



PART I

**A SURVEY OF MARINE RECREATION SERVICES
IN THE U.S. VIRGIN ISLANDS**

and

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PART II

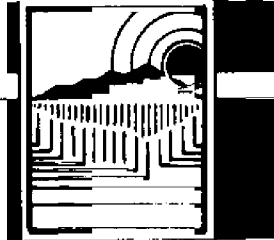
**TECHNICAL REPORT ON THE MARINE SURVEY
RECOMMENDATIONS WORKSHOP**

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University of the Virgin Islands

February 1994

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ACKNOWLEDGMENTS

The conduct of the marine recreation services survey benefited greatly from the comments received and documents made available through the offices of the Virgin Islands Marine Industries Association (VIMI); Mr. Ron Sherwood, the Executive Director, was especially helpful in his responses to our numerous queries. Our understanding of the marine recreation industry was strengthened through attendance at the VIMI meetings on St. Thomas, monthly forums at which the most pressing issues confronting the industry could be discussed, trends described and alternatives considered within the company of guest speakers and active members of the marine business community. Most notably, our thanks must go to all those busy men and women working in marine recreation services who took the time to complete the survey form and return it to our office. For the most part complete and often quite frank, the responses provide a look into the current state of the marine recreation industry in the U.S. Virgin Islands. This report would be impossible without their efforts.

A SURVEY OF MARINE RECREATION SERVICES IN THE U.S. VIRGIN ISLANDS

Summary and Findings

Introduction

The U.S. Virgin Islands, with its splendid variety of islands and cays, tranquil bays and colorful reefs, boasts some of the finest marine recreation resources in the world. These help draw thousands and thousands of visitors to the territory each year, and provide both resident and tourist with unique opportunities for leisurely recreation and marine-related enterprise.

As the tourist industry has developed in the Virgin Islands over the past two decades, marine-related businesses catering to the recreational needs of the industry have multiplied in number and variety. While boat chartering remains perhaps the most visible and famous recreational activity within the territory, other activities relying upon the marine setting include diving, sportfishing, water sports, and ferry and water tour operations. Additionally, secondary services catering directly to the needs of such marine recreation activities include marinas, marine-supply retailers, food and beverage provisioners, and boat service and repair shops. A host of ancillary enterprises provide on-shore goods and services such as lodging, dining, shopping, entertainment, transportation, laundering, maintenance, fuel, and financial and communications services. In this way, the marine recreation industry plays a substantial role in the territorial economy and has far-reaching linkages with other sectors.

As fundamental as such recreation activities are to the economy and the conduct of business in the Virgin Islands, there has been surprisingly little documentation of the industry itself. Except for the "U.S. Virgin Islands Marine Recreation Services and Facilities Directory" published in 1989 (N. Peter, 1989), there is little documentation recording employment in marine recreation, or the amount of government revenue derived from the sector. This gap in information was made increasingly apparent as the industry itself began to witness a decline in activity dating from the disastrous effects of hurricane Hugo in 1989, exacerbated by the onset of the national recession in 1990 and the Gulf War in 1991. As tourism in the Virgin Islands suffered this series of blows, the marine recreation industry, so reliant upon tourist arrivals for its own prosperity, has suffered directly in terms of lowered levels of business activity and the destruction or exodus of charter boats and marine recreation firms. While those remaining in the industry have perceived such a decline, there exists little material documenting the earlier state of the industry or the actual demise of various firms.

Thus a need for new information defining the marine recreation industry was identified. Much of the drive for this effort arose from within the ranks of the industry itself, which faced a major task of conveying to its own members and to the public at large just what the marine recreation industry encompasses and how it contributes to the economy and commercial vitality of the Virgin Islands. Additional impetus was derived from the desire of the Virgin Islands Marine Industries Association (VIMI) to develop a profile of financial and non-financial aspects of the marine industry; for this purpose, VIMI requested the Virgin Islands Marine Advisory Service (VIMAS) within the University of the Virgin Islands to conduct a study. This effort was subsequently incorporated into the VIMAS agenda under the auspices of its Sea Grant program.

As originally defined in the VIMAS Sea Grant proposal, such a study would seek to identify the sizes and types of marine recreation businesses in the territory, determine their contribution to the growth and maintenance of the tourism sector and the overall economy, and develop baseline economic and demographic data about the industry which would assist in implementing future initiatives. Given the strategic importance of a healthy marine environment upon which marine recreation is based and the potential environmental impact of recreation activities capitalizing upon marine resources, there was also a desire for the study to measure the industry's interest in and awareness of concerns for the marine environment. Deterioration or destruction of coastal and underwater resources would only hasten the decline in the marine recreation industry and result in diminished revenues for the territory.

Design of the Marine Recreation Services Survey

In an effort to capture information about the marine recreation industry and develop some simple measures of its economic consequence, a self-reporting survey form was designed to be distributed to all identifiable business engaged in the various aspects of marine recreation. This was begun in September, 1991 by Dr. Norman Quinn (Environmental Research Unit) and Dr. Richard Strickland (Social Research Unit) of the Eastern Caribbean Center (ECC) at the University of the Virgin Islands. To limit the admittedly broad pool of such businesses, and initial decision was made to exclude cargo transportation, military services and commercial fishing, endeavors which utilize the marine environment and support facilities but which were judged to be outside the realm of recreation. The scope was further defined by excluding many important ancillary service providers (e.g., hotels, restaurants, land transportation); their exclusion from the survey does not deny the important linkages that exist between such businesses and the marine recreation services.

Identifying all appropriate businesses to target for the survey was itself a task requiring some research. As noted previously, there is little documentation of the industry and therefore no standard compendium of existing enterprises within the industry. The most comprehensive catalogue available, which provided the bulk of business listings, was the "U.S. Virgin Islands Marine Recreation Services and Facilities Directory 1989", compiled by Nathalie Peter, the former VIMAS adviser on St. Thomas. The directory classified some 370 marine recreation businesses and ancillary service providers in the U.S. Virgin Islands, with the provision that near-daily changes occurring in the marine industry would quickly render such information obsolete. This proved to be a dramatic understatement as hurricane Hugo transformed the face of marine recreation in the territory overnight within months of the publication of the directory. When the directory was compiled, the business included could be divided into the following broad categories: bareboat, day-and-term-charters (32%); sportfishing and water sports (22%); fuel stations, marinas, repair shops and sailmakers (22%); provisioning and retail (15%); financial and professional services (6%); and ferries, water taxis and tours (3%).

Adopting the VIMAS directory as a starting point, efforts were made initially to identify defunct businesses (often the result of Hugo) and exclude them from the list. Current information to update the list was culled from the telephone directory and from recent listings of marine businesses contained in an issue of *The Virgin Islands Business Journal* featuring the industry. The final list for the present survey included approximately 300 businesses and spanned the same range of activities as that covered by the earlier VIMAS directory.

humb To identify relevant questions for the survey, past and recent press accounts of activity in marine recreation were reviewed. Discussions were held with members of the industry and representatives of VIMI; the latter proved to be especially informative and generous in providing copies of earlier documents prepared to outline the structure and operations of the marine recreation industry. An initial draft of the survey form, developed within the offices of the Eastern Caribbean Center with the assistance of the Associate Director, Dr. Frank Mills, was reviewed with some members of VIMI and with a small number of individuals in marine businesses; their comments were incorporated into a revised form which was prepared for a preliminary trial survey.

Some forty businesses were selected for a trial of the survey form, representing each of the major groups of activities defined originally in the VIMAS directory. Comments from respondents were used to refine the survey form, making specific questions clearer and adding one or two questions not previously considered. This process was completed by the end of the year. A copy of the final version of the survey form is attached as Appendix A.

Early in 1992, the revised survey form was mailed to managers of all the identified marine recreation businesses on all three islands (75% on St. Thomas, 16% on St. Croix and 9% on St. John); occasional follow-up calls (usually on the telephone, sometimes in person) for the return of forms and the clarification of points on the survey were made by Drs. Quinn and Strickland and Mr. Dana Fagan, then the VIMAS adviser on St. Thomas. Of the 300 forms distributed, 98 completed forms were returned. Efforts to track down missing responses indicated that at least 55 of the targeted businesses were no longer active or had been incorporated into other enterprises. Therefore, approximately half of the 300 targeted businesses were accounted for in one way or another; the other half remained unaccounted for, whether failing to return their survey forms (often despite follow-up telephone calls) or no longer being active businesses. If the rate of defunct businesses among the unaccounted was similar to that found among all those businesses accounted for, then the 98 respondents might conceivably represent approximately half of the active marine recreation businesses.

The information contained in the returned survey forms was recorded on a large spreadsheet, allowing collation of data across the industry. Responses to the open-ended questions were evaluated and categorized according to (1) the identified strength of the link between environmental quality and business activity (question number 8), and (2) the emphasis of the response upon government attitudes, economic significance and/or environmental impact of marine recreation (question number 9). Additionally, all responses to the open-ended questions were recorded in a text file for future reference and comparison across the industry; these are attached as Appendix B. Summary tables of the data were prepared and graphs using the data were generated. These will be discussed in greater detail below.

