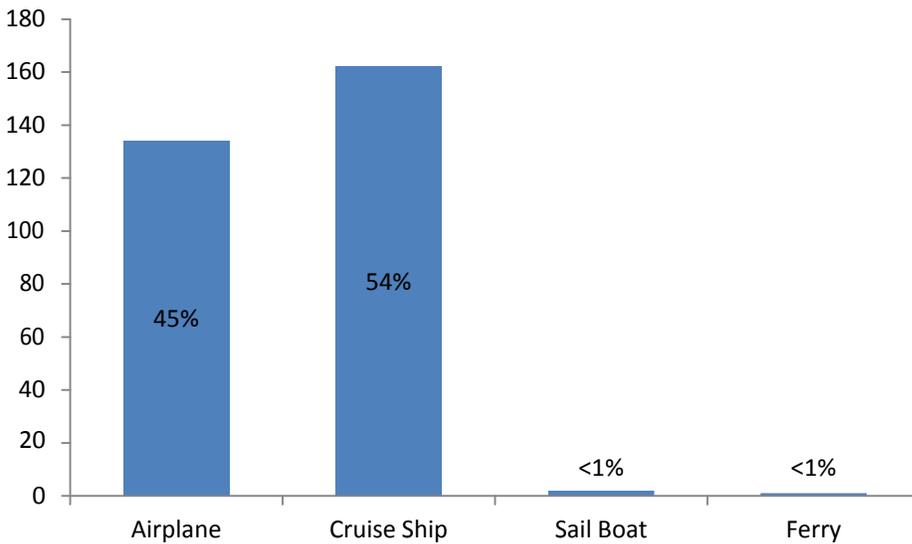


Figure 4: Method of travel to St. Thomas of non-residents.

Activities

The activity most widely participated in by STEER visitors was snorkeling (Figure 5). Snorkeling is offered as part of most tours that take place in STEER; in addition, snorkel gear is available for rent at many beaches in STEER. Beach visit was the second most popular activity participated in by STEER visitors. SCUBA was another popular activity in STEER. A substantial percentage of visitors participated in water sports such as sailing, windsurfing, kayaking, kite boarding, and stand-up paddle boarding.

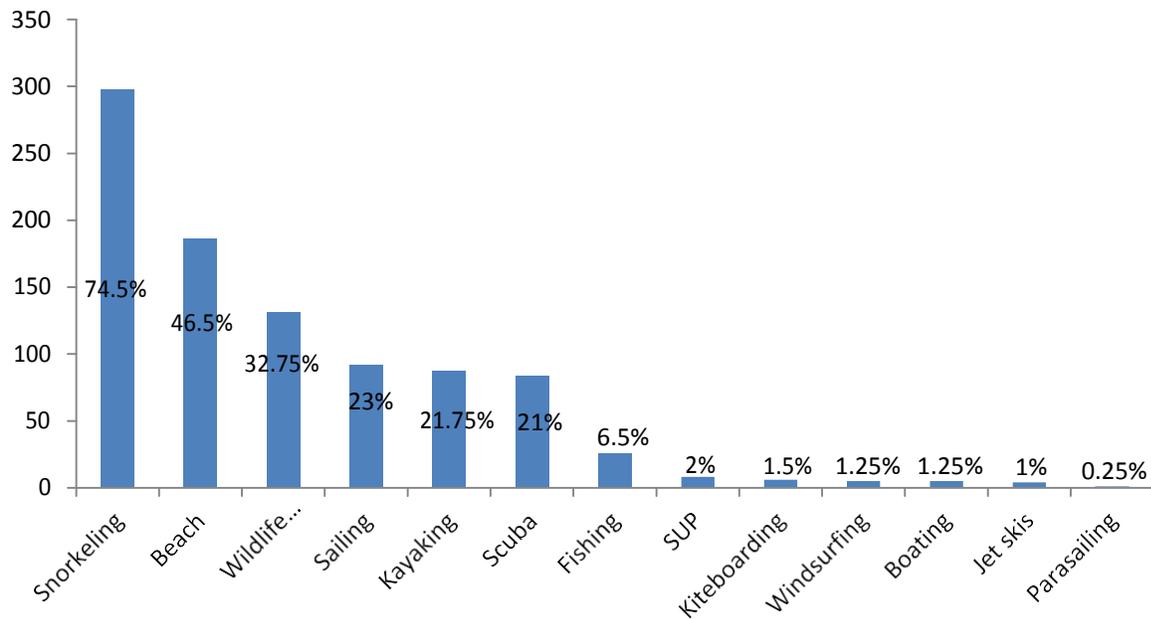


Figure 5: Activities visitors participated in while visiting STEER. Many guests participated in multiple activities.



Kite surfer in Great Bay. (S. McKenzie)



Kayakers in Mangrove Lagoon. (B. Sylvia)

Experience within STEER

The strongest aspect of visitors’ experience in STEER was their overall tour experience (Table 1). Knowledge gained scored the lowest. Safety and affordable prices were rated highest as the factors that influenced guests’ decision to visit STEER (Table 2). All the factors had a mean importance level over three, which indicates all are on the important side of the spectrum. Quality of coral reefs, beaches, parks, and landscapes had the highest mean for visitors’ interests (Table 3). There was moderate interest in an underwater sculpture garden and snorkel trail but, little interest in bird watching and camping.

Table 1: Mean visitor ratings of various aspects of their experience. A rating of 1 indicated Poor, 2 for Fair, 3 for Average, 4 for Good, and 5 for Excellent.

Tour experience	Access to wildlife	Tour availability	Service Quality	State of Underwater	Knowledge gained
4.63	4.54	4.54	4.53	4.20	4.10

Table 2: Factors affecting visitors' decision to visit STEER. Based on 1-5 scale with 1 being not important at all and 5 being very important.

Factor	Mean Rating
Safety	4.56
Affordable prices	4.49
Opportunity to see wildlife	4.47
Ease of access	4.41
Visit beaches	4.39
Adventure/sports activities	4.26
Visit parks and pristine areas	4.23
Desire to learn about habitat	4.01
Recommendations	3.78
Desire to learn about culture	3.46

Table 3: Visitors' interest level in various attributes of STEER or potential activities. Based on a scale of 1-5 with 1 being no interest at all and 5 being very interested.

	Mean Rating
Quality of coral reefs	4.67
Quality of beaches	4.64
Quality of pools	4.52
Scenic landscapes	4.50
Wild life	3.57
Underwater sculpture garden	3.55
Visit center	3.30
Witness pupae	2.94
Bird watching tours	2.89
Feeding	2.16



Coral reef within STEER. (S. Arora)

Willingness to Pay

Over half of the visitors to STEER surveyed are willing to contribute funds that would go towards conservation efforts in the Reserves (Figure 6). Most guests willing to contribute indicated they would pay between one and five dollars (53.54%), followed by 32.28% of visitors willing to pay between six and ten dollars (Figure 7). Of the 38% unwilling to pay, the three most common reasons given were that they cannot afford it, followed by the response that taxes should cover it, and that their activities do not impact the environment (Figure 8). Some users marked unsure, while a few wrote in reasons reiterating the expense, requesting assurance that funds will be spent appropriately, and pointing to a lack of care by the local population.

A higher percentage of local residents indicated they are willing to pay than non-residents (Table 4). Both residents and non-residents prefer to contribute funds by an added charge on the tour ticket and/or donation (Figure 9 and Table 5). Within the non-resident sector, air travel visitors were more willing to pay than those arriving on cruise ships (Table 6).

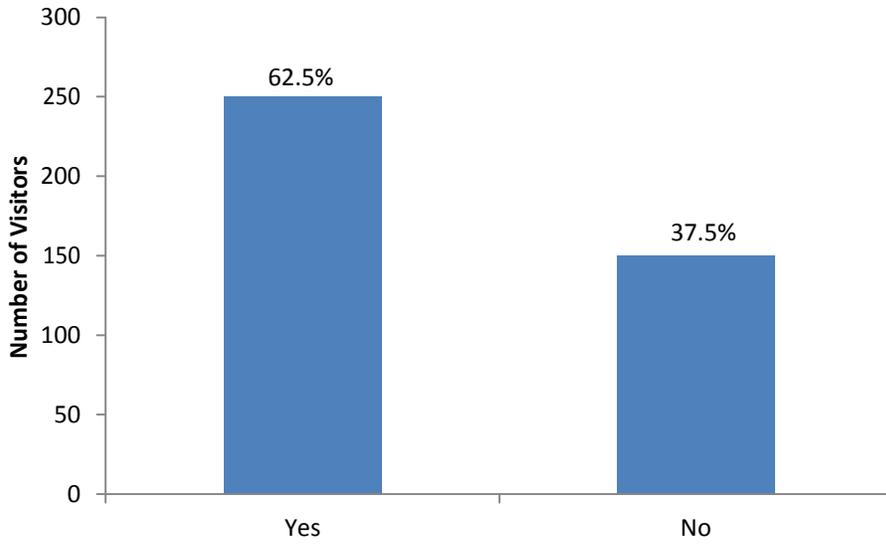


Figure 6: Willingness to pay for conservation efforts in STEER of the entire sample of 400 visitors.

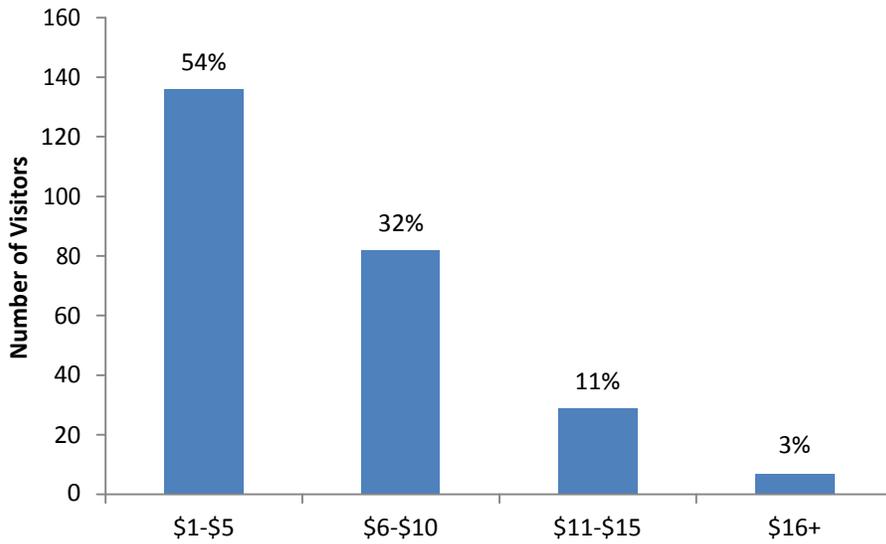


Figure 7: Amount visitors are willing to contribute for conservation efforts in STEER.

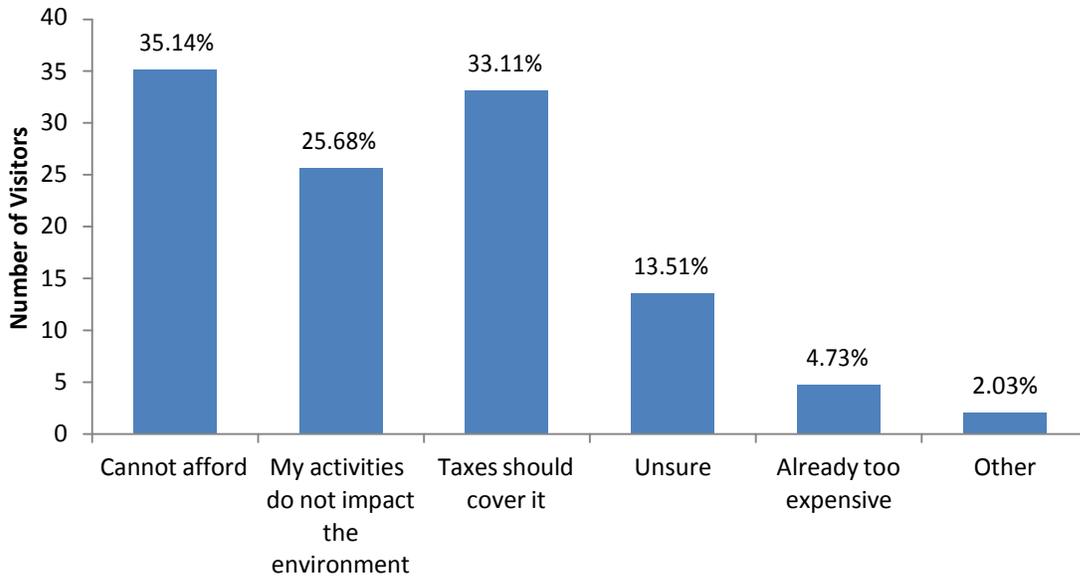


Figure 8: Reasons for declining to contribute to fund conservation efforts in STEER.

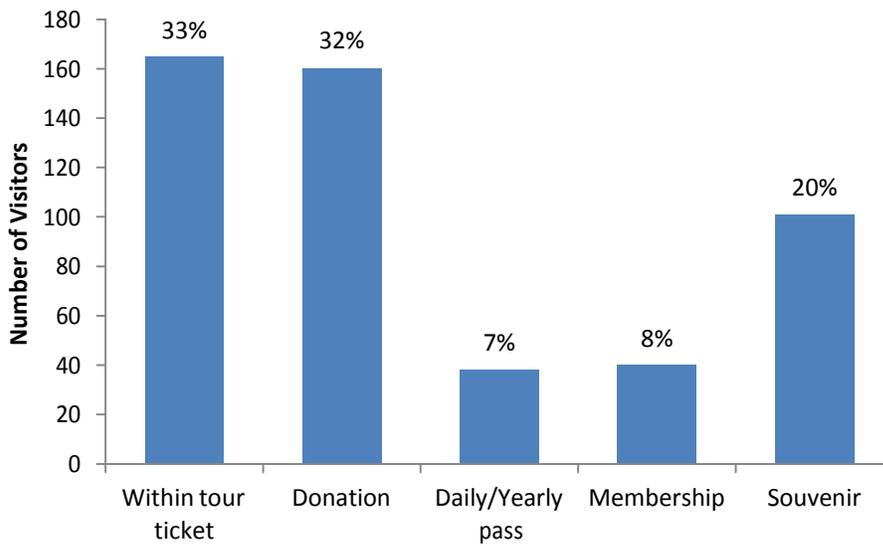


Figure 9: Method of payment preferred by individuals to contribute.

Table 4: Non-residents and residents willingness to pay for conservation efforts in STEER.

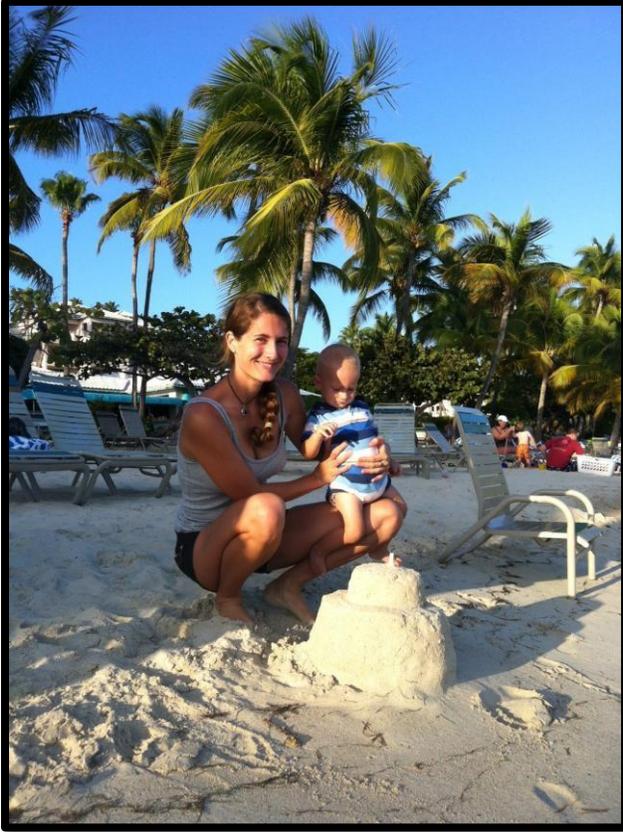
	Non-Residents	Residents
Willing to Pay	55.89%	81.55%
Not Willing	44.11%	18.45%

Table 5: Payment method preferred by non-residents versus residents. Respondents were able to select more than one choice so percentages are based on the total number of answers selected (344 for non-residents and 160 for residents).

	Non-Residents	Residents
Within Tour Ticket	33%	33%
Donation	36%	23%
Daily/Yearly Pass	3%	18%
Membership	5%	15%
Souvenir	24%	11%

Table 6: Willingness to pay based on mode of transportation non-resident visitors used to enter the territory. The percentages were based on responses from 132 visits arriving by airplane and 162 cruise ship arrivals. The sample size of sailboat (2) and ferry (1) arrivals is not large enough to make any conclusions.

	Airplane	Cruise ship	Sailboat	Ferry
Willing to Pay	78.03%	37.65%	50%	100%
Not willing	21.97%	62.34%	50%	0%



Many residents recognize benefits of STEER conservation presently and for future generations. (S. McKenzie)

Souvenir

Almost a quarter of non-resident visitors would like to contribute by purchasing a STEER souvenir. 11% of residents selected souvenir as method of contributing to conservation efforts in STEER. The most popular choices of STEER souvenir were t-shirts, tote bags, and koozies.

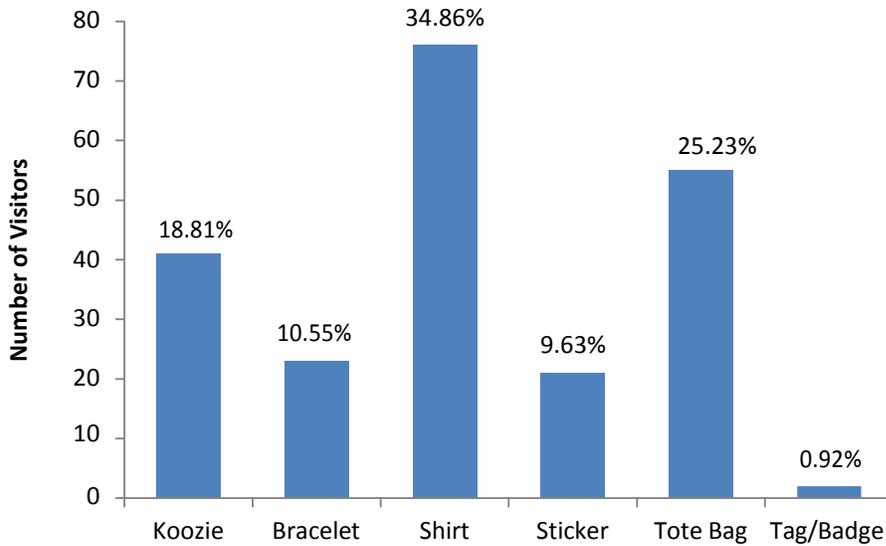


Figure 10: Souvenir preference by visitors to STEER.