Before considering the survey returns, it is important to note some characteristics of marine recreation as pertaining to St. Croix which set that island somewhat apart from St. Thomas and St. John. Forty miles of open sea lie between St. Croix and the other U.S. Virgin Islands which, combined with the nearby British Virgin Islands, form the most favorable small boat cruising area. Representing a seven-hour sail, this distance effectively places St. Croix outside the hub of the sailing activities. The reefs surrounding St. Croix further limit sailing traffic, since bareboat charters are discouraged from visiting the island without a captain. Thus, the island's sailing industry is largely local in nature, and very much smaller than that found on St. Thomas. Overall, less than 20% of all marine recreation businesses recorded earlier by VIMAS were found on St. Croix. Responses to the

present survey from firms on St. Croix represented 18.4% of the total number of responses received, reflecting the relative proportion of that island's marine businesses to the territorial total. The smaller scope of marine recreation opportunities on the island is also reflected in general tourism figures which indicate that St. Croix offers only 20% of the territory's available hotel room nights and receives only around 10% of all air and cruise arrivals (EDA data).

However, mention must be made of Buck Island National Monument off St. Croix's north coast, which attracts large numbers of divers and snorkelers to its outstanding coral reefs and has fostered a growing day charter business. The large number and diversity of diving opportunities on Buck Island and around St. Croix help account for the fact that some 20% of marine recreation businesses on St. Croix are dive oriented (compared to 7% on St. Thomas and St. John combined). The differences between the islands in business scale and recreational opportunities should therefore be kept in mind as the survey results are considered.

Additionally, it should be noted that St. John, with its well-known bays and reefs and its location relative to the British Virgin Islands attracting a great deal of the marine recreation business, is by its very proximity to St. Thomas a virtual extension of the larger island's marine industry. For the purposes of this survey, and as is common practice, St. Thomas and St. John will be considered as one entity; the more meaningful inter-island comparisons to be considered related St. Thomas/St. John to St. Croix.

Summary of the Survey Findings

The completed survey forms cover 98 separate marine recreation businesses: 69 on St. Thomas (70.4%), 11 on St. John (11.2%) and 18 on St. Croix (18.4%). As such, the survey fails to provide an enumeration of each and every marine business in the territory; it is understood that such an enumeration (using a slightly different definition of "marine business") has been the aim of a research effort simultaneously underway within the Department of Labor's Bureau of Labor Statistics. However, the survey results do cover the full range of activities found in the marine recreation industry, in approximately the same proportions as recorded in the earlier industry listings in the VIMAS directory. They therefore provide a fairly accurate representation of the industry at large, although exact employee numbers, total gross revenues, and the like can only be approximated. It is also important to note that the survey data provide a single snapshot of the industry at a given moment in time; information concerning the expansion or contraction of business activity over time for each firm is thus not captured, although some respondents did volunteer such information in their self-reporting comments.

The first survey question asked the respondent to identify the category of marine recreation activity provided by the business. The options were not mutually exclusive; while some businesses indicated more than one activity, few actually ranked the various activities in order of importance. The figures in Table 1 offer a simple measure of various services provided and suggest the relative dominance of each category within the total range of services. (The category "Other" included wholesalers, provisioners, maintenance, communications, etc.) The number of businesses depicted as providing services in Figure 1 therefore exceeds the actual number of respondents, yet the relative frequency of service provision by category is illustrated. By combining some of the overlapping

categories, a clearer picture of services provided is given in Figure 2, indicating that a large portion of the industry consists of services other than boating activities which may be overlooked in popular perceptions of the industry.

Table 1
Category of service provided by responding businesses

Service	Number of businesses		
	STX	STT/STJ	Total
Bareboat charter	0	11	11
Day charter	4	13	17
Term charter	1	12	13
Ferries, tours	0	6	6
Marinas	4	9	15
Repair Services	2	19	21
Retailers	4	16	20
Sportfishing	3	6	9
Diving	2	11	13
Water sports	2	8	10
Other	4	21	25

These figures indicate that boating activities (including charters, sportfishing and ferries) encompass 35% of activities within the marine recreation industry; this compares to 40% recorded in the lists for the VIMAS directory in 1989. Such comparison obscures, however, the dramatic 50% decline in charter boats based in the Virgin Islands since 1988; VIMI sources estimate that charter boat numbers have fallen from 550 to 279 (in 1991). Thus, while some marine activities may have expanded (or diversified) to fill some of the vacuum, it is more likely that other segments of the marine recreation industry have suffered a similar contraction in overall business activity.

Comparing figures for St. Croix to those for the territory as a whole, boating activities on that island were reported by relatively fewer firms (31% vs. 35% for the territory), as were repair services (8% vs. 13%); this would match expectations given the earlier discussion of St. Croix's location and lower sailing attraction relative to St. Thomas/St. John and the British Virgin Islands. Marina services, retail, diving and water sport businesses were all slightly more prominent on St. Croix (16% vs. 9-14% for the territory). Respondents from St. Croix accounted for 20% of the territory's marine retail businesses and 17.4% of all diving and water sport businesses identified by responding firms.

The second question on the survey asked when the business was first established in the U.S. Virgin Islands (see table 2). More than a quarter of the responding firms were established prior to 1975; 59% had begun business since 1980 and about one-third since 1986. Almost half of all businesses had at least ten years experience, serving to underscore the continuing contribution the industry has made to the broader economic activity of the territory, and granting a kind of historical legitimacy to their survey responses (especially on open-ended questions describing individual