Demographics

The sample population was 47.5% male, 51% female, and 1.5% declined to answer. Americans made up the majority of the sample. Some foreign visitors opted out of the survey due to language barriers so the nationality demographic of the sample may not be entirely representative of the population (Table 7). Retirement aged visitors were less represented than younger categories; about 18% were over age 55. This may not be an underrepresentation due to the activities available to visitors in STEER involving outdoor physicality, which is often attractive to a more youthful market. The majority of the sample's income fell between \$25,000 and \$74,999, the category with the most respondents (mode) was \$50,000-\$74,999 (Table 8). Over half of the visitors have completed college and have zero dependents.

Table 7: Ages and permanent residences of 400 visitors surveyed.

Age		Residence	
18-24	17.25%	Mainland USA	72.75%
25-34	23%	Caribbean	19.25%
35-44	23%	Canada	4.75%
45-54	18.50%	Puerto Rico	1.25%
55-64	13.25%	Germany	0.50%
Over 65	5%	England	0.50%
		France	0.25%
		Netherlands	0.25%
		Italy	0.25%
		Ireland	0.25%

Table 8: Demographic information on the 400 visitors surveyed. Income was based on the individual's annual earnings. Education is based on the highest level completed.

Income		Education		Dependents	
Less than 25,00	16.50%	Grade School	0.75%	0	58.75%
25,00-49,999	23.25%	High School	21%	1	10.25%
50,000-74,999	28.25%	Vocational school	5.25%	2	14.50%
75,000-99,999	17%	College/University	56.25%	3+	6.25%
Over 100,000	11.75%	Post Graduate	15.25%	Decline	10.25%
Decline to respond	3.25%	Decline to respond	1.50%	to respond	

Conclusions and Recommendations

Based on the results of the STEER visitor surveys, the following conclusions and recommendations can be made on how to improve the Reserves' marketing, develop key visitation attributes, and raise management and conservation funds through user fees, donation, membership fees or purchase of souvenirs.

Considering the demographics of the sample, visitors to STEER may be described as relatively young, educated, and financially stable. They have interest in the environment but, also place a high priority on safety and affordability. The data show that over half are willing to pay between one and five dollars for conservation efforts in STEER, an area that most are not from and have never been to before. Most visitors use STEER for snorkeling and beach going (75% and 45% respectively), two activities that can impact the environment negatively if the user is uninformed. The aspects of STEER that should be highlighted to attract visitors are safety, affordability, and opportunity to see wildlife. Based on responses to the visitor interest section of the survey, efforts most supported by STEER users are those geared towards the protection of the natural habitats.

Although a desire to pay for conservation efforts in STEER was pronounced, especially among residents and airplane arrivals surveyed, implementation of a mandatory user fee is not recommended at this time. Only 37.65% of cruise ship passengers surveyed are willing to pay. One-third of both non-residents and residents indicated that they would prefer to pay a fee if it was included in their tour ticket, and a donation was the second most popular choice in the sample. There is definitely an interest among many Reserves users to support STEER financially. However, awareness of STEER's existence must first be increased among both residents and non-residents for this support to become a substantial source of revenue. This can be done by supplying tour operators, hotels and other STEER adjacent businesses with educational materials, and encouraging them to emphasize STEER to their guests. All of the beaches within STEER need improved signage (some beaches have no signs at all). It is recommended to have an optional charge added onto the tour ticket for those who would like to make a donation to STEER. Increased local advertising of STEER and an opportunity to donate on the website should also be implemented to increase funding.

The STEER business interviews determined that the businesses were not interested in paying (Appendix C). A reason for the unwillingness to pay was that the businesses were not receiving any benefits from STEER. Businesses indicated that enforcement of rules and regulations as well as the installation of moorings as a priority. A non-fee permit system was recommended to foster relationships with businesses as well as to provide moorings that may bring in revenue in the future. Collecting donations for the use of moorings at Christmas Cove would also be an

opportunity to support business owner requests for a mooring system. The funds could be used for maintenance of the current moorings and installation of additional moorings. Increased enforcement was also a recommendation that would provide businesses in STEER with benefits worth their financial contribution.

In addition to increased outreach and the encouragement of donations, enforcement of STEER rules by an officer/ranger is recommended. Implementing a ranger position would meet a demand of business owners identified in the interviews while protecting natural resources and raising awareness for STEER. It is important that the officer is non-governmental; as there is considerable distrust from STEER business and the community of governmental enforcement officers. Businesses will likely be more willing to cooperate with STEER in donation collection and potential mandatory fees in the future if their voiced concerns are being heard. Though the initial startup of employing a ranger and the costs associated will be very steep, there will be quick returns in the form of modest fines on the offenders. One recommendation of the STEER Business Interview report was to create a no cost permitting system for STEER users. It is recommended to pursue the development of the permitting system after the officer is in place. Reasons for this include addressing the priorities of business, the immediate protection of resources, and leveraging the ranger to increase future permit participation.

Summary

STEER is a magnificent feature of the Virgin Islands. Caribbean and American citizens have the responsibility to ensure stewardship of these waters and adjacent encompassing coastlines and beaches. Though a mandatory fee is not called for at this time, every opportunity should be made available for users to donate funds to STEER through on-line donations, tour ticket and souvenir add on, and collection boxes strategically placed in high-access areas. Collecting donations for the use of moorings would also be an opportunity to support business owner requests for a mooring system while giving visitors the opportunity to maintain a service that protects resources provided by STEER. In addition, implementing a STEER specific ranger will be a big step in getting recognition from businesses and the community. That kind of presence on the ground will give legitimacy to the Reserves in terms of objectively reaching goals of the management plan. Revenue is required in order for STEER to be effectively managed; these

recommendations are aimed at increasing the revenue base in such a way that the STEER business owners' and visitors' preferences are considered.

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Appendices

Appendix A: STEER Visitor Survey

Appendix B: Locations STEER visitors were surveyed

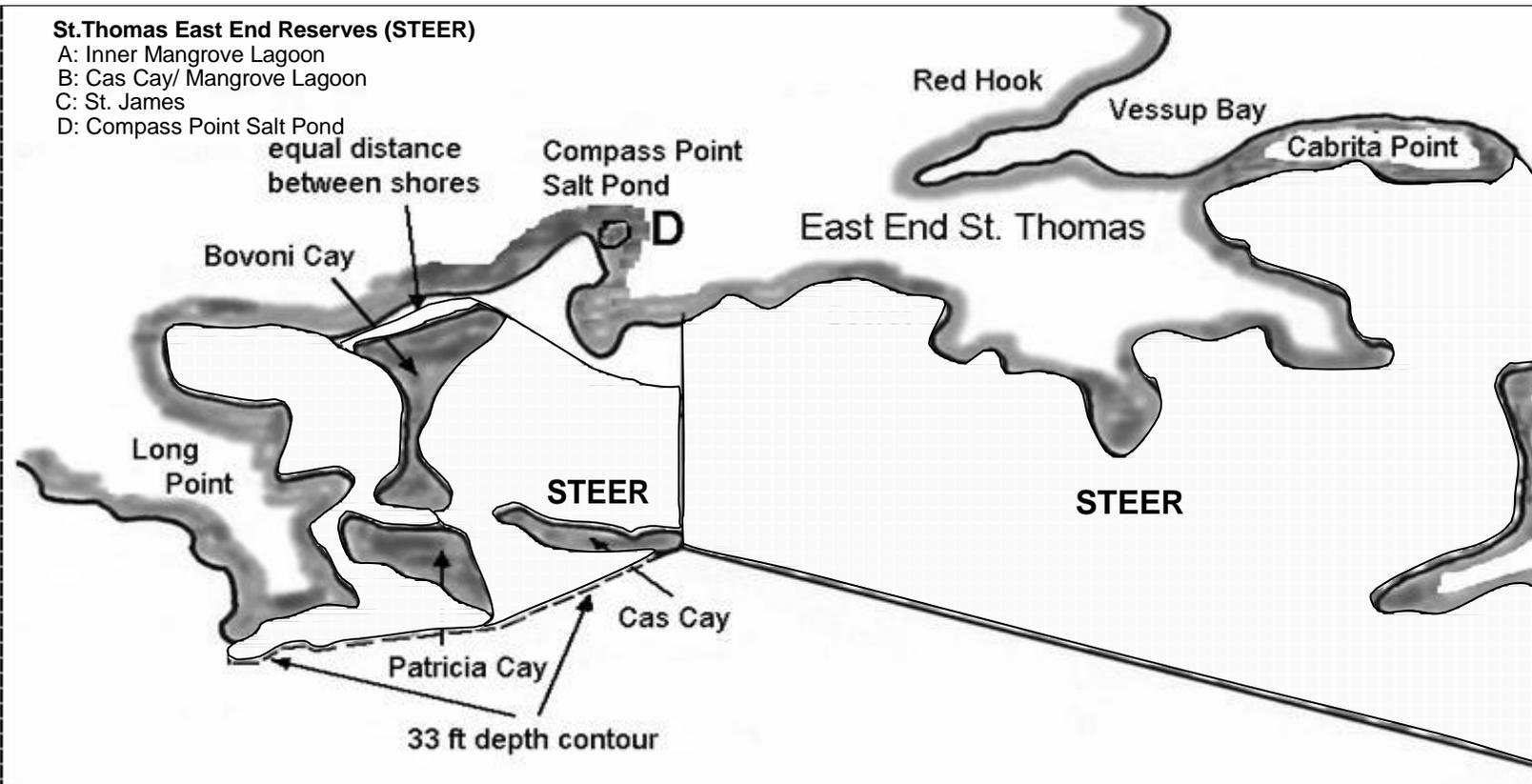
Appendix C: STEER Sustainable Tourism Report

Appendix D: STEER Visitor Data

Appendix A- STEER Visitor Survey

Welcome to the **ST. THOMAS EAST END RESERVES (STEER)**! Encompassing 3.7miles² and 24 miles of coastline on the east end of St. Thomas, STEER is a collection of marine sanctuaries and reserves. Precious habitats protected by STEER include coral reefs, seagrass beds, mangrove ecosystems, and the Compass Point salt pond. Commercially and recreationally significant fish species as well as sea and shore birds find refuge in the area. STEER is a popular area for a range of activities including water sports and boating, as well as commercial use and businesses such as marinas, ferries, and hotels.

This survey is being administered on behalf of STEER Core Team in collaboration with the VI Department of Planning and Natural Resources, Division of Coastal Zone Management and The Nature Conservancy. Your input is very important to us because it will help us gain a greater insight about visitors' experiences in STEER. The survey should take about 10 minutes to complete. We respect your privacy, and all responses are anonymous. **Thank you in advance for your input!**



1. If you are NOT a resident, please tell us how long you are staying on St. Thomas.
 - _____ days
 - I am a resident (Skip to question 3)

2. How did you travel to St. Thomas?
 - Airplane
 - Cruise ship
 - Sail boat
 - Other (please specify) _____

3. Were you aware that you were recreating in STEER (the St. Thomas East End Reserves)?
 - Yes
 - No

4. Is this your first time visiting STEER? (map of park boundaries is on the front page.)
 - Yes
 - No

5. How many times, in total (including today), have you visited STEER?
 - 1
 - 2-5
 - 6-9
 - 10 or more

6. What activities have you participated in while in STEER? (please check all that apply)
 - Snorkeling Wildlife viewing Beach visit
 - Sailing Scuba diving Kayaking
 - Fishing Jet skis
 - Other (please specify _____)

7. On a scale of 1 – 5 with 1 as poor and 5 as excellent, how would you rate your experience within STEER:

Factors	Poor	Fair	Average	Good	Excellent	Not Applicable
Service quality	1	2	3	4	5	N/A
Overall tour experience	1	2	3	4	5	N/A
Access to wildlife viewing	1	2	3	4	5	N/A
Tour availability	1	2	3	4	5	N/A
Knowledge gained about wildlife and habitats	1	2	3	4	5	N/A
State of underwater environment	1	2	3	4	5	N/A

8. On a scale of 1-5 with 1 as not important at all and 5 as very important, how important were the following factors in your decisions to visit STEER:

Factors	Not important at all	Not too important	Neutral	Slightly important	Very important
Opportunity to see wildlife	1	2	3	4	5
Desire to learn about the wildlife/marine habitats	1	2	3	4	5
Desire to learn about the local culture	1	2	3	4	5
Opportunity to visits parks and pristine areas	1	2	3	4	5
Opportunity to visit beaches	1	2	3	4	5
Opportunities for adventure/sports activities	1	2	3	4	5
Affordable prices	1	2	3	4	5
Recommendations from a friend/guide book	1	2	3	4	5
Safety	1	2	3	4	5
Ease of access/convenience	1	2	3	4	5

9. On a scale of 1 – 5 with 1 as not interested at all and 5 as very interested, what is your interest in the following:

Interest	Not at all interested	Not too interested	Neutral	Fairly interested	Very interested
Scenic landscapes	1	2	3	4	5
Quality of parks and protected areas	1	2	3	4	5
Quality of beaches	1	2	3	4	5
Quality of coral reefs	1	2	3	4	5
Bird watching tours	1	2	3	4	5
Underwater sculpture garden	1	2	3	4	5
Snorkel trail	1	2	3	4	5
Visitor center	1	2	3	4	5
Volunteer projects	1	2	3	4	5
Camping	1	2	3	4	5

10. Would you be willing to pay more for tours if you knew that a percentage of the price would go toward supporting environmental conservation efforts within STEER boundaries?
 Yes No

If yes, how much more?

- US\$1-\$5 US \$6-\$10 US \$11-\$15 Over US \$15 (please specify \$_____)

If no, why not?

- Cannot afford
 My activities do not impact the environment
 My tax dollars should cover it
 Unsure
 Other (please explain_____)

11. How would you prefer to pay to help protect our natural resources?

- within the tour ticket cost donation daily/yearly pass membership

- STEER souvenir (please circle) koozie bracelet shirt sticker tote bag tag/badge

12. What is your gender? Male Female

13. What is your approximate age?

- 18-24 25-34 35-44 45-54 55-64 Over 65

14. In which country do you permanently reside?

- USA Canada Caribbean
 France Germany Italy
 Mexico Netherlands Puerto Rico
 Other (please specify_____)

15. Please check the box which is closest to your annual income:

- \$24,999 or less
 \$25,000 - \$49,999
 \$50,000 – \$74,999
 \$75,000 – \$99,000
 Over \$100,000

16. What is the highest level of education that you completed?

- Grade school
 High school
 Vocational/ trade school
 College or university
 Post-graduate

If you have completed college/university or higher, what was your area of study?

17. How many, if any, dependents do you have?

0

1

2

>3

Decline to answer

PLEASE USE THIS SPACE TO MAKE COMMENTS OR EXPAND ON ANY OF THE
PREVIOUSLY ASKED QUESTIONS

Thanks for your participation.

We really appreciate you taking the time to answer our questions.

Have a wonderful day.

Appendix B- Locations STEER visitors were surveyed

Aqua Marine Dive Center

Secret Harbor Beach

Elysian Beach

Island Sol

Ambassadors of the Environment at the Ritz-Carleton

Great Bay (kiteboarders)

Aqua Action Dive Center

VI Ecotours

Red Hook Dive Center

Independent Boat Yard

Seablaster Tours (Christmas Cove)

St. Thomas Yacht Club

Cruise Ship Excursions

ST. THOMAS EAST END RESERVES SUSTAINABLE TOURISM REPORT



ST. THOMAS EAST END RESERVES SUSTAINABLE TOURISM REPORT

Prepared by:

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For:

Department of Planning and Natural Resources
Division of Coastal Zone Management
Government of the U.S. Virgin Islands.
November, 2012

This report was prepared by The U.S. Virgin Islands Coral Reef Management Fellow, provided through the National Oceanic and Atmospheric Administration, U.S. Department of Commerce. The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of the National Oceanographic and Atmospheric Administration or the U.S. Department of Commerce.

EXUCUTIVE SUMMARY

The St. Thomas East End Reserves (STEER), encompassing 3.7 miles² and 24 miles of coastline on the east end of St. Thomas is a collection of marine sanctuaries and reserves. The STEER is a popular area for a range of activities including water sports and boating, and commercial use and businesses, such as marinas, ferries and hotels. The high use of STEER and its adjacent areas poses a threat to the environment and can be a strain on stakeholder relationships. The STEER Sustainable Tourism Report is intended to offer ways of addressing tourism related management issues and complements the STEER Management Plan and Sustainable Finance Plan. This report contains two parts: the STEER Business Interviews and a STEER Visitor Survey Plan.

STEER Business Interview Summary

The objective of the Business Interview study was to determine the level of support that businesses operating in and adjacent to STEER would contribute. The STEER business interviews bring together data on potential tourism opportunities for STEER, preferred management bodies, preferred methods of assisting STEER management, willingness to pay fees, visitor numbers and STEER priority actions, all from the point of view of STEER stakeholders, specifically businesses operating in and adjacent to the STEER.

Businesses operating in and around STEER were interviewed using an interview form composed of 25 questions. The majority of interviews were conducted in person or over the phone. Due to time constraints, some businesses were not interviewed, and instead they completed the forms independently.

Findings

- Of the 17 businesses interviewed, most understood STEER boundaries and 12 businesses are considered to operate within STEER boundaries. The number of businesses operating in STEER is likely higher, however due to the lack of information it cannot be concluded in this study.
- Reasons for operating in STEER are consistent with those listed in the STEER Sustainable Finance Plan (Sector, 2010, p. 16). The major reasons include wildlife viewing for snorkeling and diving, access to great reefs and the convenient location. Christmas Cove is considered a special benefit to businesses, including those only passing through STEER.
- According to 9 out of 12 businesses that operate in STEER, at least 14,775 customers (residents and visitors) are taken into STEER annually.
- *The businesses do not show a strong interest or need in new tourism products.*
- Enforcement and moorings prove to be the overarching concern among businesses.
- Willingness to pay is low. Paying fees is not proven to be favorable, especially not prior to users receiving specified benefits such as active enforcement and moorings.