Marine Recreation Services

Categories of business offerings

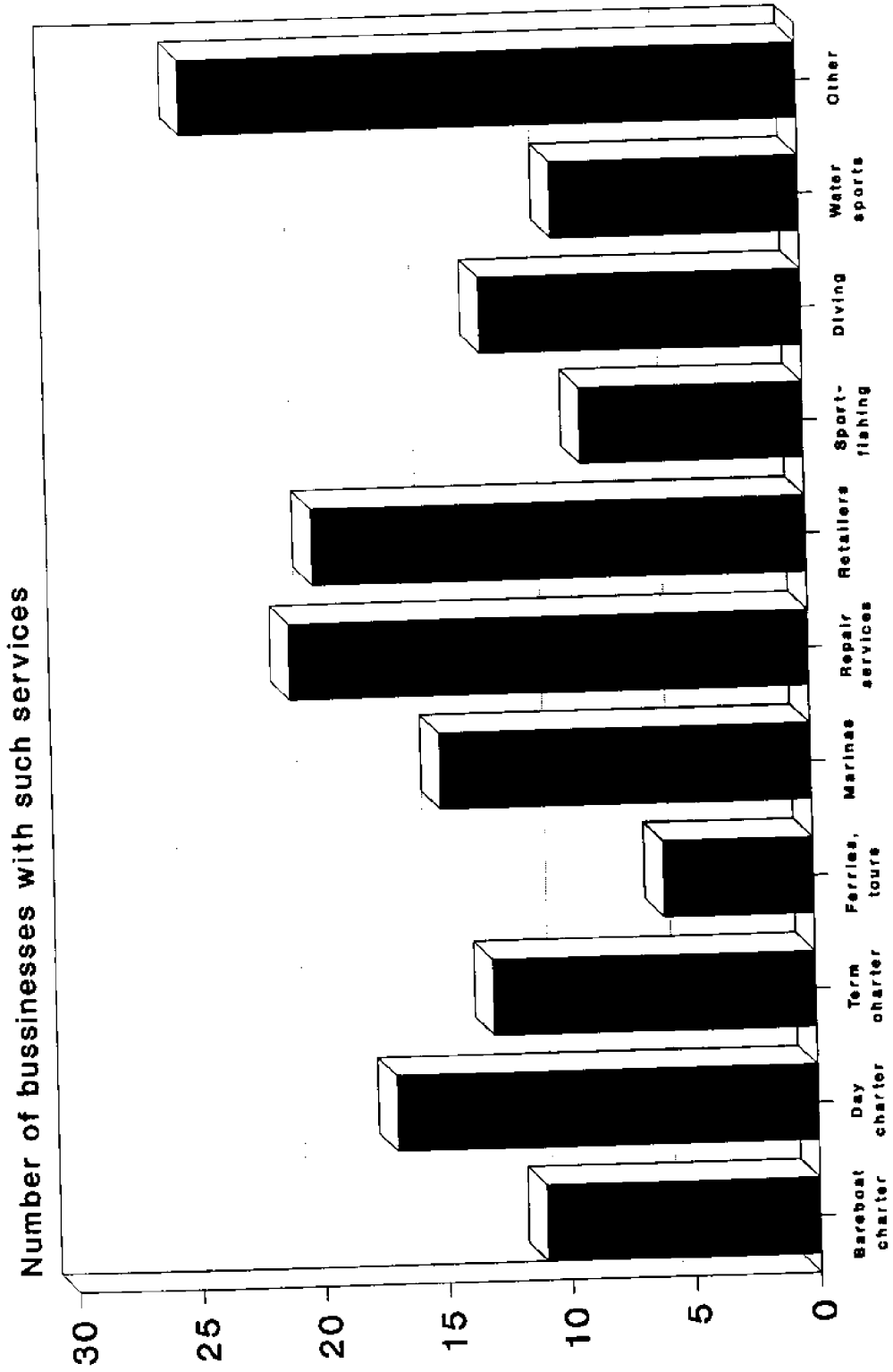


Figure 1

Marine Recreation Services

Boat/Non-boat categories of services

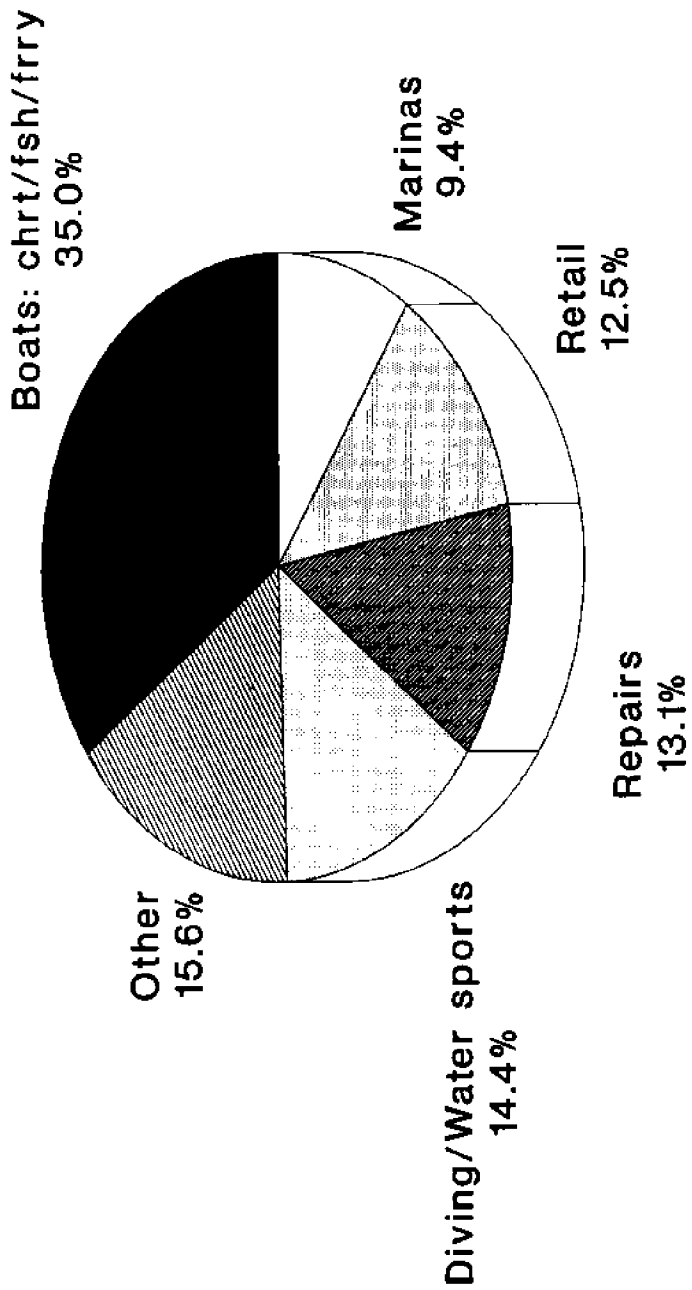


Figure 2
9

business experiences). The fact that 18% of respondents had begun business in the somewhat lackluster years following Hugo gives some encouragement for the industry's future growth and performance. However, the returns from St. Croix indicate that development of such businesses may have been more difficult there in recent years; while 45% of responding firms had begun business prior to 1980, only two responding firms (11%) had been established since 1985 (both since Hugo). Figure 3 illustrates the historical trend in business establishment among respondents and shows the slower rate of growth on St. Croix in recent years relative to that on St. Thomas/St. John.

Table 2
Year business established

	Number of businesses		Total
	STX	STT/STJ	
Before 1970	2	13	15
1970-75	3	8	11
1975-80	3	12	15
1980-85	8	18	26
1986-88	0	14	14
1989-91	2	15	17

The third question on the survey asked the business to indicate within a specified range the dollar value of total business volume in an average year. A small number of businesses gave two responses, with a smaller figure invariably associated with a decline in business in the last year or two; this question in particular hinted at the need for future research to determine historical trends in the industry. (In such cases, the smaller figure, being the most recent, was recorded as the survey response.) Approximately 6% of businesses failed to respond to this question and, as is common on questions probing income or expenditure, some may have underreported their actual business volume.

However, the figures for the 92 responding businesses given in Table 3 are useful in getting an initial idea of the scale of businesses involved and the potential economic contribution of the industry as a whole. Using mid-range figures from the survey responses, the combined business volume of the 92 reporting businesses throughout the territory can be estimated to total \$32,500,000. For the sake of argument, this figure might represent roughly half of the estimated total business volume of marine recreation services if it is assumed (as suggested above) that the survey respondents represent roughly half of the total sector. Therefore, total business volume might approach \$65 million; if an expenditure multiplier of 1.5 is introduced (a conservative estimate suggested for the industry by the 1988 "Amende" report [VIMI]), business volume might increase to \$97.5 million. Compared to adjusted figures for total tourism expenditure in the territory (\$706.5 million in 1990 [EDA data]), the estimated volume of marine recreation business might therefore represent as much as 12-13% of total tourism expenditure (and some 7% of Gross Territorial Product).

Marine Recreation Services

Year established, 98 responding firms

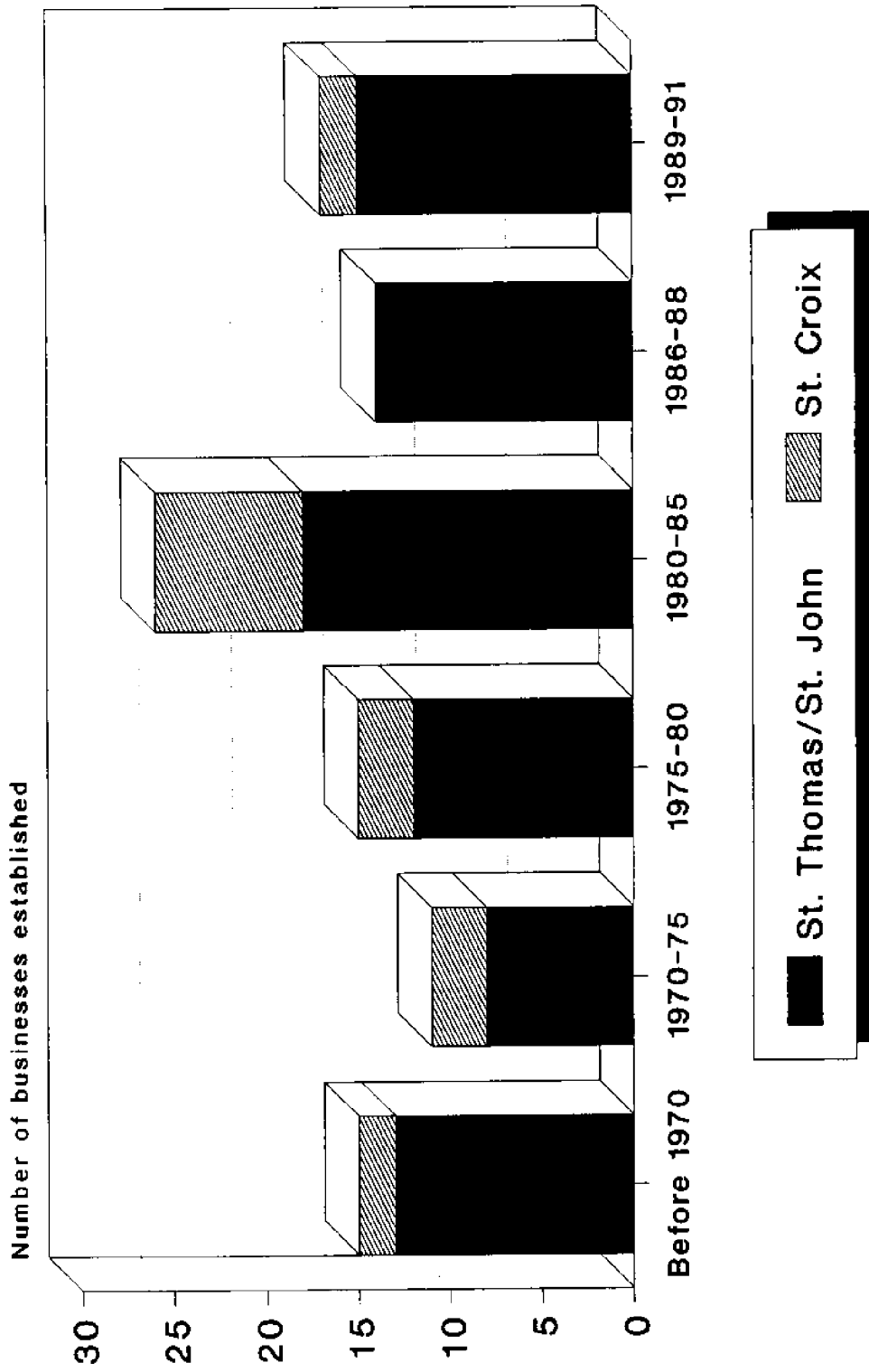


Figure 3

On average, St. Croix businesses appeared to be smaller in terms of business volume, with 45% of respondents indicating levels less than \$100,000 (as opposed to 32% for the territory overall). However, given few businesses with very high volume, the mid-range estimate of total business volume among the St. Croix respondents amounted to \$5,675,000 representing 17.5% of the territory total (proportionate to the estimated share of marine recreation businesses held by St. Croix). Comparing the average total business volume per responding firm, the figure for St. Croix (\$315,278) is not far behind the figure for the territory as a whole (\$353,261). The distribution of businesses across the ranges of business volume is depicted in Figure 4.