Conclusion & Recommendations

- It is not recommended that STEER implement entry or concession fees at this time. Focus should be given to:
 - Creating a permitting system without a fee, allowing the development of close relationships with the STEER businesses.
 - Implementation of a complete and successful mooring system with potential of collecting money for mooring use

- Establishing consistent enforcement.
- Leveraging the results of the Economic Valuation study to demonstrate to stakeholders and government officials that cruise visitors and overnight visitors are willing to pay on average \$19.05 and \$16.54, respectively, for the protection of coral reefs (van Beukering, Brander, van Zanten, Verbrugge, & Lems, 2011, p. 98)
- Businesses do not see STEER as a destination, especially with the proximity of the St. John's VI National Park. It is in STEER's interest to differentiate itself from the VI National Park.
 - Creating a website will help in promoting STEER, educating stakeholder and visitors as well as creating the vision of a destination. A STEER website is being developed by The Nature Conservancy with an estimated release date of January 2013.
- A quasi-governmental organization should be considered. Such a management body would allow leveraging the territorial government while also focusing on specific STEER issues. This is also described in the Sustainable Finance Plan (Sector, 2010, p. 6).
- A STEER visitor Willingness To Pay survey should be conducted to gain additional information on product development and visitor demographics. A WTP survey is planned to be conducted by The Nature Conservancy (estimated April 2013).

STEER Visitor Survey Plan Summary

With the lack of STEER specific tourism data, visitor surveys were deemed necessary. Visitor surveys were not implemented; instead a detailed visitor survey plan was developed. The purpose of a Visitor Survey Plan is to provide a detailed methodology, allowing STEER specific data to be captured and to determine visitor demographics, satisfaction with their STEER experience, and interest in new STEER products. A STEER specific tourism study will inform educational materials, marketing and future projects for STEER.

The detailed Visitor Survey Plan provides a full methodology including the target population, primary data collection, pilot survey, data collection instrument, venue, distribution method, interview schedule, sample selection process, response enhancement options, training of enumerators and implementation steps.

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LIST OF ACRONYMS

BVI – British Virgin Islands

CHANT – Crucian Heritage And Nature Tourism

DEE - Division of Environmental Enforcement

DEP - Division of Environmental Protection

DFW - Department of Fish and Wildlife

DPNR – Department of Planning and Natural Resources

CZM - Coastal Zone Management

MMES – Master of Marine and Environmental Science

NOAA – National Oceanographic and Atmospheric Administration

STXEEMP – St. Croix East End Marine Park

STEER – The St. Thomas East End Reserves

TNC- The Nature Conservancy

USVI – United States Virgin Islands

UVI – University of the Virgin Islands

WTP – Willingness to Pay

DEFINITIONS

Businesses

In this study, a business refers to only those that take customers into the boundaries of STEER, unless otherwise noted.

Cruise Ship Passenger

“Persons who arrive in a country aboard a cruise ship and that do not spend a night at an accommodation establishment” (World Tourism Organization, 1981).

Data Collection Instrument

“The package used to gather information from sample units and prepare it for processing; this category includes the questionnaire and interview form” (World Tourism Organization, 1995, p. 141).

Effective Sample Size

“The actual number of eligible respondents providing reliable data that we end up with” (Frechtling, 2008, p. 65).

Excursionist

“A visitor (*domestic, inbound or outbound*) is classified as a *same-day visitor (or excursionist)* if his/her trip does not include an overnight stay” (Understanding Tourism: Basic Glossary).

Initial Sample Size

“The number of eligible respondents we contact in order to achieve our optimum sample size” (Frechtling, 2008, p. 65).

Interview Form

“The data collection instrument used by interviewers in sample surveys to gather information from sample units by asking them questions and recording the answers” (World Tourism Organization, 1995, p. 143).

License and Permit Fees

“These are fees charged to tour operators to allow them to manage visitors in protected areas, e.g., charter boat owners” (Drumm, Moore, Soles, Patterson, & Terborgh, 2004, p. 40).

Optimum Sample Size

“The number of completed survey responses required to meet designated reliability and validity objectives” (Frechtling, 2008, p. 66).

Pilot Survey

“A brief preliminary survey conducted to test the survey questionnaire and data collection method before the larger, formal survey is conducted” (World Tourism Organization, 1995, p. 144).

Questionnaire

“The data collection instrument used in sample surveys to gather information from sample units by having them fill in the answers to questions themselves” (World Tourism Organization, 1995, p. 145).

Sample Size

“The number of respondents chosen to be interviewed” (World Tourism Organization, 1995, p. 145).

Survey

“A sampling, or partial collection, of facts, figures or opinions taken and used to approximate or indicate what a complete collection of information, or census, might reveal” (World Tourism Organization, 1995, p. 146).

Sustainable Tourism

“Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities” (Bartlett, 2007).

Target population

“All people of interest to the survey researcher and from among whom the sample will be selected” (Frechtling, 2008, p. 68).

Tourism Taxes

“Targeted taxes on relevant points on the market chain related to the tourism industry, earmarked for conservation” including “taxes on hotel rooms, airport use (i.e. entry or departure tax)” (The Nature Conservancy & The Conservation Finance Alliance, 2004, p. 5).

Tourist (or overnight visitor)

“A *visitor (domestic, inbound or outbound)* is classified as a *tourist (or overnight visitor)*, if his/her *trip* includes an overnight stay” (Understanding Tourism: Basic Glossary).

Travel / tourism

“*Travel* refers to the activity of travelers. A traveler is someone who moves between different geographic locations, for any purpose and any duration. The visitor is a particular type of traveler and consequently tourism is a subset of travel” (Understanding Tourism: Basic Glossary).

Venue

“The place where survey interviews are conducted” (World Tourism Organization, 1995, p. 146).

Visitor

“A *visitor* is a traveler taking a *trip* to a main destination outside his/her *usual environment*, for less than a year, for any main purpose (business, leisure or other personal purpose) other than to be employed by a resident entity in the country or place visited. A *visitor (domestic, inbound or outbound)* is classified as a *tourist (or overnight visitor)*, if his/her *trip* includes an overnight stay, or as a same-day *visitor (or excursionist)* otherwise” (Understanding Tourism: Basic Glossary).

Visitor Fee

Is commonly known as an entrance fees; “a fee charged to visitors in order to enter a protected area” (Drumm et al. 2004, p. 37).

Voluntary Donations

“Includes cash, ‘in-kind’ gifts and labor, often received through ‘friends of the park’ groups” (Drumm et al. 2004, p. 37).

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INTRODUCTION

The St. Thomas East End Reserves (STEER), encompassing 9.6km² and 24 miles of coastline on the east end of St. Thomas is a collection of marine sanctuaries and reserves. It encompasses the Cas Cay/ Mangrove Lagoon, St. James and Compass Point Marine Reserves and Wildlife Sanctuaries. Cas Cay/ Mangrove Lagoon are one of the last remaining areas of Mangrove on St. Thomas (Sector, 2010, p. 17).

Recently, the STEER management plan has been finalized allowing the reserves to be managed as one unit with 3-5 year objectives. “The intent of the Management Plan is to restore and maintain a functional ecosystem that promotes sustainable recreational opportunities and community engagement through effective management” (STEER, 2010, p. 1). The main goals are to bolster natural resource conditions, adopt effective management, inspire the community to support and participate, and fortify widespread socio-economic benefits (STEER, 2010, p. 23).

The STEER has no official management entity. It is currently managed by a core group composed of four divisions within DPNR including Coastal Zone Management (CZM), Department of Fish and Wildlife (DFW), Division of Environmental Enforcement (DEE) and Division of Environmental Protection (DEP) along with The Nature Conservancy (TNC) and University of the Virgin Islands (UVI). This management structure offers diverse ideas and many helping hands but can also pose challenges. Management structures were covered in the business interviews and the findings are presented in this report.

The STEER is a popular area for various activities including water sports operators, marinas, ferries and hotels. The high use of STEER and its adjacent areas poses a threat to the environment and stakeholder relationships. The STEER Sustainable Tourism Report is intended to offer ways of addressing tourism related management issues and complements the STEER Management Plan and Sustainable Finance Plan.

Among a list of recommended sustainable tourism projects for STEER (see Appendix A), the core group decided that Business Interviews and Visitor Surveys would bring the most value to STEER at this time. Business Interviews were chosen to gauge perception and willingness of businesses to assist STEER. With the lack of STEER specific tourism data, visitor surveys were deemed necessary to fulfill that gap.

The sustainable tourism report brings together all the collected data from STEER businesses and stakeholders and brings forward recommendations accordingly. Data was collected on potential STEER tourism opportunities, preferred management bodies, preferred methods of assisting the management group, willingness to pay fees and priority actions, all from the view of STEER stakeholders, specifically businesses operating in and adjacent to STEER.

Visitor surveys were not implemented; instead a detailed visitor survey methodology was developed. This will allow the data to be collected providing the STEER Core Group with information on visitor experiences and interests in specific STEER project. Together the visitor survey and the business interviews will give the STEER core group insight on preferred tourism management practices within STEER.

Outline of the Report

The report contains the Business Interview with a methodology, background, outcomes and recommendation. Following that is a detailed visitor survey methodology. The last portion of the report contains overall recommendations taking into consideration the Business Interviews, Visitor Surveys, Management Plan and Sustainable Finance Plan.

TOURISM DATA

U.S. Virgin Islands

Tourism is a very important sector of the USVI economy accounting for approximately 80% of the GDP and employment (CIA, 2011). 2011 hotel tourism taxes amounted to 17.5 million dollars, a 1.2% increase from 2010 and a 1.1 % increase from 2006 (U.S.V.I. Bureau of Economic Research, 2012a). Visitor expenditure for 2010 was \$1,012.5 million. As seen in Figure 1 below, cruise passengers contributed 306.3 million, far less than the 706.2 million contributed by air visitors (tourists and excursionists) (U.S.V.I. Bureau of Economic Research, 2012b). The hotel tax was 8% during those years. In 2012 the tax was increased to 10%.

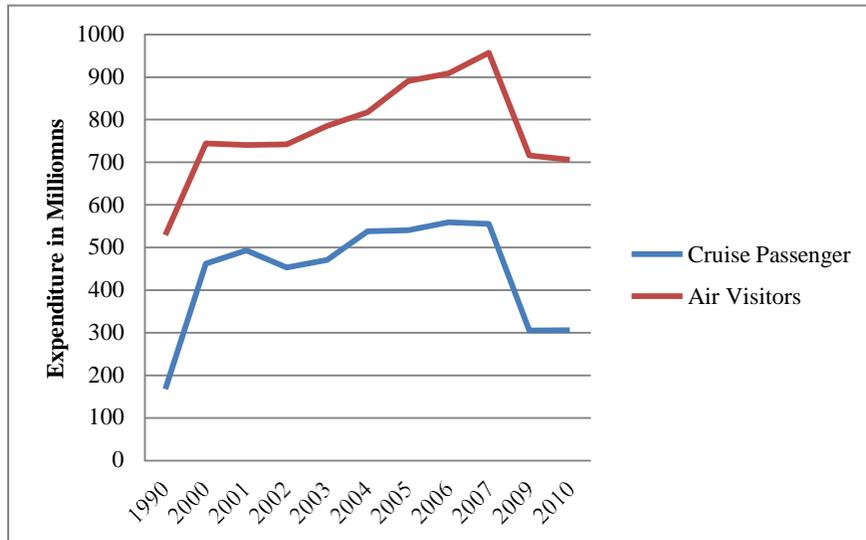


Figure 1: Expenditure - Cruise Passengers vs. Air Passengers

According to the most recent available tourism data for the U.S. Virgin Island (U.S.V.I. Bureau of Economic Research, 2012b), a total of 2,687,952 visitors arrived during 2011, representing a 5.4% increase from 2010 and a 1.2% increase over the past 5 years. Of those visitors 678,961 (25%) were air visitors (tourists and excursionists) while 2,008,991 (75%) were cruise ship passengers. This represents a growth of -1.8 percent and 8.1 percent respectively. See Appendix B for detailed 2010 and 2011 air visitor and cruise passenger arrival data. Cruise tourism has grown exponentially since the 1980's. Figure 2 illustrates that cruise passengers continue to represent the majority of visitors to the USVI. Since 1997, cruise tourism represents between 70% and 75% of all visitors.

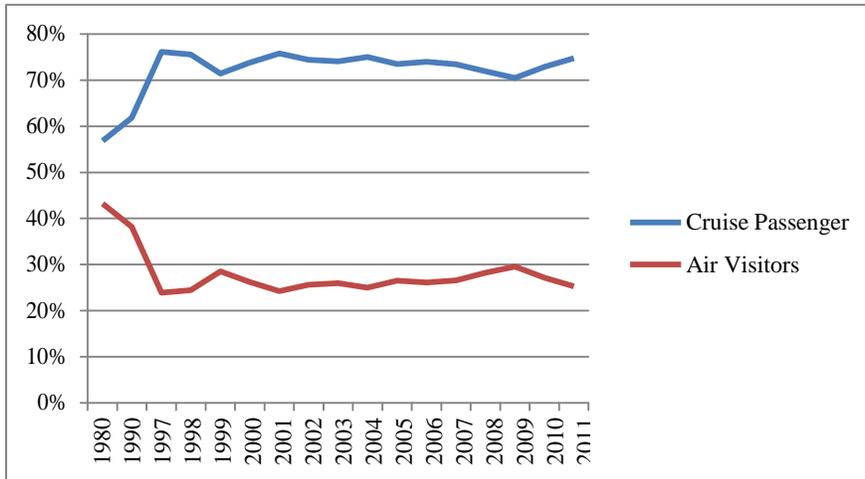


Figure 2: USVI Cruise Passengers Arrivals vs. Air Visitor Arrivals

The top arriving markets to the U.S. Virgin Islands are from U.S. Mainland cities New York City, Miami, Washington D.C., Chicago and Los Angeles respectively (U.S.V.I. Bureau of Economic Research, 2012b). The U.S. Virgin Islands October 2010 Economic Review (2011) indicates that future “marketing will target Atlanta, Boston, Chicago, New York and Philadelphia”.

It is often difficult for individuals to comprehend the economic value of nature. The USVI Tourism Market is one which directly benefits from the natural resources such as the coral reefs. As reported by the recent Economic Value of Coral Reef Ecosystems of the USVI Study completed for the U.S. Virgin Islands, “the total tourism value of the USVI coral reefs is around \$102 million annually, from which 68 million is generated by stay-over tourists and 34 million by cruise ship passengers” (van Beukering et al., 2011, p. 111).

From the provided data above, it is interesting to note that in 2011, 75% of all visitors to the USVI are cruise ships passengers, yet their contribution to coral reef values is considered to be 33% compared to 66% air visitor contribution. On a similar note, cruise expenditure is only 30% of the total USVI tourism expenditures in 2010 (U.S.V.I. Bureau of Economic Research, 2012b).

St. Thomas

As seen in Figure 3, St. Thomas receives the majority of visitors arriving to the USVI. Of all of USVI arrivals, St. Thomas and St. John received 2,419 million visitors in 2011, approximately 90% of all visitors to the USVI. St. Thomas also receives 94% of all cruise passengers to the U.S. Virgin Islands (U.S.V.I. Bureau of Economic Research, 2012b).

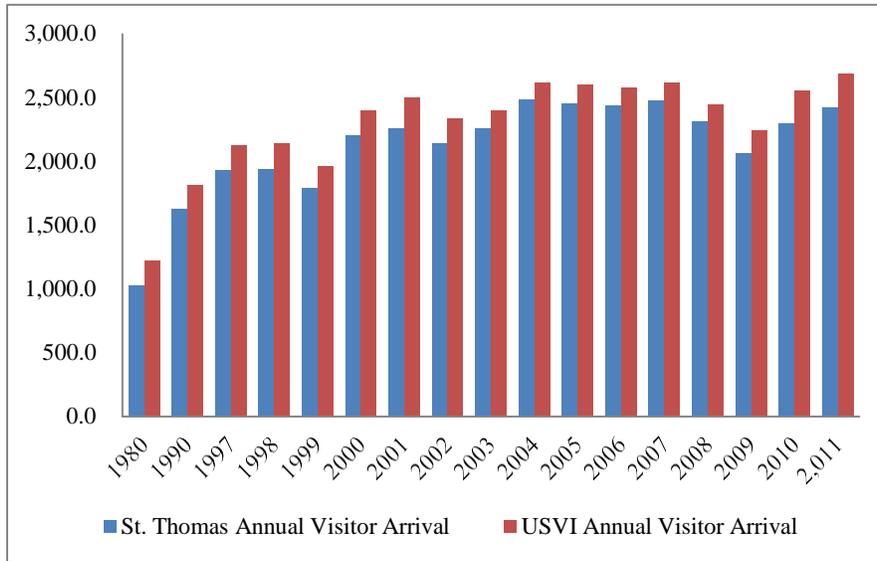


Figure 3: St. Thomas Visitor share of USVI Total

The majority of visitors to St. Thomas have always been cruise ship passengers. The USVI tourism data shows that cruise ship passengers on St. Thomas accounted for 76% of all St. Thomas visitors in 2010 and 78% in 2011.

St. Thomas East End Reserves

St. Thomas is heavily dependent on the Tourism Industry and the East of St. Thomas is a very popular destination among visitors, both tourists and excursionists. Though, exact numbers do not exist, we know that six hotels/condominiums/resorts, nine marinas and other developments are located adjacent to the STEER (STEER, 2010, p. 13). From research and discussion with stakeholders, we know that at least 12 businesses operate in STEER 25% of the time or more, with many other businesses transiting through the STEER.

The STEER Management Plan (2010, p. 15) states that popular snorkeling and scuba diving spots include Christmas Cove, Little St. James, Great St. James, Great Bay, and Cow and Calf Rocks, while Vessup Beach, Ritz Carlton, Cabrita Point, Secret Harbor, Cowpet Bay East & West are popular for windsurfing, kite boarding, kayaking, sailing and swimming. This is further confirmed with the Business Interviews.

With many of the hotels, condos and tour operators located within or adjacent to the STEER, the reserves inevitably receive many visitors. The business interview data indicates that at least 14,775 people, visitors and locals enter the STEER annually via tour operators. The actual number is likely higher considering that not all STEER business were interviewed and 3 businesses did not answer the question. This visitor number does not take into account private boaters or beach goers.

ST. THOMAS EAST END RESERVES BUSINESS INTERVIEWS

Stakeholder input is extremely important when looking at STEER management, product development and fee implementation. One segment of the stakeholders was approached through Business Interviews. The goal was to explore if and how businesses would be willing to assist the STEER and what they envision for STEER within the next 5 years.

Introduction

Background to the Study

Information gained through a willingness to pay study would provide further support for implementation of a STEER entrance fee or a Park Trust Fund. As a year 2 actions step in the STEER Sustainable Finance Plan (Sector, 2010), it was a priority among the core group. With further analyses of existing studies, it was determined that significant information on visitor willingness to pay was available through the Economic Value of Coral Reef Ecosystems of the United States Virgin Islands study (van Beukering et al., 2011). “The main objective of the study is to determine the Total Economic Value of the coral reefs of the USVI” (van Beukering et al., 2011, p. 11) of which, willingness to pay is a component. Despite the study focusing on reef related activities, it is considered to be applicable to the STEER given that visitors to STEER participate in marine activities. Since the Economic Value of Coral Reef Ecosystems of the USVI Study fulfilled the visitor segment of the willingness to pay study, a focus on businesses and concession fees was decided to be a better use of resources.