Table 3
Dollar value ranges of average total business volume per annum

	STX	Number of businesses STT/STJ	Total
Less than \$50,000	5	12	17
\$50,000-100,000	3	9	12
\$100,000-250,000	4	21	25
\$250,000-500,000	2	13	15
\$500,000-1,000,000	1	8	9
More than \$1,000,000	3	11	14

On the fourth survey question, respondents were asked to indicate which group or groups were sources of clients for their businesses; while most firms indicated more than one source, most also failed to order them by rank. The numbers in Table 4 therefore only serve to indicate how many of the 98 businesses draw clients from the various source groups. Particularly noteworthy is the fact that local residents were the single most frequently cited source of business, benefitting a majority of the firms responding. While the figures do not reflect the relative importance of each group in terms of total client numbers or gross revenue associated with each, they do underscore links between the industry and the local community that are often overlooked. Again, given the island's location, St. Croix receives less business from charter firms, independent charterers, boaters from outside the territory, and cruise ship passengers; most firms indicated that their business is generated by local residents (67% responding so vs. 60% for the territory) and air arrivals (50% vs. 37%).

Marine Recreation Services

Dollar business volume (annual)

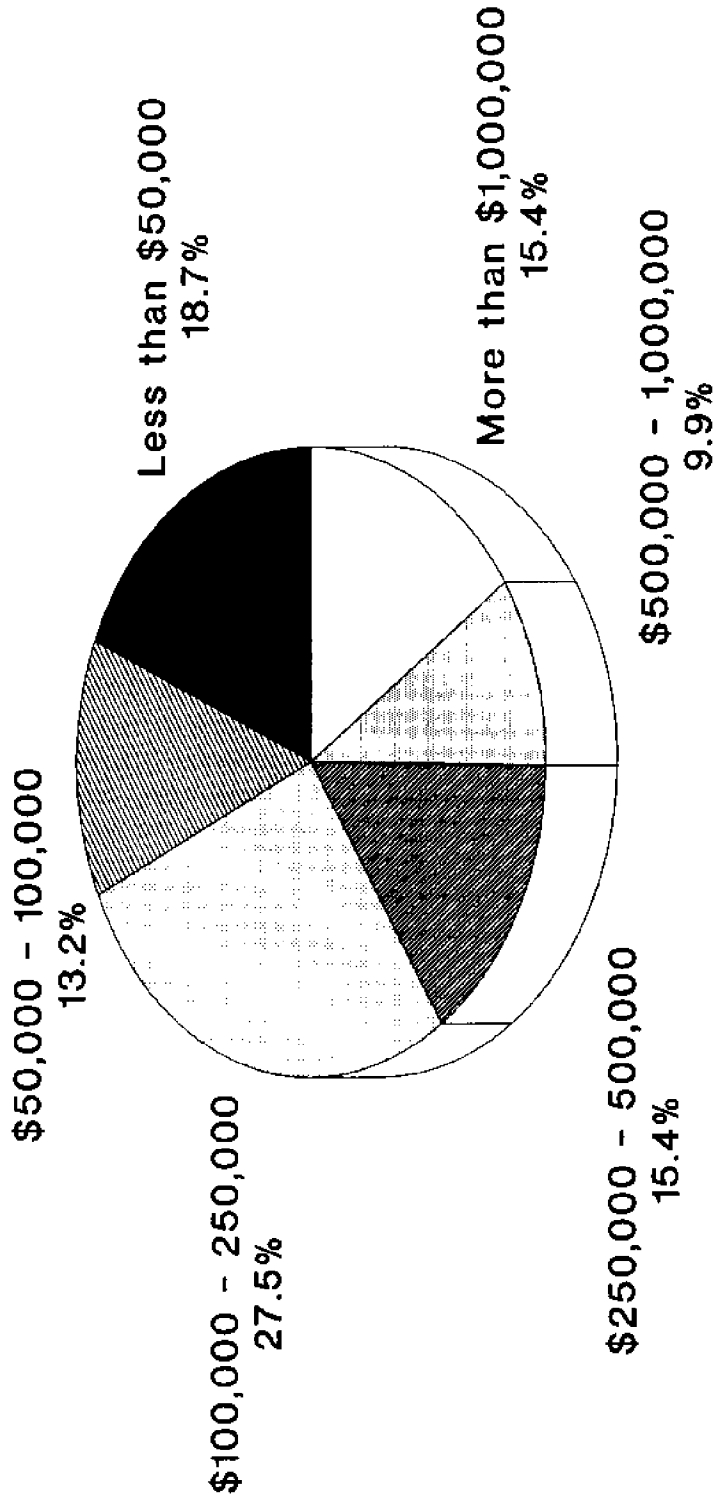


Figure 4

Table 4
Identified sources of customers

	Number of businesses		Total
	STX	STT/STJ	
Local residents	12	46	58
Transient non-USVI boaters	6	34	40
Independent charterers	4	34	38
Air arrivals	9	27	36
Charter firms	1	28	29
Cruise ship passengers	3	20	23

The fifth question on the survey was a bit more complicated than the preceding questions, asking the respondent to detail employment within the business by kind of activity, by full-time/part-time status, and by sex. The figures given in Table 5 record the actual numbers of current employees for all of the 98 responding businesses and the percentage of each category of employment in relation to total employment recorded. The total full-time employment figure of 669 is about one-half of the number of employees estimated industry-wide by VIMI in 1991 (a fact which might suggest that the 98 responding businesses comprised close to half of the currently active marine recreation firms); VIMI's estimate of 1,300 employees represents some 4% of total private sector employment in the territory. Comparing St. Croix's figures to the totals, it was found that somewhat fewer people are employed in on-the-water activities (18% vs. 20% of all marine services employees) and mechanic and repair services (18% vs. 22%), again reflecting the relatively lesser influence of boating activities there. The numbers employed by St. Croix respondents (135 full-time employees in 18 firms) represented 20% of the total industry employment recorded for the survey.

Table 5
Current employment in marine recreation services for 98 businesses

	Full-time				Part-time			
	Male	Female	Total	% Total	Male	Female	Total	% Total
On-water activities	102	29	131	19.6	39	24	63	48.1
Mechanic and repair	130	19	149	22.3	18	7	25	19.1
Public relations	15	17	32	4.8	5	4	9	6.9
Product sales	84	86	170	25.4	8	4	12	9.2
Administration	49	68	117	17.5	5	13	18	13.7
Other	50	20	70	10.5	3	1	4	3.0
TOTAL	430	239	669	100.0	78	53	131	100.0

The survey also asked respondents to record the numbers of additional employees, if any, hired during the tourist high season. The numbers for such employment were relatively low, with the 98 responding firms recording only 67 additional high-season employees (the equivalent of 10% of the full-time marine workforce). Eighteen seasonal positions were recorded on St. Croix, representing 27% of the total seasonal workforce and 13% of the island's full-time marine workforce; this might imply that seasonal variation in employment is a more important factor on St. Croix than on St. Thomas/St. John. The most common areas of such seasonal employment were on-the-water activities (30.0%), mechanic and repair services (28.4%) and product sales (25.4%). Approximately two-thirds of the seasonal employees were males.

Figure 5 illustrates the distribution of employees across the various categories of activities. This clearly indicates that there are many employment opportunities within the marine recreation industry other than those involving on-the-water activities which tend to be overlooked by common perception of the industry.

The sixth question on the survey attempted to solicit information about the average hourly wages and monthly salaries for the various kinds of employment within the industry. This question was frequently left unanswered by respondents; some indicated that the information was "sensitive", some said they could not break their figures down in a way consistent with the categories on the survey form, and some expressed confusion over the question itself. Of those responding, the figures given were collated and averages were determined, as recorded in Table 6. Given the nature of the response on the survey forms, it would appear that there is no significant adjustment of wages or salaries in relation to the changes in the tourist season. Employees on St. Croix might be heartened to learn that average wages recorded there were virtually identical to those for the territory overall (and even exceeded the territorial average by as much as 20% for on-the-water activities).