The Economic Value of Coral Reef Ecosystems of the USVI study determined that 69% of cruise ship passengers and 72% of airplane passengers are willing to pay an additional fee to conserve the reefs (p. 94). The average willingness to pay by USVI cruise ship and air visitors is \$19.05 and \$16.54 respectively (p. 98). St. Thomas specific visitors indicated that cruise passengers are willing to pay \$12.84 while air visitors are willing to pay \$17.52 (p. 96). The preferred methods of fee payment were per activity (31%) and per visit (30%) (p. 95).

Problem Definition

The problem, as defined through consultation with the STEER Core group was to determine the level of support that businesses operating in and adjacent to STEER would be willing contribute. The businesses referred to in the Business Interview Study are tour operators that take customers into the boundaries of STEER. Underlying questions the core group desired to answers to include:

- Are businesses willing to support STEER?
- What form of support was preferred, fees or in kind services?
- When do businesses think STEER will be ready to implement concession fees, if such a system is chosen to be implemented?
- What other products and activities do businesses think would be successful and would add value to the STEER?
- How many visitors enter STEER via tour operators?

Study Objectives

The study objective was to provide insight into businesses willingness to support STEER, in order for successful management of STEER.

Methodology

To answer the problem as defined above, the target population was all businesses operating in or adjacent to STEER. A list of all the businesses contacted is available in Appendix C. All potential respondents were contacted via email and followed up by phone calls to set up interviews.

The survey instrument (see Appendix D), containing 25 questions, was created with several reviews by the STEER Core Group. The interviews were conducted in person or over the phone. Due to time constraints, some businesses were not interviewed, and instead they completed the surveys independently and emailed Anne Marie Hoffman, Stephen Hale or Marija Micuda.

All data was collected between July 12, 2011 and October 28, 2011. Of the 48 businesses that were contacted, only 17 surveys were collected and analyzed.

Limitations

Because of the small population, all businesses were contacted to participate in the interview, therefore not making it a random sampling. The majority of businesses that operate in or adjacent to STEER were interviewed; therefore STEER business representation is considered to be largely captured. The fact that it is a small sample should still be acknowledged and data should be used with caution.

Not all of the businesses were interviewed face to face. Several businesses completed the surveys independently and mailed them in. That did not allow for further probing and question clarification.

Lastly, a lack of familiarity with business on St. Thomas posed additional limitations. Business owners were wary when approached by an unknown person on a touchy subject such as fees and protected areas. This proves that face-to-face interactions are extremely important as well as a relationship with the person being interviewed. An introduction to the businesses or a forewarning to all businesses by a known STEER stakeholder in a timely manner might have better facilitated the process. A public meeting was planned for early 2011 and would likely have assisted the process. For various reasons the public meetings were not accomplished.

Survey Results, Finding & Interpretation

The following section includes the relevant results and findings of the business surveys with a specific focus on the problem definition. The survey consisted of 25 questions, which were divided into key themes: types of activities available, perception of STEER now and in the future, willingness to pay and support STEER, and a characteristic of visitor demographics. Questions were designed to elicit pertinent information to assist the team in answering the central problem definition as outlined by the core team, to determine the level of support that businesses operating in and adjacent to STEER would contribute.

STEER Businesses

Question 1 attempted to understand how many businesses operate in STEER. Question 3 probed deeper to gauge if businesses realize that they operate in STEER. Of the 17 businesses interviewed, 11 indicated that they operate in STEER. However, question 7; “What percentage of your trips occur within STEER?” shows that 12 businesses operate in STEER at least 24% of the time. For data analysis purposes, 12 businesses are considered to operate in STEER. Table 1 provides a detailed overview of businesses and their percentage of trips in STEER.

With only one business not understanding the STEER boundaries is a good indication that most businesses do realize they operate in STEER. The only business that did not completely understand the boundaries operates in STEER approximately 24% of the time. None of the 12 businesses interviewed operate solely within STEER. VI Eco-tours and Island Sol have the highest share of trips in STEER, 80% and 85% respectively.

The 12 businesses have been in operation for many years. The oldest business is 35 years old, 4 other businesses have been in operation for 20-34 years and the youngest business is 3 year into operation. Experienced businesses know the area, how it looked before and what it looks like now. STEER is also an obvious benefit to them since it has sustained their business for many years. This can and should be leveraged when working with the businesses.

Table 1: STEER Businesses

BUSINESSES	PERCENT OF TRIPS IN STEER	YEARS IN OPERATION
------------	---------------------------	--------------------

Big Blue		
Red Hook Dive Center	50	30
Elysian - Beach Hut	50	25
St Thomas Dive Club	30	35
Dive in!	25	15
Aqua Action	50	4
Magic Moments Luxury Excursions	24	
Island Sol	85	8
Dive HDV	65	3
VI Eco-Tours	80	12
Patagon	55	32
Coki Beach Dive Club	40	20

The reasons for operating in STEER are similar across all businesses operating in STEER. It is also in line with the STEER Sustainable Finance Plan (Sector, 2010, p. 16). The major reasons include wildlife viewing for snorkeling and diving, great reefs and convenient location. Christmas cove is a special benefit to businesses, including those only passing through STEER. It is considered a protected and safe area, ideal for stopover trips to and from the British Virgin Islands and St. John. The full list is of reasons for operating in STEER is available in Appendix E.

Recreational Activities in STEER

According to 9 out of the 12 businesses that operate in STEER, they serve approximately 27,215 customers (residents and visitors) annually of which about 14,775 are taken into STEER. This is a rough estimate based on information provided by the businesses; however it does prove that there is a significant number of people, both visitors and residents that can be reached through the tour operators.

Various activities are occurring within the STEER boundaries. Snorkeling and scuba diving business are most abundant as is seen in Figure 4, however, VI Eco Tours with nearly 7,500 visitors and Island Sol with approximately 3000 account for 71% of visitors to STEER. It can be inferred that windsurfing, kite boarding and kayaking are highly participated in activities since the two activities are provided by only two businesses. Diving and especially snorkeling is common among many of the 12 businesses.

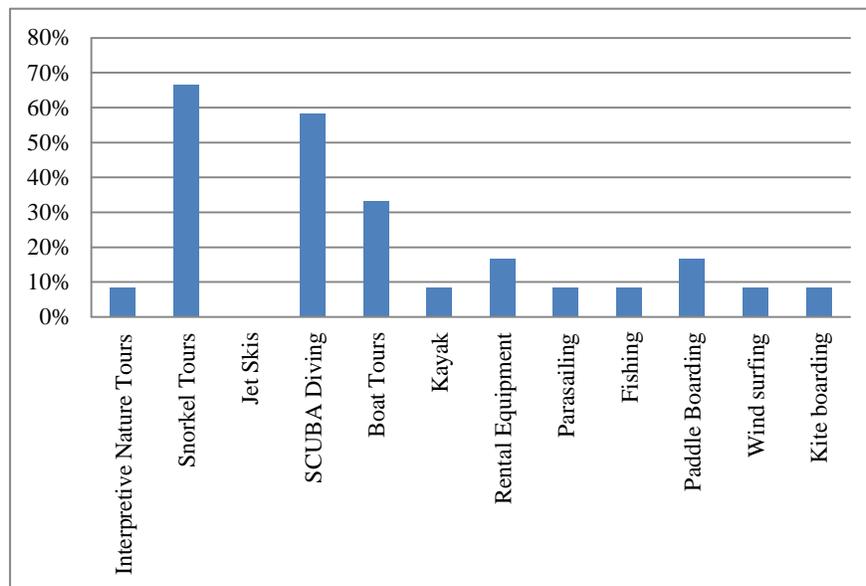
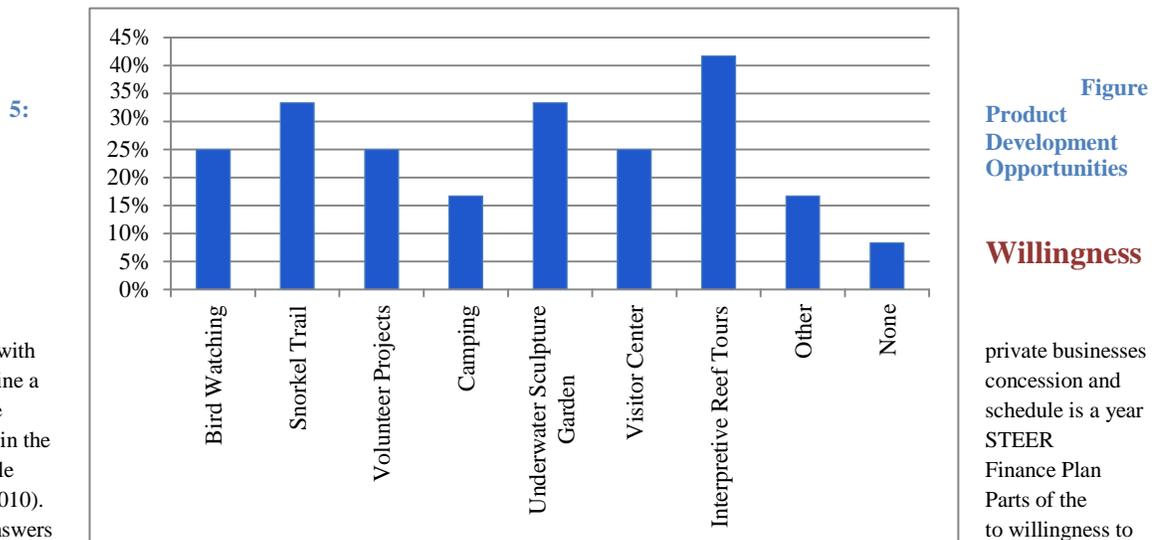


Figure 4: Tours Available In STEER

Interest in new products

Interest in new products is not high despite the representation in Figure 5. It is difficult to distinguish among the various products, as they are all very close in preference levels. However, worthy to note is that interpretive tours with the use of underwater sculpture gardens or different artificial reef structures were received positively. Diversifying existing tours is an important factor here. Businesses do not think that STEER was ready for a visitor center and camping was not seen as a viable product.

A potential reason for a lack of interest in new products may be that the businesses interviewed are successfully operating their businesses; therefore they see no need for new activities unless it benefits their business. Considering snorkeling is provided by most of the 12 businesses, it is not surprising that interpretive snorkel trails received the most support. The visitor survey should give a better indication of potential new activities and attraction that could be successful in STEER.



When and if STEER decides to implement concessions or permit fees, they must be applicable to all, they must be enforced and there must be a benefit to the businesses. The benefits that businesses indicated as priorities include applying the fee system across all businesses, enforcing the fee system, providing mooring systems and enforcing the rules and regulations. Other benefits such as a website, brochures and a visitor center are mentioned only by a few. The fact that a website and brochures are not seen as important is likely due to the STEER not yet being viewed as a destination. They do, however notice issues with enforcement and moorings, as illustrated in Figure 7.

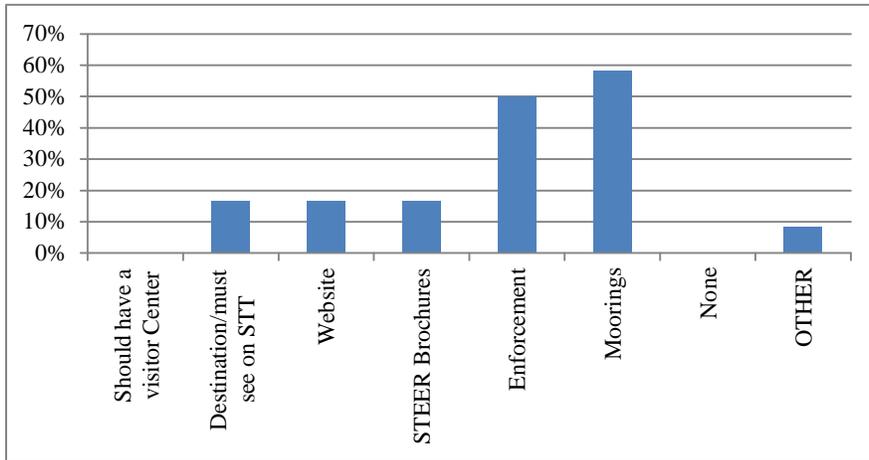


Figure 6: Benefits Expected For STEER to Charge Fees

Enforcement proves to be very important across many issues, including question number 23, “What should the collected fees be used for”? As one of the respondents stated: "There are many needs and all of the above apply. As long as it is transparent and we know what the fines are being used for" (Anonymous, 2011). It is all important, though Figure 8 shows that it is advisable to prioritize enforcement and mooring along with coral preservation.

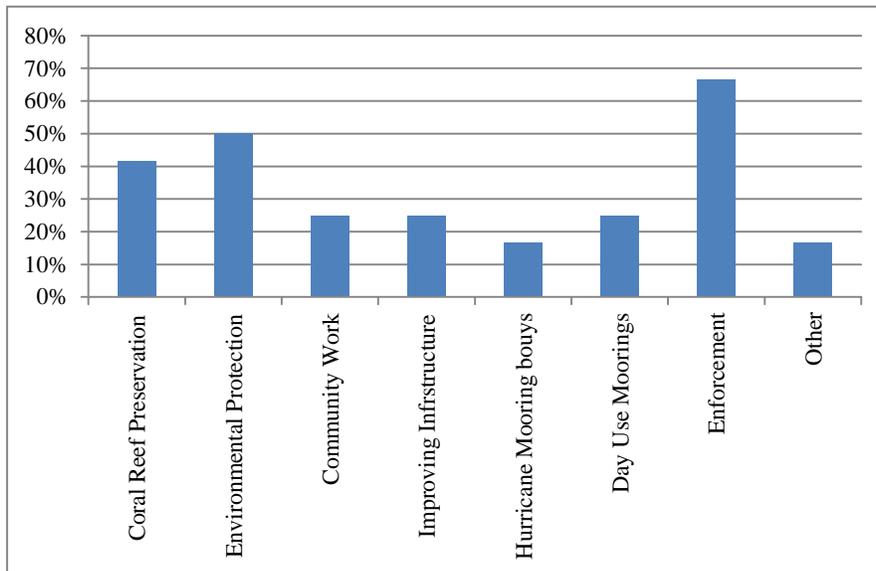


Figure 7: What Should Collected Fees Be Used For

Another concern businesses have with STEER charging fees is that STEER is not at all similar to the VI National Park on St. John, yet it is very easy to access St. John from St. Thomas. This obvious difference between the two protected areas should be leveraged by STEER acknowledging the differences, again purposely differentiating itself. Charging businesses a fee without providing solid benefits as mentioned above can result in loss of businesses in STEER to other areas on St. Thomas or St. John. This is particularly the case with businesses that are not using STEER frequently.

In addition to the Business Interviews, 14 reef related tour operators were interviewed for the Economic Value of Coral Reef Ecosystems study. Of the 14 businesses, 7 were based on St. Thomas. Though it is unknown if any of the 7 businesses operate in STEER, it is important to note that 71% of the 14 businesses think that charging water sports users is good idea. They however, do not think that the government should be the collection agency, consistent with the findings in the business interview (van Beukering et al., 2011, p. 172).

Preferred Methods of Support

The survey looked at alternative methods of support including donation of boats for research, collection of voluntary fees and similar. This question was of value because STEER is not yet ready to collect fees and the businesses are wary of fees. This allows the businesses to express support in other ways and perhaps more importantly, work with the businesses and create a positive relationship.

As would be expected, businesses not operating in STEER do not wish to support STEER and do not think that they will ever consider operating in STEER. This is due to their thought that STEER will never be as attractive as the VI National Park on St. John.

User Fees refer to an environmental entrance fee and is a year 4 sustainable finance activity. Figure 6 shows that businesses were not keen on charging visitors a fee because it increases the price of a tour. They expressed concern with overcharging visitors and losing business as a result.

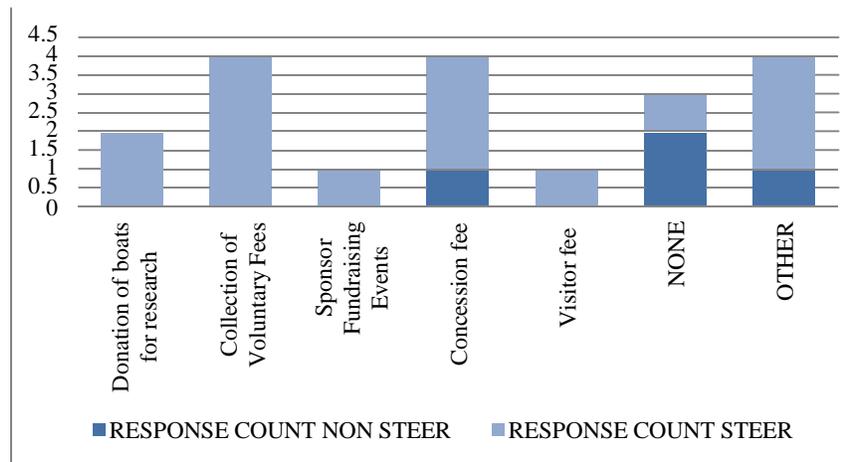


Figure 8: Preferred Fee Methods

Voluntary fee collection received the most support followed by concession fees and other alternative options. Though only 12 businesses were interviewed, of which 4 preferred voluntary fees, voluntary fees do not put a burden on other businesses or visitors, therefore is recommended. Other support options suggested by the businesses included handing out STEER flyers, creating a logbook and a STEER contact list, becoming proactive in simply enforcing the laws, equipment and time donation. A business not operating in STEER also mentioned charging for mooring balls rather than fees is more acceptable because of the obvious benefit associated with them. There is no consensus on what method of support is best for STEER, though the voluntary fees were rated the highest and pose the least risk.

STEER Management Body

The questionnaire gave businesses an option of four management structures: government, water sports operators acting collectively, a quasi-governmental body, NGO/Non-Profit and other.

A non-profit is likely a good avenue for funds, however it does not provide sound capabilities for enforcement which is a very important factor in choosing a management body. Alternatively, a quasi-governmental management body would allow leveraging the territorial government while being able to focus on specific STEER issues. Geoghegan (1998, p. 3) noted that of all Caribbean Marine Protected Areas, the self-financing areas are managed by Quasi-governmental statutory bodies or non-governmental organizations and not by the government. Such management frameworks allow for more flexibility in raising and retaining funds. In STEER's case a quasi-governmental or non-governmental management body would allow for funds to be collected and put towards conservation. Money can be accessed quicker and fundraising can provide means of collecting additional funds. It would also provide an opportunity to avoid losing already acquired public support due to its distrust for the government. On the downside, some federal grants might not be available if a quasi-governmental or non-governmental organization is formed.

Based on the interviews conducted, there are mixed thoughts on who should manage the STEER. One conclusion can be made though; the local government was not considered to be the appropriate management body. Nearly all of the businesses indicated some frustration

with government and do not wish to see the STEER under the management of the U.S. Virgin Island Government, especially not DPNR. This is due to the many times the Government, specifically DPNR, has not completed tasks they have promised and has not responded promptly to issues, among other negative experiences. It is in line with the Economic Value of Coral Reef Ecosystems study where “several operators actually made a point of explicitly mentioning that the government should under no condition be allowed to be responsible for the collection of the fees” (2011). Negative views of government as the management body is also mentioned in the STEER Sustainable Finance Plan as well (Sector, 2010, p. 6). Transparency is imperative for any managing body in order for stakeholders to cooperate and for fee implementation to be possible.

Visitor Demographics

Visitor Demographic profiles are made of age range, gender, education level, country of origin, and nationality of the visitors. Visitor demographics assists destinations understand the market segments of their destination. In addition to demographics, other characteristics such as purpose of trip, travel motivation, experience or knowledge being sought, and services purchased should be analyzed in order to identify existing and future travel markets (Gutierrez, Lamoureux, Matus, & Sebunya, 2005, p. 46).

As expected, USA has the highest share of the market as shown in Figure 9. This should be kept in mind when planning for activities, events and future marketing. No additional demographic information was made available through the Business Interviews. Additional visitor demographic information, age range, gender, education level, and nationality, should be collected via visitor surveys.

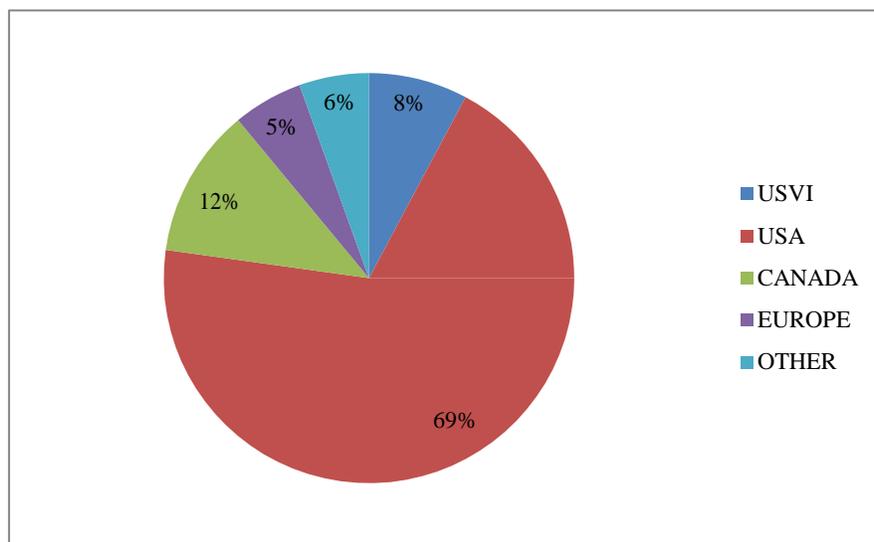


Figure 9: STEER Visitor - Country of Origin

Conclusion and Recommendations

The following section provides detailed conclusions and recommendations. Specific attention is given to recommendations on product development, willingness to pay and preferred methods of assisting, positioning of STEER and marketing.

Product Development

Other specific tourism products are not recommended at this moment. Instead, STEER should focus on the implementation of a complete and successful mooring system with potential of collecting money for mooring use and establishing consistent enforcement. Creating a website will help in promoting STEER, educating stakeholder and visitors as well as starting to create the vision of a destination.

Businesses mentioned that they would provide more information to tourists if it was made available to them. The 2002 Geotourism study (Stueve, Cook, & Drew, p. 2) states that 53% of American travelers say that they have a better travel experience if they learn about the

geography and culture of the destination they visit. It is suggested that the STEER core management group provide the businesses with appropriate information. The information should be presented in a reader friendly manner, allowing the businesses to easily read, comprehend and relay the information.

A STEER visitor survey should be conducted for additional information on product development. The survey will be able to further indicate if an underwater sculpture trail or an underwater garden should be considered.

Willingness to Pay & Preferred Methods of Assisting

As indicated by the Economic Value of Coral Reefs study, visitors are willing to pay a fee to protect the coral Reefs. However, STEER is not currently ready to charge concessions or user fees. In order for businesses to willingly pay a fee, there must be specific benefits. Priority benefits mentioned by STEER businesses include mooring systems and enforcing the rules and regulations.

Despite STEER not being ready to collect fees, other ways of assisting STEER exist. Based on the business interviews and looking at the willingness to pay exhibited in the Economic Value of Coral Reef Ecosystems of the USVI Study, creating a permitting system without a fee is recommended for the current situation. See Appendix F for the Sr. Croix East End Marine Park Draft Marine Operator Permit.

Voluntary donations are favorable and are highly recommended since they do not pose a threat. If hotels and tour operators can request voluntary donations, this may further prove to them that customers are willing to pay as has been demonstrated in the Economic Value of Coral Reef Ecosystems of the USVI Study. A detailed strategy on how funds will be collected, where they will be deposited and what they will be used for should be developed prior to collections. The Conservation Finance Guide (2004) offers alternatives types of voluntary donation such as “per night add-on fees” and having voluntary drop boxes. Other ideas to consider are adding voluntary fees to STEER tours and allowing visitors to decline the charge.

Additionally, it is suggested that STEER works closely with businesses to establish appropriate mooring systems and enforcement ,providing the much needed benefits to STEER businesses. Once STEER is ready to collect fees, it is strongly recommended that only one fee system be implemented in order not to double tax visitors or over burden concessionaires. STEER can choose to charge visitors or businesses. Entrance fees are not a viable option because there are different entry points into STEER. However, visitor fees paid through tour operators and hotels adjacent to STEER or a territory wide visitor entrance/exit tax for protected areas can be conducted. For businesses, a concession fee, either as an annual fee or percentage of profits can be implemented.

Since businesses a wary of putting a burden on visitors by introducing fees, a willingness to pay study is a good way of showing businesses that the willingness is there. In a Bonaire study, “the results coupled with the decision to charge other types of marine park users, enabled the management authority to convince the dive operators that little or no adverse effects would be caused by an increase in the dive tag price” (Thur, 2010). The results of the Economic Value of Coral Reef Ecosystems of the USVI study should be leveraged to demonstrate to stakeholder and government officials that cruise visitors and overnight tourists are willing to pay on average \$19.05 and \$16.54, respectively, for the protection of coral reefs that are worth \$102 million per year to the USVI tourism economy (van Beukering et al., 2011, p. 98).

Management

Possible STEER management structures include The USVI Government, a non-profit, a quasi governmental organization and watersports operators. Taking into consideration the various choices among the businesses, the uniform distrust for solely DPNR to manage STEER and the obvious need for enforcement, it is strongly recommended that a quasi-governmental organization such as the Magens Bay Authority and The BVI National Park Trust be considered. If STEER does remain under the purview of DPNR, it is highly recommended that DPNR acknowledges the significance of STEER and makes protected area management a priority, also suggested by Sector (2010, p. 12). Gaining the trust back is an important step and will take time.

Visitor Demographics

Considering the business surveys did not provide sufficient information, market segmentation and specific marketing strategies will depend on the findings of the visitor survey.

Positioning

Businesses do not see STEER as a destination and they cannot envision STEER being successful next to St. John’s VI National Park. Because of this, it is in STEER’s interest to differentiate itself from the VI National Park. This can be accomplished by promoting

STEER's unique features and targeting different markets such as cruise ship passengers. St. Thomas cruise ship passengers accounted for 73% of all St. Thomas visitors in 2009 and 76% in 2010. Considering the high number of cruise ship passengers to St. Thomas and the location of STEER within a very busy tourism area, it is likely that cruise ship passengers will take a tour within STEER.

Additionally, do not compete with VI National Park. Instead work together by offering discounts to the Friends of VI National Park to join tours in STEER and vice versa.

It is also advisable that businesses market that they support STEER, a marine protected area. This will allow them to position themselves as an environmentally friendly business, an aspect important to many American Travelers. According to a study completed by TIA and NGT, "about 54 million (35%) of American travelers are inclined to select a company that strives to protect and preserve the environment" (Stokes, Cook, & Drew, 2003, p. 21).

Marketing.

When planning for visitor education and outreach, STEER management should keep in mind the top markets outlined earlier, New York City, Miami, Washington D.C., Los Angeles and Chicago, as well as potential new targets the USVI Department of tourism will be advertising to; Atlanta, Boston, Chicago, New York and Philadelphia. Once the STEER visitor survey is complete, marketing efforts should be directed to the markets found in STEER.

Despite it not being a very popular choice among businesses, STEER should create a website. A website would provide a central location for STEER information to be distributed to visitors and stakeholders. It will also give the ability to create the much needed vision of STEER as destination on St. Thomas. Brochures and marketing of existing businesses within STEER is an avenue to gain support by providing an obvious benefit.

Other

Please see Appendix G for businesses to include in the Friends of STEER group and those wishing to receive updates on STEER projects and plans

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ST. THOMAS EAST END RESERVES VISITOR SURVEY PLAN

Introduction

Unlike island and territory wide tourism data, there are no visitor specific data for STEER. According to the St. Thomas East End Reserves Management Plan and discussion with the Core group, specific STEER visitor data was highly desired. Following is a detailed plan to implement a visitor survey within the St. Thomas East End Reserves.

The core management group was engaged in defining the desired STEER tourism data and what the best methods of doing so would be.

Problem Definition

The problem, as determined through consultation with the STEER core group, is to determine the demographic information of STEER visitors, satisfaction with the experience in STEER and what other activities are the visitors to the St. Thomas East End Reserves interested in.

Survey Objectives

In consultation with the STEER core group, a STEER specific tourism study would inform educational materials, marketing and future projects for STEER.

The objective of the survey is to access visitor experiences in STEER and demand patterns. The survey will capture visitors' satisfaction with STEER tours and will capture visitor profile information, degree of interest in a range of potential products and experiences within STEER. Willingness to pay for conservation efforts within STEER is briefly looked at as well providing businesses with STEER specific information.

Complete Methodology

The full survey methodology includes the target population, primary data collection, pilot survey, data collection instrument, venue, distribution method, interview schedule, sample selection process, response enhancement options and training of enumerators.

Limitations

All surveys face limitations. The following points address potential limitation that may be encountered during this survey.

- The surveys will be collected at several venues. Due to the different markets at each tour and nature of trips, the collection methods may differ.
- A few businesses expressed concerns about collecting surveys at their premises. If they do not agree, the survey will not be representative of all visitors participating in a trip with a STEER tour operator.
- The number of visitors entering STEER is an estimate; therefore the suggested sample is an estimate as well.
- The survey may not end up as a probability survey with all visitors having a non-zero chance of being surveyed.

Validity Review

Researchers should assess the validity of their survey by applying the eleven key criteria to their sample survey after it has been completed. This will allow the reviewer to determine the level of confidence they can have in the results of this sample survey. The eleven criteria and detailed information on how to apply it to this specific survey can be found in Appendix H.

Reliability

It is important to consider the reliability of the survey. Reliability is a statistical concept that addresses the amount of random error in survey results with the ultimate goal being to create a highly reliable survey that is free from random error. Reliability is affected by the sample size and the variability of the phenomenon being measured through the survey and it increases as the sample size increases. In order for the survey to be reliable at a 95% confidence level, the actual optimum sample size was calculated to be $n=374$ (Raosoft Inc., 2004).

If a method other than face-to-face interview is used, such as online or mail surveys, the initial sample size should be adjusted accordingly in order for the appropriate number of surveys to be collected.

Target Population

The target population includes all visitors, tourists and excursionist, to STEER via one of the STEER tour operators. The Sampling Unit is defined as individual visitors to STEER.

Based on the information received from businesses during business interviews, at least 14,775 customers enter STEER via tour operators, approximately 1,287 are locals and the remaining 13,488 are visitors. With the knowledge that not all businesses were interviewed and 9 out of 12 of them provided a number of customers, the number of customers entering STEER is expected to be higher.

The target population is established on the numbers provided by the businesses, some estimates and whether or not a business has approved interviewing their customers. Taking all of the circumstances into consideration, our target population size is estimated to be 13,489 and the optimum sample size is calculated to be $n=374$ (Raosoft Inc., 2004). Face to face surveys elicit a high response rate if conducted correctly (NOAA Coastal Services Center, 2007, p. 4) and it is not expected that a much higher initial sample size would be needed for such a collection process. However, if an alternate collection method is to be used, the initial sample size should be increased based on the expected response rate. For example, mail in surveys have proven to have a very low response rate because people forget to mail back their responses (World Tourism Organization, 1995, p. 45). This will require a larger initial sample size.

Primary Data Collection

The survey should be administered as a face-to-face interview at predetermined businesses operating in STEER and after commencing of the tours. For a detailed list of businesses and location to collect surveys see Appendix I. This method of primary data collection is relevant to the population because it assures that the surveyed individuals have experienced STEER.

Pilot Survey

A total of 5 pilot surveys were collected in October of 2011. The individuals surveyed were a mix of visitors and residents intercepted on the beach. Though this is not the collection methodology or venue designed for the survey, the testing was important to establish the validity of the interview form, to improve the questions and to ensure the likert scales resonated with the possible respondents. Pilot survey respondents' comments prompted several changes to the interview form. Besides minor grammatical corrections, the only other significant change needed was to better explain that the survey is about the St. Thomas East End Reserves and to familiarize the respondents with the reserves. Many of the respondents were unaware that question 3 was asking how many times they have been to STEER and not St. Thomas. Therefore, a map of STEER has been added to the beginning of the survey to allow the respondent to understand the area being discussed. A question was added asking the respondents if they were aware that the tour they have taken was within the St. Thomas East End Reserves. Additional pilot surveys should be conducted in order to insure that the changes are sufficient. See Appendix J for the complete survey.

Data Collection Instrument

The interview form contains 15 questions over 3 pages. Questions seek to gain an understanding of experiences in STEER, interest in specific tourism products and demographics. The introduction provided to possible respondents is quoted directly below:

Welcome to the St. Thomas East End Reserves (STEER). This survey is being administered on behalf of The STEER Core Management Group in collaboration with the Department of Natural Resources, The Division of Coastal Zone Management. Your responses will help us gain a greater insight about visitors' preferences. We respect your privacy, and all responses are anonymous.

Venue

The venues for the survey are at each business conducting tours within STEER, pending the businesses approval. Seven of 12 businesses agreed to permit surveying of their customers upon return of the tours. Two businesses disagreed to participate, while 3 businesses did not provide an answer. Appendix I present a detailed list of business to contact in regards to surveying visitors as well as additional businesses not surveyed.

The percent of surveys to be collected at each site is represented in Appendix I. Despite businesses already agreeing to permit surveying on their sites, survey venues should be re-confirmed with appropriate persons. A letter of request has been drafted to assist in the process of securing data collection venues (see Appendix K).

Distribution Method

The distribution method is face to face. Face to face surveys, if done correctly, usually result in high response rates (NOAA Coastal Services Center, 2007, p. 4).

Interview Schedule

The STEER core management group should determine appropriate dates and times in cooperation with each of the businesses. Collection times at each of the venues will vary according to tour times. Determine what times during the day the tours return and create schedules ahead of time. Keeping in mind that some tours might not go and that some visitors may refuse to participate, make sure to schedule several collection times for each venue.

A sample schedule with detailed explanation on how to create a similar random schedule is available in Appendix L.

Sample Selection Process

The total population of visitors to STEER and their characteristics are unknown. Taking this into consideration, it is suggest that estimated visitor numbers provided by the businesses be utilized and a proportionate number of the population be surveyed.

Having a probability sample is highly unlikely do to the many unknowns. However, to strengthen the validity of the survey a systematic sampling method may be used. In this method a random number should be selected. The number is then the interval in selecting potential respondents (i.e. selecting every 5th visitor getting off kayak tour with VI Eco Tours).

Response Enhancement

Response enhancement should be considered in order to stimulate high response rates. World Tourism (1995, p. 22) suggests that the following factors have proven to increase response rates:

- Brief, easily understood questionnaires
- Cash incentives and other material awards
- Courteous, congenial interviewers who build rapport with respondents
- Respondents are assured anonymity
- If self completed, clear instructions on how to return completed questionnaire
- Personal request to the respondents to complete the questionnaire
- Description of a potential benefit of the survey results for the respondent
- Minor interruption of respondents' other activities

Due to the time constraints that cruise ship passenger's experience, enumerators driving in the taxi with cruise ship passengers should be considered. An incentive should be given to the taxi drivers to cooperate. If this method is used, it should be noted that this may affect the validity of the survey since the collection method will not be the same across all venues.

An alternative method, perhaps a solution for all venues, is having an online or mail back survey for visitors to complete. In this case, a lower response should be expected. The team should be prepared to adjust the initial sample size based on the appropriate response rate expected.

Methods to stimulate high survey response rate include brief, easily understood questionnaires, courteous interviewers, clear instructions on how to return survey if self completed, cash incentives or other rewards etc.

Training Interviewers

Data collection will occur at several venues and is anticipated that several enumerators will be recruited. In order for the surveying to be consistent across all enumerators, training of interviewers is highly recommended.

“Interview training should include how to locate, identify, contact, greet, qualify, and interrogate respondents, as well as how to record responses and end the interview” (World Tourism Organization, 1995, p. 23).

Implementation

A Step-by-Step action list provides an overview of survey tasks to be completed (see Appendix M).The team should create a schedule with specific deadlines to assure timely completion of the projects.

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APPENDICES

[Appendix A-Sustainable Tourism Project Recommendations](#)

[Appendix B –Detailed 2009 and 2010 Air Visitor and Cruise Passenger Arrivals](#)

[Appendix C – List of Businesses contacted to conduct survey](#)

[Appendix D – Business Data Collection Instrument](#)

[Appendix E – Reasons for operating in STEER](#)

[Appendix F – Businesses interested in the Friends of STEER Group and in receiving info on STEER](#)

[Appendix G - Sample Survey Evaluation Criteria](#)

[Appendix H– Data Collection Venues](#)

[Appendix I – Visitor Survey](#)

[Appendix J – Letter request for support](#)

[Appendix K – Visitor Survey Sample Schedule Procedure](#)

[Appendix L – STEER Visitor Survey Action List](#)

Appendix A-Sustainable Tourism Project Recommendations

St. Thomas East End Reserves (STEER)

Sustainable Tourism Project Recommendations

This document contains a total of 11 sustainable tourism related projects. The first 5 projects are ideas that have been mentioned during meetings within the last several months and have therefore been analyzed in more detail. Projects 6-8 have initially been analyzed for The St. Croix East End Marine Park and may also be of interest to STEER. 9-11 are additional ideas, mostly long term projects, for STEER to consider. Finally, several activities from the Sustainable Finance Plan were included.