Table 6
Average hourly wage or monthly salary by category

	No. of firms	Average hourly wage	No. of firms	Average monthly salary
On-water activities	24	\$11.25	15	\$1,929
Mechanic and repair	30	\$12.27	8	\$2,458
Public relations	7	\$11.14	8	\$2,748
Product sales	32	\$ 9.06	8	\$1,898
Administration	26	\$11.77	18	\$2,201
Other	12	\$11.08	4	\$1,225

By multiplying the numbers of current full-time employees recorded by category in Table 5 times the average wage and salary figures in Table 6, totals can be derived as shown in Table 7 which allow an estimate of the total amount generated for full-time employee compensation among the 98

Marine Recreation Services

Employment by category

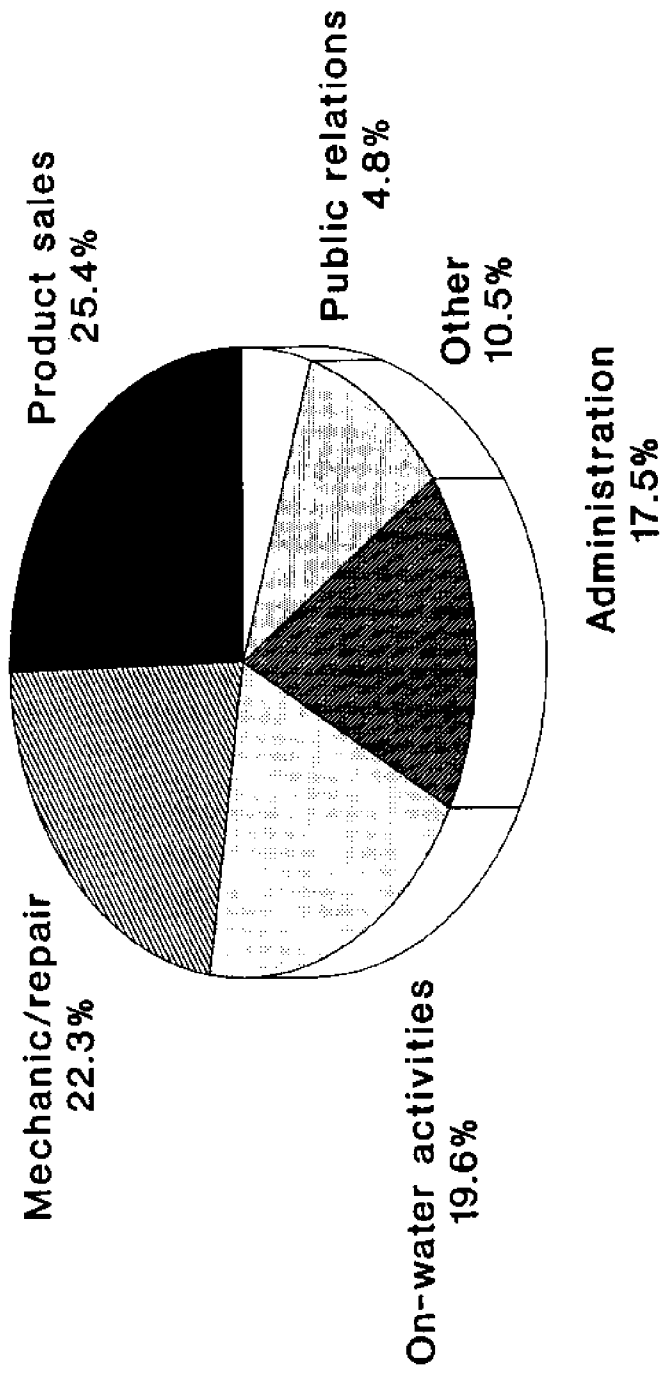


Figure 5
16

responding firms. The average annual wage income or salary by category can also be estimated. (The figures for total wages were derived by multiplying the average hourly wage times 40 hours per week times 50 weeks per year times employee numbers; those for total salaries were derived by multiplying the average monthly salary times twelve months times employee numbers.) The first column (Total wages) is calculated as if all full-time employees received the average hourly wage; the third column (Total salaries) is calculated as if they all received the average monthly salary. In this way, it is safe to assume that the total annual wage/salary bill for full-time employees in the 98 responding businesses fell somewhere in the range of \$14-16 million; if it is true that the respondents represent half of the total industry, the total might well be doubled. Again applying a multiplier of 1.5 as done previously, the range would then approach \$42-48 million. This sum, representing 7-8% of total private sector gross pay for the territory (Department of Labor data), does not include wages paid to part-time or seasonal employees.

Table 7
Total annual full-time wage/salary estimates for 98 businesses

	As total wages	Average annual wage	As total salaries	Average annual salary
On-water activities	2,947,500	22,500	3,032,388	23,148
Mechanic and repair	3,656,460	24,540	4,394,904	29,496
Public relations	712,960	22,280	1,055,232	32,976
Product sales	3,080,400	18,120	3,871,920	22,776
Administration	2,754,180	23,540	3,090,204	26,412
Other	1,551,200	22,160	1,029,000	14,700
TOTAL	\$14,702,700		\$16,473,648	

The seventh survey question asked respondents to predict how many new employees might be taken on by their businesses, assuming ideal conditions over the next two years. They were asked to indicate how many employees would be filling new posts and how many would be replacing current staff. They were also asked to specify any special skills or training considered necessary for such positions. While a small number of firms indicated that current economic conditions would preclude any plans for expansion or new hiring, the number of openings foreseen by the rest of the businesses totaled 355, as shown in Table 8. The distribution of new and replacement posts across the various categories is illustrated by Figure 6.

Table 8**Future estimated employment opportunities in marine recreation services**

	New posts			Replacement posts			Total posts	Percentage of total
	STX	STT/STJ	Total	STX	STT/STJ	Total		
On-water activities	20	50	70	5	32	37	107	30.1
Mechanic and repair	23	27	50	2	24	26	76	21.4
Public relations	1	14	15	0	1	1	16	4.5
Product sales	15	43	58	5	18	23	81	22.8
Administration	6	26	32	0	11	11	43	12.1
Other	11	17	28	0	4	4	32	9.0
TOTAL	76	177	253	12	90	102	355	100.0

Respondents from St. Croix projected a total of 88 future openings representing 25% of the survey total. This is slightly higher than their proportion of overall marine business activity and might suggest an optimism among the island's firms that may run counter to expectations based on the traditional dominance of St. Thomas/St. John in the sector.

Given that the recorded number of hypothetical future openings indicates a potential 50% expansion in marine recreation employment, it is important to consider what kinds of skills will be demanded by such jobs. This would allow better planning among potential candidates for such positions and improved program design among trainers and educators seeking to develop and place individuals interested in working in the marine recreation industry. Although not specifically measured by the survey, there was often expressed the perception that the industry fails to engage the interests and talents of local residents; this was despite the express efforts of some businesses to recruit and train local youths in a variety of skills ranging from boat handling and navigation to boatbuilding and repair.

The findings of the survey underscore the need for the industry to identify and publicize future employment opportunities for which young people might train, and for training programs to be established which provide some of the skills specifically required by marine recreation activities. Table 9 records the skills listed by the responding businesses when they were asked to identify prerequisites for employment in one of the given areas. The responses are listed in order of prominence based upon the number of times each was mentioned.

Marine Recreation Services

Future openings for employment

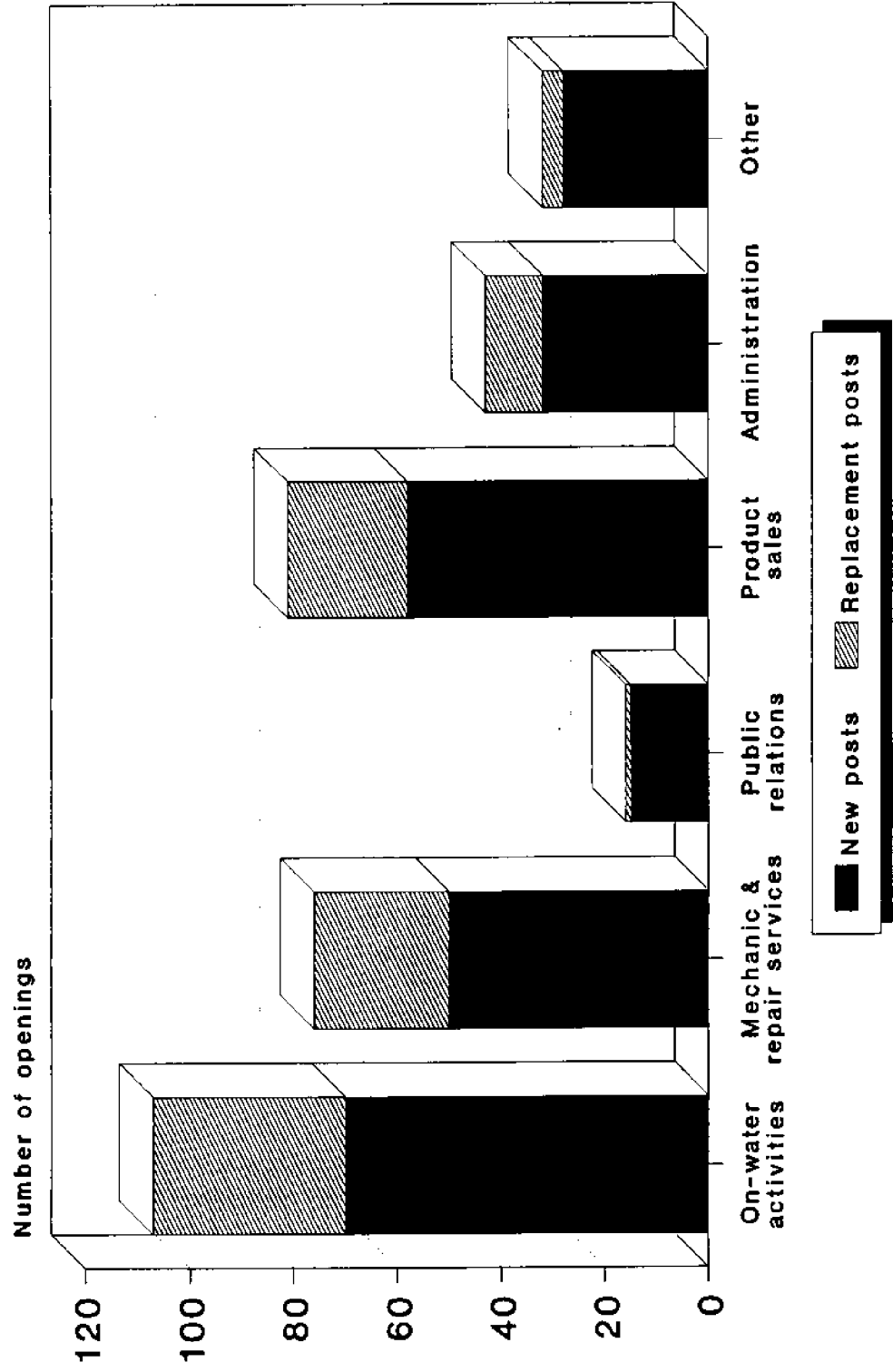


Figure 6

Table 9
Special skills or training required for future marine recreation employment

On-water activities:	High demand: Captain's license Dive instructor license Water safety and lifesaving Less demand: Communications Rope work Environmental knowledge Cooking skills
Mechanic and repair:	Mechanical skills Outboard and diesel engine training Carpentry and woodwork Dive equipment repair Welding Electrical skills
Public relations:	Computer skills Marketing Communications Sales
Product sales:	Sales Diving product knowledge and skills Computer skills Math skills Marketing
Administration:	Bookkeeping and accounting Computer skills Management training General clerical skills
Other:	Boat cleaning Dock work Food and beverage

The eight survey question was open-ended, asking respondents to comment on any observations they might have concerning the relationship between the environmental quality of the territory's marine coast and surrounding waters and the perceived level of their businesses' activity. The majority of respondents (70%) indicated that there was indeed some kind of positive linkage

between the state of the marine environment and their business; 14% responded that there was no link, and another 14% had no comment on this question. The answers given are recorded in their entirety in Appendix B.

In order to summarize the data in some way, the answers were evaluated by the survey staff and assigned a rank depending upon whether the respondents expressed a strong positive link, moderate positive link, or weak positive link between the coastal marine environment and their business characteristics. Over half (55%) of the responding businesses indicated a strong positive linkage between the two; 8% expressed a moderate positive linkage and another 8% cited a weak positive link. No respondent thought that a littered, dirty marine environment would benefit the industry. Diving and water sport businesses were perhaps the most vocal in their responses, citing that their very existence depended in large part upon the health of marine organisms and underwater communities which attracted their clientele from around the world. The prevalence of such businesses in St. Croix's marine recreation sector might help account for the fact that St. Croix responses were, if anything, stronger in citing the positive relationship between the state of the marine environment and level of business activity; more than 60% of responses from St. Croix cited a strong positive link (compared to 55% for the territory overall) while only 6% indicated no link (compared to 14% overall). Many charter boat operators also cited a very strong positive link between the two. Examples of such comments are recorded in Table 10.

Table 10
Examples of comments citing a strong environmental/business linkage

"Very high relationship. The quality of the reef (i.e., diving) greatly affect our destination divers. We need to protect the underwater environment. A mooring system is essential." (diving business)

"Of course. What we sell is beautiful water, healthy fish life, snorkeling, and other water sports." (marine equipment and supply)

"Absolutely! Even though the waters appear clear, the coral, rocks, and bottom now (over the past eight years) have a gray silt covering everything. Huge coral formations are gone. I believe this to be caused by increased business - marine and land. More tourists, more building, less vegetation, causing more soil run-off and of course more sewage." (captain's training course)

Yes, totally dependent on the quality of our marine environment. We sell that vacation." (boat charters)

"Yes, experienced divers dive less due to eroding conditions of reef and availability of fish." (diving business)

"There is an absolute direct relationship because healthy marine life is what my guests have come to see." (diving business)

"Sun, sand, water, clear skies, clean beaches, clear and clean water is our reason for existence. If we don't take care of them, our business is gone, and there is a lot of pressure now, without much if any

Continuation Table 10

response from our government. The private sector is at work all the time but we cannot do it alone. Tremendous basic environment education is necessary *now* and continuing." (boat charters)

"My guests are here for clean air, clean water and good snorkeling. Any pollution or destruction of the above will destroy my business." (boat charters)

"Yes. The quality and attractiveness of the USVI waters determine if transients come to our area and if they stay long enough to have repairs done. Of course this also applies to sportfishing transients concerned with healthy fish populations. Ultimately our *local* business is dependent on the tourist industry finding our waters (and land) desirable." (marine equipment and supply)

"Our business is generated due partially to the marine activities (snorkeling and diving). People are attracted to the crystal blue waters." (sailing school)

"Poor environment leads to less visitors and demand for our services." (communications company)

"Should the environmental quality of the shores and waters of the Virgin Islands and St. Croix in particular deteriorate, my business would suffer in direct proportion to such deterioration." (yacht sales)

"The USVI marine coast and surrounding waters and our business are very much related because if the water is not clean, free of plastic bags and trash, we really have nothing to sell. Our greatest assets we have in the marine field are beaches, clean water and picturesque landscape." (ferry company)

One aspect that is notable about the comments and their sources (shown in parentheses) in Table 10 is that an expressed appreciation of the environment and its contribution to the vitality of marine recreation services can be found across the spectrum of activities within the industry. This may indicate an area of commonality that could be drawn upon to develop a sense of unity among otherwise often disparate service providers. Conservation of marine resources and promotion of environmental awareness might therefore be seen to have wide-ranging benefits for many different actors within the business community, not to mention the positive effects of such upon the environment itself and the popular enjoyment of its resources.

The variety of businesses represented in Table 10 also allows reconsideration of a popular view that on-the-water activities (notably charter boats and other boats servicing diving and water sport businesses) are environmentally detrimental. In fact, some of the most ardent supporters of environmental protection and careful conservation practices are found among the boating sector of the industry. While exceptions can always be found, most of these businesses, realizing that their survival depends upon drawing customers to a healthy and vibrant marine environment, generally exercise great care to prevent spoiling the beauty and quality of the natural resources; to do otherwise would be to foul their own nest, discouraging future visitors and effectively reducing their levels of business.

The ninth and final question on the survey invited respondents to add any additional comments concerning their businesses in the territory. More than one third left this question blank. Nearly 40% commented in one way or another about the relationship between the marine recreation industry and the territorial government, ranging from the application of tax laws and fees to the overseas advertising of local marine recreation opportunities. The comments of another 20% related to the economic significance of marine recreation services, alluding to a perceived lack of recognition of this contribution on the part of the government and/or community at large. About 3% of the comments focused on issues of environmental quality and thoughts about legislation aimed at protecting natural resources. There did not appear to be any appreciable inter-island differences among the responses. Examples of the responses given are listed in Table 11. The complete answers are recorded in the second part of Appendix B.