1. Willingness to pay study

- A WTP study is a Sustainable Finance Plan year 2 action step. It would help reveal the appropriate fee/concession price point to implement and raise revenue.
- A willingness to pay study can be combined with a STEER specific tourism study depending on desired data. If the desired STEER specific tourism data is simply number of visitors and demographic data, than this is an option. (*see project #2 for details*)
- A WTP study can help support further implementation of the environmental entrance fee.

STRATEGY:

- Review existing studies
- Develop willingness to pay survey
- Conduct the visitor willingness to pay survey (cruise ship passengers, tourists)
- Interview/focus group with local tourism businesses to assess their willingness to pay a park fee/concession.

2. STEER specific tourism data

- The tourist data referenced in the Sustainable Finance Plan were island and territory wide. A desire for specific STEER tourism data has been expressed by a few stakeholders
- A STEER specific tourism study would allow for appropriate product development and proper marketing

STRATEGY

- It can be collected by collaborating with tourism businesses to track visitor numbers along with activities visitors participated in, origin etc.
- Another option is to create a UVI MMES internship. Take charge of developing the data collection instrument, the methods and the plan. The student/s would be in charge of collecting the data under my supervision. After analysis the written report will reveal if there are differences between overall visitors visiting St. Thomas vs. STEER and should complement the Sustainable Finance Plan.
- The tourism study can look at

- Types of visitors that visit STEER. This includes excursionists/ same-day visitor (cruise ship passengers, USVI residents and possibly BVI residents, ferry passengers) and tourists (overnight visitors).
- Demographic questions
- Activities participated in and reason for visiting STEER
- Demand for new activities/products. While interest in new products is assessed, willingness to pay for specific products (bird watching, snorkel trail etc) can also be investigated. A Demand study is highly recommended prior to implementing new products within STEER.
- This project can be split into two surveys.
 - A onetime demand survey to look specifically at desired products for future implementation.
 - An annual visitor survey to assess number of visitors, length of stay and demographic data.

<u>STRENGTHS</u>	<u>WEAKNESSES</u>
<ul style="list-style-type: none"> ● Identifying number and type of visitors entering STEER. ● Monitor tourism growth and potential impacts ● Assist in management and monitoring of visitor numbers and uses 	<ul style="list-style-type: none"> ● Should be an ongoing process in order to monitor visitor numbers and capacity issues if needed. ● Need staff and resources to conduct annually
<u>OPPORTUNITIES</u>	<u>THREATS</u>
<ul style="list-style-type: none"> ● Assist in defining desired products/product gaps ● UVI internship ● If concessions/fees are implemented, reporting visitor numbers can become a requirement. 	<ul style="list-style-type: none"> ● Tourism related businesses not co-operating, especially if there is no benefit to them. ● Businesses fearing STEER imposing a limit on visitors can result in unreliable data.

3. Development of Patricia Cay & Bovoni

- Bird watching, mentioned in several meetings, is a potential product for the area. My main concern is the close proximity of the shooting range. Gun shots were heard while kayaking through the inner mangrove lagoon.
- Questions to be addressed:
 - i. Do the gun shots scare birds away?
 - ii. If the gunshots do not scare birds away, would the gun shots decrease the appeal to birdwatchers to visit? Attractiveness to birders can be gauged through a STEER specific tourism survey (*details in project #2*)

STRATEGY:

- Demand for birding (with a nearby shooting range) can be accessed through the tourism/demand study. If the market isn't there, there is no need to further look at threats, financial benefits.
- Might require building a platform onto one of the cays (if possible). My concern with this is that it will likely involve removing mangrove. Unless there is an easy access/entrance, or if bird watching via kayak or pedal boats would be sufficient.
- Inquire about the different species of birds, likelihood of seeing them and then research if those species would attract bird watchers to St. Thomas. Possibly conducted through an online survey.

<p style="text-align: center;"><u>STRENGTHS</u></p> <ul style="list-style-type: none"> • It would add product differentiation • Will offer the enjoyment & recreation component • US bird watching market is willing to spend more money¹ for the experience. 	<p style="text-align: center;"><u>WEAKNESSES</u></p> <ul style="list-style-type: none"> • Shooting range in close proximity • If new local businesses are opened, training will most likely be required
<p style="text-align: center;"><u>OPPORTUNITIES</u></p> <ul style="list-style-type: none"> • Bird watch via kayak or pedal boat • Easy for already existing businesses to take on those tours (faster process, no training required) • Consider encouraging local displaced population to open businesses. (Potentially get more buy in!? This would likely be a much longer process involving training) 	<p style="text-align: center;"><u>THREATS</u></p> <ul style="list-style-type: none"> • Removal of mangrove (if developing walkway) • Easy for already existing businesses to take on those tours. <ul style="list-style-type: none"> - not beneficial to STEER if concessions/fees are not set up - Threat of losing/not gaining more local buy in because existing businesses took over this product as well.

¹ 27% of US bird watching market has an income of \$50,000-\$74, 499, while 29% has an income of \$75,000 and higher

4. Mooring buoys

A need for mooring buoy systems was discussed earlier in the year. Though this is not a tourism product or activity it serves a recreational activity within STEER and encourages sustainable use by recreational users and visitors.

- Anchor damage - The Management Plan indicates creating a buoy system in popular boating areas containing coral and sea grass habitat within STEER
 - Strategy 8.1.A with goal to ‘Reduce the number of boats anchoring on coral and sea grass by 90% by 2015’
- Capacity issues were also discussed

STRATEGY:

*Need more info on project to date and needs

<u>STRENGTHS</u>	<u>WEAKNESSES</u>
<ul style="list-style-type: none"> • Decrease in anchor damage 	<ul style="list-style-type: none"> • Implementing and collecting fees may be difficult • Maintenance
<u>OPPORTUNITIES</u>	<u>THREATS</u>
<ul style="list-style-type: none"> • Revenue generation through mooring fees and permits. 	<ul style="list-style-type: none"> • Maintenance may cost more than the mooring buoy fees will raise.

5. Snorkel Trail

- Since this project is a Sustainable Finance Plan action step (year 3), it is meant to raise revenue for STEER. There is no indication in the Sustainable Finance Plan as to how this would be done; however, concessions and fees seem to be reliable options.

STRATEGY:

- Discussion with tour operators and stakeholders to narrow down a list of potential locations.
- Site visits to define appropriate location

<u>STRENGTHS</u>	<u>WEAKNESSES</u>
<ul style="list-style-type: none"> • Educational tool for both visitors and locals if developed in area with public access 	<ul style="list-style-type: none"> • Revenue from such a product is possible only if tours are offered by operators and fees are applied.
<u>OPPORTUNITIES</u>	<u>THREATS</u>
<ul style="list-style-type: none"> • Could the snorkel trail act as a nursery for corals? • Christmas Cove as possible location with an opportunity to collect mooring fees. 	<ul style="list-style-type: none"> • Can easily be operated by existing kayaking business only.

PRODUCTS ANALYZED FOR STXEEMP THAT MAY BE OF INTEREST TO STEER

6. Sustainable Tourism Plan

- I can develop a document for future implementation in yr 3 or 4 that complements the existing Sustainable Finance Plan. The plan can include a detailed timeline for development of a specific product, a marketing plan for that specific product and future action steps (products) to be implemented after my contract.
- Conducting a smaller project such as a willingness to pay study and/or collecting STEER specific data would strengthen the tourism plan. A demand study would help define the most viable products.

7. SAVE (Scientific, Academic, Volunteer, Educational) (<http://www.save-travel.org/>)

- The SAVE concept is not a product that will be implemented immediately, but a long – term project.
 - o Scientific – Allow researchers and schools to conduct research within STEER. Also, have volunteers/tourists assist local researchers with their work. Revenue would come from providing housing and permits to conduct research in specific area. An example is dolphin research volunteering in Croatia with Blue World (www.blue-world.org/en/get-involved/volunteer)
 - o Academic - This product would allow students to gain credit for research work and internships conducted within STEER during the semester or as thesis work. Revenue comes from fees and/or accommodation.
 - o Volunteer – Tourists assist with research, teaching, lionfish dives and other programs benefiting the park for 7-10 days. The revenue would come from the fees visitors pay for housing and assistance.
 - o Educational - Offer workshops every week/month for a fee. Offer various topics by different speakers, local arts and craft lessons, snorkel clinics and more. This can attract both local residence and visitors. A central location (visitor centre) is useful.

8. Underwater Sculpture Garden

- Jason deCaires Taylors constructs underwater sculpture gardens, which act as artificial reefs, offering a dive site away from natural reef therefore removing stress. It also offers habitat for other animals such as lobster and fish. Besides the conservation aspect, it is a great educational tool for visitors and local residents. He often involves locals in the process of creating sculptures and maintaining them. His existing underwater sculptures are located in Grenada and Mexico.(www.jasondecairestaylor.com)
- Jason deCaires Taylor visited St. Croix in 2008 and proposed a project on the west end of St. Croix. The project never took place for reasons currently unknown to me.
- Can substitute the snorkel trail.
- Potential sites would need to be surveyed.
- Such a project would require significant funding, decreasing the likelihood for implementation.

- Revenue would come from concessions or fees.

ADDITIONAL IDEAS

9. Water Sports/Tour Operator guidelines or certification program

- Develop guidelines for all water activities (SCUBA diving, kayaking, snorkel tours and adjacent hotels)
- Potential partners - DPNR, Department of Tourism
- Pilot within STEER and STXEEMP

10. Create a organization equivalent to CHANT (Cruzan Heritage and Nature Tourism)

- CHANT (www.chantvi.com) is a non-profit that assists small business with business plan development and promoting through CHANT's website. Their goal is to offer local resident opportunities to open tourism businesses and pass on their knowledge of the island culture through the tours.
- I would suggest creating an organization along the same lines. Perhaps an organization promoting eco-tours, assisting with business plan development in order to give an opportunity for locals to open businesses (snorkel tours, bird watching). Another option is to create a community managed business or co-operative that will give locals an opportunity to get more involved in the tourism industry and benefit from it. Such an organization can also assist with improving skills by offering workshops.

11. Lion Fish Tourism

- The increase of lionfish in the surrounding waters might open up new markets:
 - o Volunteer tourism
 - o Divers can come to St. Thomas to assist in searching for lionfish within STEER
 - o This would require a set up of a formal program. Partnering with hotels, dive shops, and researchers is needed in order to offer dive packages.
 - o Revenue can come from specific lionfish diver fees/environmental fees that will go back into STEER
 - o Lionfish hunts, which are already taking place on St. Croix
 - o STEER can partner with local dive shops to organize lionfish hunts within STEER
 - a. Competition entrance fees can benefit STEER
 - b. Competitors can use personal boats or join the dive shops. Dive shops can charge an additional \$5-\$10 per competitor for the use of their boats/gear.

- o Restaurants can be encouraged to create lionfish dishes and recipes, have competitions and cook offs.
 - o Perhaps this better fits as a territory wide initiative?
 - o Is ciguatera an issue?

SUSTAINABLE FINANCE ACTION PLANS

Actions related to tourism were singled out as possible projects. The following actions, especially those in years 3-5 can potentially be included and further developed in a tourism plan for later implementation.

Year 1

- Host a STEER Opening event to raise money for the reserves
 - o This should turn into a STEER annual event?!

Year 2

- Conduct willingness to pay (WTP) surveys for tourists and cruise ship passengers as part of a larger Economic Valuation and User Assessment Study (*details above in project #1*)
- Work with private businesses to determine a concessions/permits fee schedule
- Establish Host Boat Program
- Implement the voluntary cruise ship and air visitor environmental entrance fee;
 - o Though many steps are needed to implement this, the willingness to pay study should be one of the first steps and would support further development.
- Work with hotels, dive shops, tour operators and concession stands to determine how to better market STEER and develop tours visitors would be willing to pay for;
 - o This should be a component of STEER tourism data collection/demand survey process. The businesses can assist in collecting data in order to develop new products and market together. (interview operators, survey visitors)

Year 3

- Conduct yearly visitor surveys of STEER including boat use, diving etc. (*details above in project #2*)
 - o Can be started with STEER specific tourism data gathering and then conducted yearly
- Visitor center – grant writing
- Create a snorkel trail (*details above in project #5*)
 - o If not implemented by me, it can potentially be developed and included in tourism plan

Year 4

- Implement the Environmental Entrance Fee for all tourists and cruise ship passengers;
- Achieve Blue Flag status;

Year 5

- Conduct another visitor use survey and compare with the earlier survey to see if financial mechanisms have had an impact on number of visitors to the park.

Appendix B –Detailed 2009 and 2010 Air Visitor and Cruise Passenger Arrivals

U.S. Virgin Islands Annual Tourism Indicators															
BUREAU OF ECONOMIC RESEARCH - OFFICE OF THE GOVERNOR															
1050 NORRE GADE #5 - CHARLOTTE AMALIE, U.S. VIRGIN ISLANDS 00802 - (340) 714-1700 www.usviber.org															
	1990	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Annual Percent Change	
														5-Year	1-Year
VISITOR ARRIVALS (thousands unless noted otherwise)															
Total visitors	1,811.5	2,395.8	2,497.4	2,336.6	2,392.6	2,619.7	2,601.9	2,570.7	2,606.2	2,435.2	2,246.5	2,550.5	2,688.0	1.2	5.4
Tourists	462.5	545.9	527.2	520.2	537.9	566.8	593.8	570.6	587.1	574.2	562.6	589.8	535.8	-1.1	-9.2
Excursionists	1,349.0	1,849.9	1,970.2	1,816.4	1,854.4	2,052.9	2,008.1	2,000.1	2,019.1	1,861.0	1,683.9	1,960.7	2,152.2	2.0	9.8
Air excursionists	229.4	81.5	78.8	77.7	82.9	88.2	95.6	96.6	101.2	104.0	101.6	101.8	143.2	9.2	40.7
Cruise passengers	1,119.6	1,768.4	1,891.4	1,738.7	1,773.9	1,964.7	1,912.5	1,903.5	1,917.9	1,757.1	1,582.3	1,858.9	2,009.0	1.6	8.1
Air visitors - tourists & excursionists	691.9	627.8	606.0	598.0	620.8	655.0	689.4	667.2	688.3	678.1	664.2	691.6	679.0	0.4	-1.8
Number of cruise ships	1,142	1,014	976	845	888	924	818	782	752	687	621	680	698	-2.0	2.6
St. Thomas/St. John:															
Air visitors - tourists & excursionists	510.5	480.8	469.6	471.2	505.9	524.2	544.8	533.4	558.4	558.4	533.3	543.0	531.9	0.0	-2.0
Cruise passengers	1,117.2	1,719.8	1,790.5	1,671.3	1,751.9	1,960.9	1,910.2	1,901.3	1,917.4	1,754.6	1,507.6	1,751.3	1,887.1	0.4	7.8
Number of cruise ships	1,140	949	909	812	878	922	814	776	750	685	593	631	643	-3.4	1.9
St. Croix:															
Air visitors - tourists & excursionists	181.4	147.0	136.4	126.8	114.9	130.8	144.5	133.8	129.9	119.7	130.9	148.6	147.1	2.2	-1.0
Cruise passengers	13.1	232.4	237.4	120.5	23.0	25.0	54.5	35.2	7.1	2.5	105.1	149.4	158.2	798.1	5.9
Number of cruise ships	14	139	138	71	25	11	48	25	6	2	48	67	72	440.9	7.5
VISITOR EXPENDITURES (millions of dollars)															
Total expenditures	697.0	1,205.9	1,234.1	1,195.4	1,256.5	1,356.0	1,431.6	1,467.6	1,512.6	1,157.1	1,021.3	1,012.5	-	-	-
Tourists	498.8	725.9	722.1	723.5	765.4	789.8	863.8	883.2	929.8	-	687.4	678.2	-	-	-
Excursionists	198.2	480.0	512.0	471.9	491.1	566.3	567.8	584.3	582.9	470.7	333.9	334.3	-	-	-
Day-trip by air	30.6	18.2	18.6	18.5	20.3	27.6	27.2	25.6	27.7	29.7	28.6	28.0	-	-	-
Cruise passengers	167.6	461.8	493.4	453.4	470.8	538.6	540.6	558.8	555.2	441.0	305.3	306.3	-	-	-
SELECTED TOURISM-RELATED EMPLOYMENT (number of jobs)[a]															
Total tourism-related employment	8,640	8,660	9,020	8,910	8,379	8,723	8,695	8,593	8,778	8,683	8,038	8,301	8,469	-0.2	2.0
Hotels and other lodging places	3,460	3,980	4,060	3,930	4,020	4,260	4,052	4,015	4,001	3,991	3,581	3,587	3,549	-2.4	-1.1
Gift shops	2,370	2,010	2,110	2,130	1,603	1,590	1,662	1,561	1,583	1,479	1,370	1,381	1,351	-2.8	-2.2
Eating and drinking places	2,380	2,100	2,290	2,300	2,256	2,360	2,455	2,511	2,523	2,547	2,493	2,793	2,959	3.5	5.9
Transportation by air	430	570	560	550	500	513	526	506	528	521	491	443	493	-0.2	11.3
Scenic and Sightseeing Transportation								143	145	103	97	117	-	-	20.6
SELECTED TOURISM-RELATED IMPORTS (millions of dollars) [b]															
Total tourism-related imports	141.0	209.9	235.9	231.5	248.7	202.3	597.2	561.3	421.0	438.2	305.7	349.8	361.0	-6.7	3.2
Alcoholic beverages	31.8	20.5	26.4	24.6	24.2	30.3	33.5	31.7	40.6	28.3	29.9	30.9	34.2	3.5	10.7
Cameras	3.8	2.5	1.6	1.3	3.2	5.7	5.3	5.3	1.7	0.7	1.1	1.8	1.8	-1.2	0.0
China	2.9	0.6	0.9	0.5	0.4	0.7	0.7	1.1	0.8	0.7	0.6	1.0	1.0	2.5	0.0
Crystal	3.1	0.4	0.5	0.7	0.8	0.4	0.4	0.5	0.1	0.5	0.2	0.2	0.1	42.0	-50.0
Jewelry	72.1	157.5	179.5	170.6	192.7	135.6	511.0	480.9	339.4	374.8	242.4	274.2	278.2	-7.9	1.5
Leather goods	4.2	0.3	2.1	0.5	1.0	1.2	2.2	3.7	3.5	2.8	2.8	1.8	2.5	-4.4	38.9
Linen	2.2	1.1	1.3	1.3	1.5	2.0	1.5	1.4	0.8	1.5	1.6	1.5	2.1	17.0	40.0
Perfume	9.7	4.8	5.0	4.5	4.1	4.9	4.3	3.0	5.1	4.0	3.4	4.1	3.9	9.8	-4.9
Watches	11.3	22.2	18.6	27.5	20.8	21.5	38.3	33.7	29.0	24.9	23.7	34.3	37.2	4.1	8.5