Table 11
Examples of "Additional Comments" provided

"All these forms and taxes for a small business with 3 employees make it hard to do an honest and competitive business: 6% custom duty, 4% gross receipts tax, 3% excise tax, employer's report to Commissioner of Finance, employe's annual federal unemployment tax return, employer's quarterly VI withholding tax return, and employer's quarterly federal tax return." (sailmakers and canvas repair)

"Local government policies are ruining the charter business because of over-restrictiveness. Coast Guard rules have the same effect. It's ridiculous. So is on-the water DPNR enforcement; it's an embarrassment. Too many operators are leaving to other parts of the Caribbean." (communications company)

"Very concerned that marine business not desired by USVI. The BVI has encouraged and solicited a large number of our yachts to base and spend money there, not St. Thomas. St. Thomas seen by boat crews as dirty, crowded, expensive, and dangerous with a high crime rate. Tortola perceived as quiet and laid back, much more positive image." (boat charters)

"Attitudes ranging from governmental indifference to local hostility toward tourism will cause USVI to lag behind economies of more competitive tourist destinations." (diving business)

"One concern of many VI businesses that does need comment is crime. The amount of crime definitely hurts our levels of business." (marina)

"High rents in ideal retail areas make it impossible for smaller businesses to survive, especially retail on moderately priced items as opposed to high ticket items (e.g., jewelry)." (diving and water sports supply retailer)

"The VI government sees this multimillion dollar sailing and boating potential as though it does not exist." (marine equipment and supply)

Continuation Table 11

" Moorings on frequently used dive sites can help reduce coral and sea bed damage. Legislation regarding moorings has 'disappeared'. " (diving business)

"The government has no concept of the extent of our industry or its value. The government causes most of the pollution that is damaging our environment. The government is driving away the boats with fear of taxes, laws, etc. which are not necessary. The government doesn't realize that there are other countries who want marine industries and that boats can easily move to where they are wanted." (boat charters)

"The government is shooting itself in the foot by (1) not allowing the dive industry to place moorings which will protect our reefs, and (2) failing to limit fishing which hurts the fishing and diving industry." (diving business)

"My business is completely dependent on the boating community, and this community is getting smaller all the time. So is my business. It would be a big help if local officials would help in drawing more boats to the territory instead of chasing them away." (marine equipment and repair)

"Some boaters choose not to stay in St. Thomas due to harassment from DPNR officials and other government agencies. Fewer boaters mean less business in the VI." (carpentry and woodwork)

"Marine businesses on the whole have a difficult time making a profit in the USVI. It is time the local government realizes the potential and acts to preserve those that are left." (water sports business)

"The charter yacht capital of the world- The Virgin Islands - is in a tailspin. Concerned citizens, the private sector and government must come together with an open mind and a sense of urgency if we are to stop the spin and start on the long road back to the top. There are tremendous outside pressures to respond to and deal with now." (boat charters)

"The VI government needs to recognize the economic value of marine industry and allocate natural resources and infrastructure for this industry; the industry could double in five years with assistance." (boatbuilders)

As with the earlier comments regarding linkages between environmental quality and business, the comments provided on this last open-ended question revealed some common concerns that arise throughout various branches of the industry. The survey clearly detected a sentiment among marine recreation businesses that their current economic significance and their potential for expansion within the territorial economy receive little recognition from government officials or from the broader public. Many businesses are sensitive to allegations that marine recreation services are a source of pollution and cause of environmental degradation, charges which they strongly refute. Many marine recreation businesses are small; the number of full-time employees across the 98 responding businesses averaged less than seven, and many businesses operate entirely with only one or two employees. As such, these businesses often feel disadvantaged in terms of available incentives and economic or political clout when compared to larger enterprises in the broader tourist industry.

Looking forward: Key issues for the marine recreation industry

The survey results portray marine recreation services as a multifaceted industry offering a wide range of employment opportunities and generating a significant amount of income for the territorial economy. Marine recreation represents one of the most important drawing cards of the U.S. Virgin Islands, attracting thousands to enjoy the natural wonders of the marine environment while stimulating the economy through the provision of jobs and generation of revenue. While businesses responding to the survey directly accounted for as many as 1,000 private sector jobs, as much as \$15 million in personal incomes, and at least \$32 million in gross revenues, this may yet represent only half of the industry as a whole. VIMI has estimated that in 1990-91, charter boats alone yielded gross revenues of \$25 million, and that was achieved *despite* the suppressive effects of the Gulf War and the national recession on tourism.

However, the industry is showing signs of strain, as business levels drop, revenues stall, and members of the industry fold up or move away. The \$25 million generated by 279 charter boats in 1990-91 is a dramatic decline from the record level of over \$82 million generated by 540 boats in 1988-89 (VMI data). While some charter boat businesses were hit hard or destroyed outright by hurricane Hugo, the number of boats in the territory has continued to decline since then for a number of reasons; as they go, so go many of the smaller supporting businesses which are associated with the boating sector.

Among often cited reasons for the decline are various incentives, tax breaks and the development of boating support facilities found in other ports in the Caribbean (e.g., the Bahamas, the British Virgin Islands, St. Martin). It appears that the governments of such states have recognized the potential benefit of a healthy and expanding marine recreation sector and have gone out of their way to attract boaters and charter operators from other islands. The growth of such activities carries along with it the expansion of other ancillary services, further boosting those economies. The local marine industry expresses fears that the territorial government has failed to grasp the significance of the sector in terms of its economic contribution. One consequence, according to such observers, is the wasting away of local businesses as mobile portions of the industry (e.g., the boats and the tourists) gravitate toward those states offering a more hospitable, promotional climate for the sector.

Much has already been said in the press, at VIMI meetings, and in dialogues with government representatives concerning current official attitudes toward the industry. Clearly, as shown through some of the survey responses attached here, members of the industry feel that the government needs to review its stance on the taxation and regulation of marine recreation activities and services; many practices on the books are felt to discourage business in the sector rather than promote its growth. Important threats to the marine recreation industry of the U.S. Virgin Islands can be found throughout the Caribbean, from the aggressive promotion campaign in the Bahamas to the potential blow lying in wait as Cuba moves toward opening up to regional tourism. In fact, one need look no further than the backyard waters of the British Virgin Islands to find that keen competition for a share of the U.S. Virgin Islands' marine business is on its very doorstep. The sense of urgency felt within the territory's marine business community is indeed very real. The survey thus lends weight to the need for further detailed discussions concerning taxes and fees, rules and regulations that the government applies to marine recreation services, a discourse that extends well beyond the scope of this survey and is best left to those already engaged in such exchanges.

Perhaps somewhat more encouragingly, the survey sheds some light on the scale and nature of employment within marine recreation. When given the chance to ponder the future, the surveyed businesses revealed hopes for a significant growth in employment opportunities. For the community to fully benefit from such expansion, it would seem imperative that better facilities and training programs be established which can help interested youth identify openings in the industry and develop the necessary skills. Efforts made in the past to increase the awareness and participation of local youth in different kinds of marine activities have met with notable success: the "Kids and the Sea" program (KATS), supported through the various efforts of VIMI, VIMAS and Rotary members, has helped train dozens of youths in a variety of water safety and boat navigation skills; Gold Coast Yachts on St. Croix has established a successful apprenticeship program recruiting local youths to learn and profitably apply valuable boatbuilding skills. As successful as such programs are, their output in terms of trained marine recreation employees still fails to satisfy the territorial demand for such skilled labor. The number of future openings anticipated by the survey results would suggest that more, not less, energy and determination should be applied in helping local youths identify and train for new jobs in marine recreation services.

Perhaps most fundamentally, the survey helps raise a call for careful consideration of the way in which the territory's marine environment is exploited and conserved. The marvelous riches of the waters, reefs and coasts of the Virgin Islands are in many ways the lifeblood of the tourist industry on the islands. While marine recreation thus attracts hordes of visitors, the visitors themselves disturb the natural order of the marine environment; the numbers in which they come and the actions that they commit while in, on or around the water will have serious implications for the survival of the marine community. Its spoilage or destruction would mean the demise of one of the leading attractions for visitors to the territory, with profound and self-evident negative consequences. For the most part, marine recreation businesses are among the first to recognize the importance of environmental conservation and work actively to encourage their customers to respect the delicate balance of the marine ecosystem. Given their existing experience in conserving marine resources and encouraging sound recreational practices among their customers, they could perhaps assist in promoting greater environmental awareness throughout the community. This might help to dispel some of the negative judgments popularly held against the industry, while at the same time heighten the overall appreciation of the greatest natural resources of the Virgin Islands.

APPENDIX A

SURVEY FORM

MARINE RECREATION SERVICES SURVEY FORM

Strickland/Quinn
1992

USVI MARINE RECREATION SERVICES SURVEY

- 1) Which category best describes your business? Please indicate rank by number if more than one applies.

<input type="checkbox"/> Bareboat charters	<input type="checkbox"/> Marinas	<input type="checkbox"/> Diving
<input type="checkbox"/> Day charters	<input type="checkbox"/> Repair services	<input type="checkbox"/> Watersports
<input type="checkbox"/> Term charters	<input type="checkbox"/> Retailers	<input type="checkbox"/>
<input type="checkbox"/> Ferries, tours	<input type="checkbox"/> Sportfishing	(Specify if other)

- 2) When was your business first established in the U.S. Virgin Islands?