	St. Thomas/St. John		St. Croix		TOTAL		Percent Change
	2010	2011	2010	2011	2010	2011	
Cruise Passenger Arrivals	1,751,328	1,887,096	149,418	158,186	1,858,946	2,008,991	8.1%
Air Visitor Arrivals	543,002	531,907	148,556	147,054	691,558	678,961	-1.8%
Total Arrivals (Cruise + Air)	2,294,330	2,419,003	297,974	305,240	2,550,504	2,687,952	5.4%

Appendix C – List of Businesses contacted to conduct survey

	COMPANY	ACTIVITY	TOUR LOCATION	SURVEYED
SNORKELING AND UNDERWATER ACTIVITIES	Homer's Snorkel & Scuba Tours	Night snorkeling, day snorkels, SCUBA	Hull Bay, Secret Harbour, Blue Beard Beach	NO
	Big Blue	Snorkel Tours, Christmas Cive		YES
	Virgin Island Ecotours	Kayak, Hike & Snorkel the Mangrove Lagoon, Historic Hassel Island from Frenchtown	Mangrove Lagoon, Cas Cay	YES
WINDSURFING KITEBOARDING PARASAILING	Caribbean Watersports & Tours	Parasailing & Screaming Eagle Jet Boat	Little Saint James snorkel	NO
	Island Sol	Sailing, Windsurfing, Kiteboarding, Wakeboarding and lessons	Cas Cay Kite Boarding	YES
	West Indies Windsurfing			NO
	Magic Moments Luxury Excursions	Boat rentals and Charters	BVI & St.John trips	YES
	Sandspur Charters			NO
	See & Ski	Boat rentals/captained and not captained		NO
	VIP Yacht Charters			YES
	Stormy Petrel or Pirate's Penny	charters, USVI/BVI's		NO
	Treazzure Sailing Charters	charters - personal-day etc		NO
	DAY SAILS	Alaunt Charters	day sails	

	COMPANY	ACTIVITY	CONTACT	TOUR LOCATION	SURVEYED
	Day Sail Winifred	day sails		Great Saint James, Little Saint James, St. John	NO
	Daysail Fantasy	day sails		Great Saint James, Little Saint James, St. John	NO
	Heavenly Days Catamaran	day sails, sunset sails		St. John, turtle cove etc	NO
	Lady Lyndsey Catamaran			?	NO
	New Horizons Snorkel Adventure	day silas, sunset sails		St. John, unihabited cays in the sound?	NO
	Rumbaba Charters	Day sails			NO
	Yacht Lou	day sails		St. John	YES
SCUBA	Aqua Action Dive Center				YES
	Aqua Marine	SCUBA			NO
	Dive In!				YES
	Patagon Dive Center				YES
	Red Hook Dive Center				YES
	St. Thomas Diving Club				YES
	Coki Beach Dive club				YES
Dive HDV				YES	
HOTEL SPORTS CENTER	Sapphire Beach Resort			Night Wind and New Horizons charters use Christmas Cove	NO

	COMPANY	ACTIVITY	CONTACT	TOUR LOCATION	SURVEYED
	Secret Harbour Beach Resort			Aqua Action is the Dive shop that operates out of Secret Harbor	NO
	The Ritz-Carlton, St. Thomas				NO
	Elysian, operated by Wyndham	Windsurfing, Scuba Diving, Parasailing, Jet Skiing			YES
	Bolongo Bay				NO
MARINAS	Fish Hawk Marina				NO
	Independent Boatyard				YES
	Pirate's Cove Marina				NO
	Tropical Marine				
	Humphrey's Marina				
	Saga Haven Marina				YES
	Ruan's Marina				
	East End Boat Yard				
	Yacht Club				
	Boater's Haven at Compass Point Marina				
OTHER	Budget Marine				YES
	cruise ship excursions				

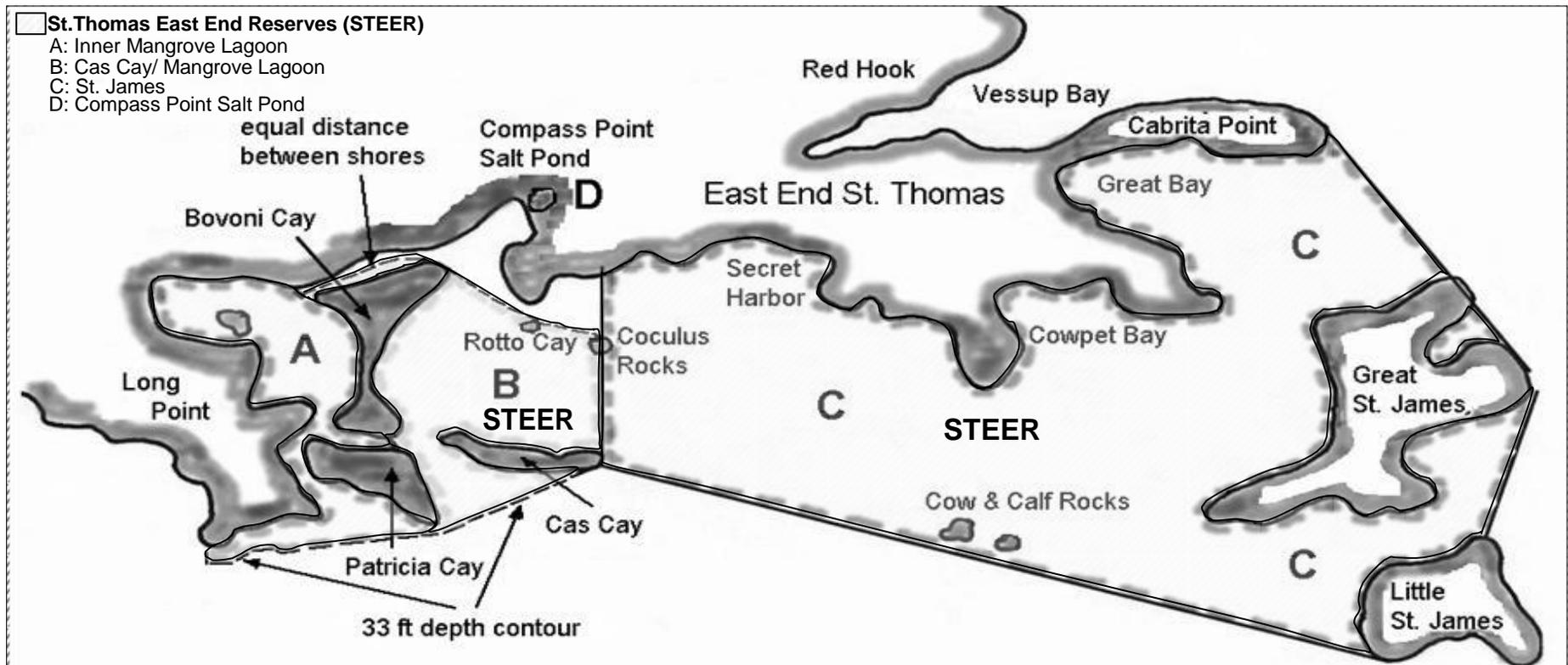


STEER PRIVATE BUSINESS INTERVIEW

Appendix D – Business Data Collection Instrument

A recommendation in the STEER management plan is to look at further development of eco tourism programs – “RESPONSIBLE TRAVEL TO NATURAL AREAS THAT CONSERVES THE ENVIRONMENT AND IMPROVES THE WELL-BEING OF LOCAL PEOPLE” (TIES, 1990). The STEER Core team is scoping out what activities currently exist in the Reserves, visitors interest in “eco tours”, what local business’ interest and ideas are for new “eco tourism” products within STEER and what management practices are preferred. **Your input is extremely valuable. Please make your voice heard by completing this Survey. We respect your privacy, and all responses are anonymous.**

The hashed out area in the map below marks the St. Thomas East End Reserves. STEER includes Christmas Cove, Cow and Calf Rocks, Mangrove Lagoon, et



Form Instructions: The form should only take 20 minutes of your time. It is a fill in form you can complete on your computer. Despite the look, there is unlimited space for your answers. You can use the up and down arrows or click on the gray spaces to input your answers. **Please email the completed form to Marija Micuda at marija.micuda@dpr.gov.vi.** If you prefer to dictate your answers over the phone, please contact Marija Micuda at 340-718-3367. If you have any questions or concerns during the process, please feel free to contact me. Thank you for your cooperation!



STEER PRIVATE BUSINESS INTERVIEW

BUSINESS NAME _____

ADDRESS _____ **EMAIL** _____

PHONE _____ **CONTACT PERSON** _____

1. Do you operate or stop over in the st. Thomas east end marine reserves? (please refer to map)
 Yes No

2. What type of tours do you provide within STEER? (check all that apply)
 Interpretive Nature Tours SCUBA Diving
 Snorkel Tours Boat Tours
 Jet Skis Stop Over/Overnight (i.e. Christmas Cove)
 Kayak Other (please specify) _____

3. What areas within steer do you utilize? (include sites you visit often and those you visit less frequently/a few times a year) _____

4. a. Do you consider your tours to be eco-tourism products (RESPONSIBLE TRAVEL TO NATURAL AREAS THAT CONSERVES THE ENVIRONMENT AND IMPROVES THE WELL-BEING OF LOCAL PEOPLE)? Yes No

b. Please explain why or why not? _____

5. How long have you been operating in STEER? _____

6. Why do you choose to operate within STEER? _____

7. What percentages of your trips take place within STEER? _____%

8. How many customers do you serve annually? _____

9. What percent of those customers do you take into STEER annually? _____%

10. Of all the customers you serve annually, what percentage came from:

USVI	%
USA	%
Canada	%
Europe	%
Other	%

11. What percent of your visitors fall within the following categories:

Cruise Ship Passengers	%
Airplane/Overnight Visitor	%
Private Yachters	%

12. What do you think is the main reason people choose your service?

13. a. Do you think the experience you provide can be improved? Yes No

b. How or why not? _____

14. We are planning to ask visitors about their interest in the following eco-tourism products. Which of the following products do you think would be successful within STEER?

- | | |
|---|---|
| <input type="checkbox"/> Bird watching | <input type="checkbox"/> Underwater Sculpture Garden |
| <input type="checkbox"/> Snorkel trail | <input type="checkbox"/> Visitor Center |
| <input type="checkbox"/> Volunteer Projects | <input type="checkbox"/> Interpretive tours of reef |
| <input type="checkbox"/> Camping | <input type="checkbox"/> Other (please specify) _____ |

EXCURSION DETAILS

15. Do you inform the visitors about the wildlife and habitats that you visit? Yes No

16. Do you instruct visitors on how to behave in the water? Yes No

17. If not, why not? (check all the apply)

- Do not have enough knowledge/not familiar with the habitat
- Visitors do not like it
- Difficult to train staff
- Takes up too much time of the tour
- Other (specify)

18. Do you think additional information about wildlife; STEER habitats etc. would be useful to you and your crew in order to inform visitors? Yes No

19. Would you support the idea that all operators and guides in STEER should have a standard training course in order to provide consistent information to the visitors? (Please explain why or why not) Yes No

STEER FUNDING (fees, donations, contributions, environmental taxes)

In a recent economic valuation study, visitors indicated that they are willing to pay a fee to preserve coral reefs in the USVI. STEER management groups began discussing various funding types for the park (fees, taxes, donations). STEER is not yet at the point of implementing fees, however ideas are being discussed to see what the best and favored funding strategy is. Your input on this topic is extremely important in order to successfully develop and protect STEER for future use.

20. What would be your preferred method of assisting/contributing to STEER?

- Donation of boats for research
 - Collection of voluntary fees from visitors
 - Sponsor fundraising activities
 - Annual fee for use of STEER
 - Collection of visitor fees
 - Other (please specify) _____
-
-

21. If STEER was to collect fees, what amenities/benefits would you expect from the protected area?

- Should have a visitor center
 - Should be considered a destination/must see on St. Thomas
 - Website
 - STEER Brochures
 - Enforcement
 - Mooring buoys
 - Other _____
-

22. If you do not operate in STEER, would you be interested in doing so if the Reserves were improved (amenities/benefits from question 21)? N/A (I operate in STEER) Yes No

23. If you were satisfied with the STEER (conditions mentioned in questions 21/22 and STEER decided to implement fees in order to continue funding the park, what do you think is the best method and reasonable price is:

- Annual visitor fee \$ _____
 - Visitor entrance or exit tax \$ _____
 - Per trip within STEER \$ _____
 - Monthly Concession fee \$ _____
 - Annual Concession fee \$ _____
 - Other (please specify) \$ _____
-

24. If fees were collected, what should collected funds be used for?

- Coral Reef Preservation
- Environmental Restoration

- Community Work
 - Improving infrastructure
 - Hurricane mooring buoys
 - Day-use mooring buoys
 - Transient mooring buoys
 - Enforcement
 - Other _____
-

25. Currently STEER does not have an official management body.

a. Do you think there should be an official STEER management body to oversee all STEER projects and collect fees (if appropriate in the future)? Yes No

b. If yes, who do you think that management body should be?

- Government
- Water sports operators acting collectively
- Quasi-governmental body (such as the Magens Bay Authority)
- NGO/Non-Profit (such as Friends of STEER)
- Other: _____

We will be conducting visitor surveys to gain an insight into visitors' preferences. In order to gauge visitors experience in STEER and preferences for future products, we plan on conducting the surveys when visitors return from trips.

-
- 25. Would it be all right if we surveyed visitors after your tours within STEER? Yes No
 - 26. Would you be willing to participate in Friends of STEER volunteer group? Yes No
 - 27. Would you like to receive information about STEER progress, projects and plans? Yes No

Please us the space below to make comments or expand on any of the previously asked questions!

Thank you!
Contact Marija Micuda at
marija.micuda@dpr.gov.vi with any questions you may have!

Appendix E – Reasons for operating in STEER

Free
Spotted eagle ray
Christmas cove wildlife is unique
Protected area - cow and calf rock
Variety of fish, rock and coral formations (cow rock and little saint James)
Proximity
Better dive spots & easy dives
STEER is ideal for sailing and Christmas cove is very important because is a safe area and acts as protection.
Christmas Cove for overnight trips from the BVI's
Location
Gorgeous
Wind is great
Resort
Great reef and wildlife
Part of our longer range of sites
Good dive sites

Appendix F – St. Croix East End Marine Park Draft Operator Permit

GOVERNMENT OF THE UNITED STATES VIRGIN ISLANDS
DEPARTMENT OF PLANNING AND NATURAL RESOURCES
ST. CROIX EAST END MARINE PARK

APPLICATION FOR MARINE OPERATOR PERMIT
FOR OPERATION OF ALL RECREATIONAL COMMERCIAL MARINE ACTIVITIES WITHIN THE
BOUNDARIES OF THE ST. CROIX EAST END MARINE PARK (STXEEMP)

APPLICATION NUMBER: _____

ANNUAL FEE ATTACHED (Certified Check, Bank/Cashier's Check, Money Order)

Gross Receipts/Projected Income* \$ _____ (include supporting evidence)
Estimated fee \$ _____

Application is hereby made for a Marine Operator's Permit for Operation of all Recreational Commercial Activities within the boundaries of the St. Croix East End Marine Park, USVI. **By submission of this application, the applicant certifies that the information provided is true and accurate to the best of his/her knowledge.**

1. DATE OF APPLICATION: _____

2. NAME OF APPLICANT: _____
(*must be a natural person*)

3. NAME OF BUSINESS/CORPORATION under which businesses will be conducted:

4. TITLE OF APPLICANT or RELATIONSHIP TO BUSINESS: _____

5. MAILING ADDRESS: _____

6. TELEPHONE and FAX NUMBERS: (TEL): _____ (FAX): _____

7. NAME AND MAILING ADDRESS OF OWNER OF BUSINESS (if different from above):

8. DETAILED SUMMARY OF PROPOSED ACTIVITY (i.e. scuba, snorkeling, charters, tours, motorized water sports, rental etc. Please be specific): _____

APPLICATION FOR MARINE OPERATOR'S PERMIT
FOR OPERATION OF ALL RECREATIONAL COMMERCIAL MARINE ACTIVITIES WITHIN THE
BOUNDARIES OF THE ST. CROIX EAST END MARINE PARK (STXEEMP)

* The annual fee is ___% of company's gross receipts or projected income.

9. WATERCRAFTS(S)/VESSEL(S) DETAILS (Number of vessels & registration numbers):

10. TYPE OF CHASEBOAT/SAFETY FACILITIES PROVIDED TO USERS:

(Attach color photograph(s) of chaseboat(s) and registration number(s))

11. TYPE AND COLOR(S) OF LIFEJACKETS:

(Attach color photograph(s) of lifejacket(s))

12. BUSINESS LICENSE NUMBER: _____
(Attach copy of Business License)

13. EVIDENCE OF APPLICABLE INSURANCE: State type and extent of coverage and attach
copy of current policy:

14. DATE OF COMMENCEMENT OF ACTIVITY: _____

15. DESCRIPTION OF SITE OF BUSSINESS OPERATION (must be specific and detailed,
including exact location where business activity will take place, such as sales, rentals,
storage, tours etc, and the type or kind of booth to be erected or constructed, if any. (explain
fully and provide drawing/photo, or other relevant documentation etc).:

16. DOES THE PROPOSED PERMIT HOLDER WISH TO INSTALL AND/OR OPERATE A
MOORING, STRUCTURE AND/OR OTHER FACILITY IN THE MARINE PARK/S?

Yes No

If **yes**, please indicate location(s): _____

ADDITIONAL CONDITIONS OF PERMIT:

1. This permit is granted for a period of one year commencing from the date of approval by the Commissioner. Application for a new permit or renewal must be made at least thirty (30) days before expiration of this permit. An estimated fee must be submitted with application.
2. Failure to obtain a business license will render this permit null and void, nullification of permit will result in forfeiture of all fees paid.
3. All Park rules and regulations along with Park marine operator guidelines must be obeyed while in the St. Croix East End Marine Park.

Appendix G - Businesses interested in Friends of STEER and in receiving info on STEER

Business Interested in Friends group and additional info on STEER
Elysian - Beach Hut
St Thomas Dive Club
Dive in!
Independent Boat Yard
Magic Moments Luxury Excursions
Island Sol
Dive HDV
VI Eco-Tours
Patagon
Coki Beach Dive Club

Appendix H - Sample Survey Evaluation Criteria

KEY CRITERIA	RECOMMENDATIONS	EXPECTED OUTCOME
TARGET POPULATION DEFINITION	<p>Clear definition of the population from which you will draw your sample.¹</p> <p>The target population should be defined so that every visitor has a known, non-zero chance of being included in the survey.</p>	Visitors (both overnight visitors and same-day visitors) to the St. Thomas East End Reserves taking a trip with defined tour operators within the St. Thomas East End Reserves
SAMPLING UNIT	Individual, household etc.	The sampling unit is defined as individual visitors.
SAMPLING FRAME	“The sampling frame is a list of all sample units in the population, or instructions for indicating all such units. It is used to draw the sample for the survey.” ²	Clients of STEER tour operators.
SAMPLE SELECTION METHOD	“To ensure a sample that is truly representative of the population, establish sample selection rules in advance that make sure every visitor has a known, non-zero chance of being included.” ³	Interviewing every client of STEER tour operators is not possible. Multistage sampling is recommended for STEER. Randomly selecting days and times to conduct interviews at specific venues. Sampling the respondents (i.e. systematic sampling).
RESPONSE RATE	“Survey Response Rate can be defined as the number of completed interviews divided by the number of eligible units in the sample.” Survey reliability and validity is threatened if response rate is less than 75%. ⁴	The Response rate will be determined after completion of the survey.
RESPONSE ENHANCEMENT PROCEDURES	Methods to stimulate high survey response rate include “brief, easily understood questionnaires, courteous interviewers, clear instructions on how to return survey if self completed, cash incentives or other rewards” etc. ⁵	<ul style="list-style-type: none"> - Minimal request of personal information - Assured anonymity - If additional enhancement is seen as necessary rewards for taxi drivers to take enumerator with the visitors or incentive for visitors may be considered - See Response enhancement section of the report for additional enhancement techniques.

¹ World Tourism Organization. (1995). *Collection and Compilation of Tourism Statistics*. Madrid, Spain: World Tourism Organization.

² Ibid.

³ Ibid.

⁴ Ibid.

⁵ World Tourism Organization. (1995). *Collection and Compilation of Tourism Statistics*. Madrid, Spain: World Tourism Organization.

CODUCT OF A PILOT SURVEY	It is an additional measure to maximize the effectiveness of the survey and should be administered to a small group of individuals similar to the target population. ⁶	<ul style="list-style-type: none"> - Five pilot surveys were conducted. The survey was then edited according to the respondents' comments, concerns and suggestions. - Conduct more pilot survey in order to confirm t hat the edited survey will accurately measure what the survey is sought out to measure.
INTERVIEW MODE	Many ways of surveying exist, all of which are divided into two categories: interview based and self completed. ⁷	Face to Face interview
SURVEY INSTRUMENT	Survey should provide clear instructions, clear and cons ice questions, the order of questions should be considered, with important and difficult questions at the beginning, personal questions at the end, survey should be precoded etc. ⁸	<p>Introduce and clearly explained the survey contains 15 questions.</p> <p>Demographic questions appear at the end in an effort to avoid respondents from ending the survey early because of uncomfortable questions, such as income.</p>
INTERVIEW TRAINING	Interviewer training is important in order for the data collection to be consistent.	
DATA ENTRY	Entering data from completed survey to the computer without errors is extremely important. It is suggested that each answer be “keyed in twice and answers be compared by a computer program”. ⁹	

⁶ NOAA Costal Services Center. (2007). *Introduction to Survey Design and Delivery*.

⁷ Idib.

⁸ World Tourism Organization. (1995). *Collection and Compilation of Tourism Statistics*. Madrid, Spain: Workd Tourism Organization.

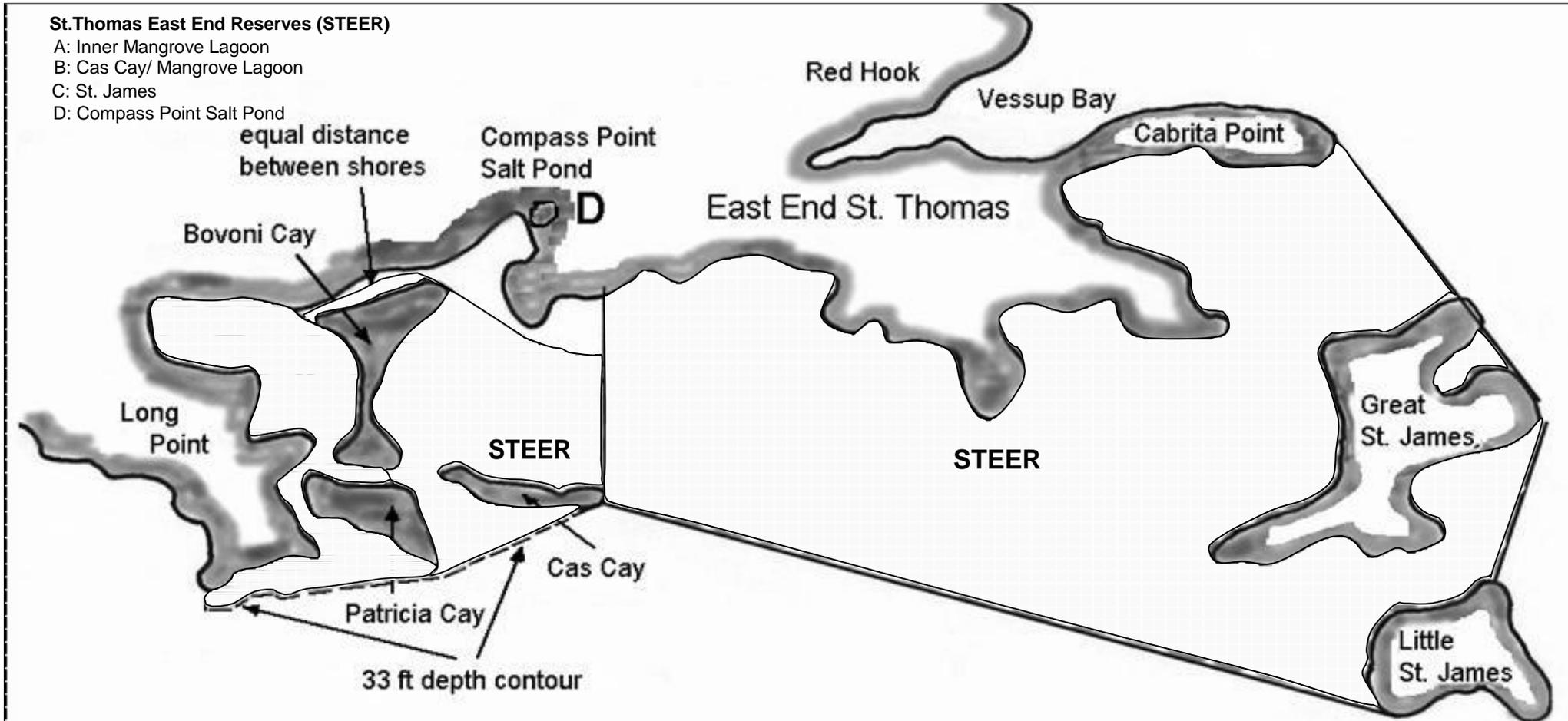
⁹ Frechtling, D. C. (2008). *Tourism Sample Surveys: Planing, Design, Conduct and Processing*.

Appendix I – Data Collection Venues

VENUE	SURVEYED	PERMISSION TO CONDUCT SURVEY	CONTACT	TOTAL VISITORS TO STEER	PERCENT OF ALL VISITORS TO STEER	SURVEYS NEEDED
Dive In	YES	YES		120	0.8%	3
Big Blue	YES	N/A		60	0.4%	2
Aqua Action	YES	YES		1455	10.0%	38
Patagon Dive Center	YES	NO		990	6.8%	26
Island Sol	YES	YES (if the Ritz allows)		2975	20.5%	77
St. Thomas Dive Club	YES	YES		864	6.0%	22
Coki Beach Dive Club	YES	YES		490	3.4%	13
VI Eco Tours	YES	YES		6525	45.1%	169
Red Hook Dive Center	YES	YES		200	1.4%	5
Magic Moments Luxury Excursions	YES	N/A		200	1.4%	5
Aqua Marine Dive	NO	N/A		200	1.4%	5
Caribbean Watersports	NO	N/A		200	1.4%	5
West Indies Windsurfing	NO	N/A		200	1.4%	5
				14479	100.0%	374

Appendix J – Visitor Survey

Welcome to the **ST. THOMAS EAST END RESERVES (STEER)**! This survey is being administered on behalf of STEER Management Group in collaboration with the Department of Natural Resources, The Division of Coastal Zone Management. Your input is very important to us because it will help us gain a greater insight about visitors' experience in STEER and preferences for future tours. The survey should take about 10 min. to complete and the information gathered will remain anonymous. **Thank you in advance for your input!**



BUSINESSES OPERATING WITHIN STEER: Island Sol, Red Hook Dive Center, VI Eco Tours, Big Blue, St. Thomas Dive Club, Dive In, Aqua Action, Dive HDV, Patagon, Coki Beach Dive Club



ST. THOMAS EAST END RESERVES VISITOR SURVEY



17. If you are NOT a resident, please tell us how long you are staying on St.Thomas.

- _____ days
- I am a resident (please discontinue survey)

18. How did you travel to St. Thomas?

- Airplane
- Cruise ship
- Sail boat
- Other (please specify) _____

19. Where you aware that the tour you just participated in took place in STEER (the St. Thomas east end reserves)?

- Yes
- No

20. Is this your first time visiting STEER, the St. Thomas east end reserves? (a map of park boundaries, beaches and tours within the park is provided on the front page for your reference.)

- Yes
- No

21. How many times, in total (including today), have you visited STEER, the St. Thomas east end reserves?

- 1
- 2-5
- 6-9
- 10 or more

22. What activities have you participated in while in the St. Thomas east end reserves? (please check all that apply)

- Snorkeling
- Wildlife viewing
- Sailing
- Scuba diving
- Fishing
- Jet skis
- Other (please specify _____)

23. On a scale of 1 – 5 with 1 as poor and 5 as excellent, how would you rate your experience within STEER:

Factors	Poor (1)	Fair (2)	Average (3)	Good (4)	Excellent (5)
Service quality	1	2	3	4	5
Overall tour experience	1	2	3	4	5
Access to wildlife viewing	1	2	3	4	5
Tour availability	1	2	3	4	5
Knowledge gained about wildlife and habitats	1	2	3	4	5
State of underwater environment	1	2	3	4	5

24. On a scale of 1-5 with 1 as not important at all and 5 as very important, how important were the following factors in your decisions to choose a tour within STEER:

Factors	Not important at all (1)	Not too important (2)	Neutral (3)	Slightly important (4)	Very important (5)
Opportunity to see wildlife	1	2	3	4	5
Desire to learn about the wildlife/marine habitats	1	2	3	4	5
Desire to learn about the local culture	1	2	3	4	5
Opportunity to visits parks and pristine areas	1	2	3	4	5
Opportunities for adventure/sports activities	1	2	3	4	5
Affordable prices	1	2	3	4	5
Recommendations from a friend/guide book	1	2	3	4	5
Safety	1	2	3	4	5
Ease of access/convenience	1	2	3	4	5

25. On a scale of 1 – 5 with 1 as not interested at all and 5 as very interested, what is your interest in the following:

Interest	Not at all interested (1)	Not too interested (2)	Neutral (3)	Fairly interested (4)	Very interested (5)
Bird watching tours	1	2	3	4	5
Underwater sculpture garden	1	2	3	4	5
Snorkel trail	1	2	3	4	5
Visitor center	1	2	3	4	5
Volunteer projects	1	2	3	4	5
Camping	1	2	3	4	5

26. Would you be willing to pay more for tours if you knew that a percentage of the price would go toward supporting local environmental efforts in the St. Thomas east end reserves?

Yes No

If yes, how much more?:

US\$1-\$5 US \$6-\$10 US \$11-\$15 Over US \$15 (please specify \$_____)

If no, why not?:

- Cannot afford
- Locals should pay for it
- Do not know/refused
- My activities do not impact the environment
- Other

27. Gender: Male Female

28. Your approximate age?

18-24 25-34 35-44 45-54 55-64 over 65

29. In which country do you permanently reside?

- | | | |
|---|--------------------------------------|--------------------------------------|
| <input type="checkbox"/> USA | <input type="checkbox"/> Canada | <input type="checkbox"/> Caribbean |
| <input type="checkbox"/> France | <input type="checkbox"/> Germany | <input type="checkbox"/> Italy |
| <input type="checkbox"/> Mexico | <input type="checkbox"/> Netherlands | <input type="checkbox"/> Puerto Rico |
| <input type="checkbox"/> Other (please specify _____) | | |

30. Please check the box which is closest to your annual income:

- \$24,999 or less
- \$25,000 - \$49,999
- \$50,000 – \$74,999
- \$75,000 – \$99,000
- Over \$100,000

31. What is the highest level of education that you completed?

- Grade school
- High school
- Vocational/ trade school
- College or university
- Post-graduate

PLEASE USE THIS SPACE TO MAKE COMMENTS OR EXPAND ON ANY OF THE PREVIOUSLY ASKED QUESTIONS.

THANK YOU

Appendix K – Letter request for support

September 30, 2013

Dear _____,

As you may know, there are currently many projects taking place within the St. Thomas East End Reserves. We completed business interviews in 2011 that gave us insight into the businesses that operate in STEER and how they wish to see STEER develop in the future.

If you have participated in our businesses survey, we thank you for your input. The next step is to conduct visitor surveys in order to better understand visitor's motivation to visit STEER, their satisfaction within STEER and their activity preferences. Answers to this will allow The STEER core management group to plan for future development of STEER.

In order to collect the data, we do need access to visitors within STEER. We are requesting your permission to survey visitors at your business. The surveys would be conducted after your tour is complete, therefore not taking away from your business time. We are looking to conduct the surveys August 20, 2013 – September 20, 2013. We will create a schedule and survey only at times prior agreed to with you. All surveys are confidential.

Attached you will find a sample of the survey. If you have any questions please feel free to contact Anne Marie Hoffman.

We hope to collect all the needed data and look forward to sharing the information with you.

Anne Marie Hoffman
St. Thomas East End Reserves Coordinator
The Nature Conservancy
St. Thomas, USVI
ahoffman@tnc.org

Appendix L – Visitor Survey Sample Schedule Procedure

- To create a survey schedule, list data collection venues as is done in Table 1 below. Fill in the WEEK columns with the number of weeks the survey will be conducted (8 WEEKS in Table 1).

	WEEK	1	2	3	4	5	6	7	8
VENUES									
Red Hook Dive Center			x						x
St Thomas Dive Club				x				x	
Dive in!			x		x				
Aqua Action		x			x				
Island Sol			x	x					
VI Eco-Tours		x					x		
Coki Beach Dive Club		x	x						
Big Blue								x	x
Elysian - Beach Hut					x	x			
Dive HDV							x		x
Patagon			x						x
Cruise Ship Excursions				x		x			
Caribbean Watersports			x						x
Aqua Marine					x		x		

Table 1

- Decide how many weeks you want to survey at each venue. In Table 1, 2 weeks were chosen for each venue.
- To get a random sample of weeks, use a random sample table such as Table 2 below. Table 2 was created in excel with numbers from 1 to 8. The table will help choose which weeks to interview at each venue.
- Pick a starting random number such as you birthday or use excel to get a random number.
- Count across the rows starting in upper left corner using the chosen random number. This is the first week you will interview at the first venue listed, mark it with x as in table 1 above.
- Continue counting until you have the desired number of weeks for the venue.
- Continue the process for all venues. Do not start at the beginning but continue counting until you reach the end of the table, then start from beginning.

Random Number = 5								
7	7	7	3	2	3	1	8	
2	1	3	4	2	7	1	5	
4	3	2	2	1	6	4	6	
7	4	7	4	4	7	6	1	
6	6	2	7	5	3	3	6	
6	4	2	1	3	2	2	3	
5	1	1	2	8	6	7	7	
2	8	6	1	4	7	6	1	
5	4	8	4	2	1	8	2	
5	6	5	7	8	7	2	2	
5	3	3	7	5	5	6	8	
2	8	5	8	6	6	4	4	
7	4	3	8	6	8	5	1	

Table 2

- Once you have the weeks for all venues, it is time to choose days to survey at each location. The process is very similar to choosing weeks. Table 3 creates a weekly schedule with the venues to interview.
- Choose a number of “day parts” for interviewing. Assuming that most businesses have morning and afternoon trips, two day parts, morning and afternoon, were chosen below.
- Do the same as for choosing weeks. Use a random number table such as Table 4, choose a random number and starting counting from upper left corner until you have the desired number of days for each venue.

WEEK 1							
DAY OF THE WEEK	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
VENUES							
Aqua Action			X				X
VI Eco-Tours				X			X
Coki Beach Dive Club			X			X	

WEEK 2							
DAY OF THE WEEK	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7
	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
VENUES							
Red Hook Dive Center							
Dive in!							
Island Sol							
Coki Beach Dive Club							
Patagon							
Caribbean Watersports							

RANDOM NUMBER TABLE 1-14

Random number = 11

6	9	1	11	6	4	6	12
9	2	4	11	11	14	14	10
13	11	3	6	13	6	4	8
10	9	4	6	9	5	8	14
6	7	5	2	1	10	9	12
6	12	9	6	5	11	9	2
11	14	4	5	10	1	5	11
7	10	8	4	11	9	5	10
2	8	6	10	10	1	10	4
2	3	7	3	6	2	9	2
10	11	7	6	10	7	2	6
3	5	9	1	6	11	8	4

Table 3

Appendix M – STEER Visitor Survey Action List

4. Conduct additional Pilot Surveys at survey venues.
5. Edit visitor survey according to the pilot surveys.
6. Talk to taxi drivers about survey collection. Discuss potentially driving with them back to cruise ship docks or other methods they can assist with.
7. Secure permission to survey at businesses (create and submit letters of request with a detailed explanation of the purpose of the survey, the methodology and a tentative schedule)
8. Create a Interview Schedule
9. Recruit enumerators
10. Train enumerators
11. Implement Survey
12. Data Entry
13. Coding
14. Post Coding
15. Data Analysis - When analyzing the visitor survey data, keep in mind the outcomes of business interviews. Consider questions such as Do the two groups agree on fees, potential products for STEER and experience in STEER?
16. Send “Thank You” letters to all businesses that helped with brief outcomes of the survey.