<input type="checkbox"/> Before 1970	<input type="checkbox"/> 1975-80	<input type="checkbox"/> 1986	<input type="checkbox"/> 1988	<input type="checkbox"/> 1990
<input type="checkbox"/> 1970-75	<input type="checkbox"/> 1980-85	<input type="checkbox"/> 1987	<input type="checkbox"/> 1989	<input type="checkbox"/> 1991

- 3) Please indicate the range of the dollar value of total business volume for your business in an average year.

<input type="checkbox"/> Less than \$50,000	<input type="checkbox"/> \$100,000-250,000	<input type="checkbox"/> \$500,000-1,000,000
<input type="checkbox"/> \$50,000-100,000	<input type="checkbox"/> \$250,000-500,000	<input type="checkbox"/> More than \$1,000,000

- 4) Please indicate from which group(s) you draw most of your business. Rank by number if more than one applies.

<input type="checkbox"/> Local residents	<input type="checkbox"/> Transient non-USVI boaters	<input type="checkbox"/> Cruise ships
<input type="checkbox"/> Charter firms	<input type="checkbox"/> Independent charterers	<input type="checkbox"/> Air arrivals

- 5) How many people does your business employ? Include self-employment. Include fractions if one person serves multiple functions (for example, 1/2 Product Sales and 1/2 Administrative).

	Full Time year-round		Part time year-round		Extras in high season, if any	
	M	F	M	F	M	F
Sex						
On-water activities						
Mechanic and repair services						
Public relations						
Product sales						
Administration						
Other (specify)						

- 6) What is the average hourly wage or monthly salary paid to an employee in each category? Please record any change in high-season pay. Include self-employment.

	Average hourly wage or monthly salary in \$s	Any raise in high season?	\$ share of job category in firm's employee budget
On-water activities			
Mechanic and repair			
Public relations			
Product sales			
Administration			
Other (specify)			

- 7) In the next two years and assuming ideal conditions, how many new people are you likely to employ in the following categories? Please note special skills or training you feel would be essential in filling these positions.

	No. of New Employees		Special Skills or Training Required
	New posts	Employee replacement	
On-water activities			
Mechanic and repair			
Public relations			
Product sales			
Administration			
Other (specify)			

- 8) Do you observe any relationship between (1) the environmental quality of the USVI marine coast and surrounding waters and (2) the level of your business activity? If so, please describe this below.

9) Please add any additional comments you wish to make concerning your business in the USVI.

Check this box if you wish to receive a complimentary copy of the survey report.
 Thank you for assisting with this survey.

Please contact Norman Quinn or Richard Strickland with any questions.

Please return the questionnaire to us at:
The Eastern Caribbean Center, University of the Virgin Islands,
Charlotte Amalie, St. Thomas, USVI 00802
Telephone: (809) 776-9200

APPENDIX B

ANSWERS TO OPEN-ENDED QUESTIONS

MARINE RECREATION SERVICES SURVEY

Strickland/Quinn
1992

**ANSWERS GIVEN TO OPEN-ENDED QUESTIONS ON
THE MARINE RECREATION SERVICES SURVEY**
(Strickland/Quinn, ECC)

Question 8. Do you observe any relationship between (1) the environmental quality of the USVI marine coast and surrounding waters and (2) the level of your business activity? If so, please describe this below.

I feel that we are attracting less cruising sailors for shorter durations due to the complicated government process of registration, mooring, etc. Usually during hurricane season, we could always count on several cruising boats to spend hurricane season in the islands and would generally spend time and money on repairs and updating their equipment. [207]

Yes, this area is the finest cruising grounds in the world. The worse part is the crime and filth we have *ON* St. Thomas. The waters are pristine. [126]

Not directly observable. [167]

Only to the extent that should environmental conditions or reputation deteriorate, we could expect a gradual erosion of tourism, and hence lower business volume, and weaker conomy. [171]

On the 10-20 year cycle this is important; on a short-term basis the difference is more noticeable in terms of complaints by guests of the amount of trash and garbage strewn all over the islands. [177]

Yes, tourism is the main source of income for the USVI. Poor coastal water quality and "trashy" beaches reduces tourism which is reflected in loss of income and loss of jobs. Example: neglect of USVI waste treatment facilities. [188]

As long as marine environment stays good, business should remain somewhat consistent. [158]

Very high relationship. The quality of the reef (i.e., diving) greatly affects our destination divers. We need to protect the underwater environment. A mooring system is essential. [177]

Not really. My business is reduced when the charter boats have been forced away by government rules and regulations, street crime and harassment. [260]

Submarine is battery operated and releases no toxins or pollutants into the water. [123]

No. [hardware store] [412]

Not yet, but we hear continually from our visitors about the decline in water quality. [168]

Absolutely. We are dependent throughout every spectrum of life here in the Virgin Islands. [193]

Except for gas emissions, none. [480]

Yes, big drop in requests for diving due to damaged reefs. [198]

Of course, what we sell is beautiful water, snorkeling, healthy fish life and other water sports which can be enjoyed more by quality of the environment. [sic] [291]

Although our business demands space for boats (repair), we feel the best way to attract boats is to provide the kind of environment that boaters like to visit. This would indicate areas where boaters could go to have work done efficiently as well as areas that are naturally preserved. [284]

Yes, the more activity, the greater the level of degradations. [109]

Yes, there is a relationship between environment and the USVI marine coast and surrounding waters.

How much business relies on this, I don't know! [301]

Yes, without great snorkeling here, we wouldn't be in business. Many tourists are disappointed in the marine life, naming better snorkeling in the Bahamas, BVI and down island. [315]

Yes, fire at dump [St. John] decreased sales due to poor environment. Oil spill created jobs, created more business. Cloudy weather decreases sales, hot days increase sales. [ice, water] [413]

Yes, the VI waters are seen by the world as the ideal, sailing and boating as one of the finest. [341]

Yes, our business is derived from the fishing in the area. [420]

Yes, business is always affected by weather (swells, high seas, poor visibility, etc.) Also, we are sometimes seeing more waste on the reefs. Lack of fish life makes some reefs here appear "dead." Divers often compare their experiences to destinations (like Cayman and Cozumel) and the USVI does not meet their expectations. Better diving is often available at these locations, at much lower overall cost. [217]

So far, we have been blessed with the most beautiful cruising conditions in the world, so we have not seen any negative effects, unless you count the devastation done by Hugo. After Hugo, our business plummeted 50%. [458]

Absolutely!! Even though the waters appear clear, the coral, rocks and bottom now (over the past 8 years) has a gray silt covering everything. Huge coral formations are GONE. I believe this to be caused by increased business--marine and land. More tourists, more building, less vegetation, causing more soil run-off and of course more sewerage. Is the Legislature Building still dumping their sewerage into the harbor? [152]

Yes, totally dependent on the quality of our marine environment. We sell that vacation. [492]

No. [yacht charters] [271]

Unknown at present. [new business] [235]

Yes, experienced divers dive less due to eroding conditions of reef and availability of fish. [419]

None. [propeller repair] [356]

No. [woodworking] [136]

I do not feel that the quality of our environment is what is driving business away. Congestion has driven many boaters to find less crowded water further down island (St. Martin, Grenadines, even Venezuela). This crowding has some impact on the environmental quality, but our waters are still quite beautiful. [214]

It is required that our crew and passengers adhere to coastal zone regulations. [ferry] [397]

Not really. [lumber company] [414]

A clean environment is very important to the success and survival of the [yacht] club. [423]

There is an absolute direct relationship because healthy marine life is what my guests have come to see. [400]

Yes, education. [216]

Due to hurricane Hugo and pollutants in our waters, the reefs in general are dying. With reefs dying, so will the diving businesses in general. From many tourist divers, I hear the comment, "Your reefs look dead." They are right. [288]

Beaches spoiled by too much development. Government discharge of raw sewage into Charlotte Amalie harbor. Un-trained DPNR officers being rude and obnoxious to yachtsmen. [156]

Sun, sand, water, clear skies, clean beaches, clear and clean water is our reason for existence. If we don't take care of them, our business is gone, and there is a lot of pressure now without much if any response from our government. The private sector is at work all the time but we cannot do it alone. Tremendous basic environment education is necessary *now* and continuing. [426]

No. [furnishings] [257]

Yes, it helps if the shores are clean, not littered. [371]

No!!! Only anti-social behavior of the locals against the marine community, along with the "don't give a damn" attitude that the locals have about the financial boost the marine industry contributes. Adding to the problem is the VI government, they also have the same "don't give a damn" attitude. [anonymous, 3542]

Over construction causing unsightly scars and drainage problems; loss of non-pelagic fish due to overfishing, primarily fish traps and nets. [310]

All activities are conducted, currently, at Magen's Bay. Concern of pollution, particularly after heavy rain, has caused questions from families re: infections, etc. Additionally, the natural consequence of marine life--particularly jellyfish--causes discomfort, concern and reduced participation during late summer and early fall. [422]

Our company spends time and money to educate our customers to the customs and rules of the local and federal governments. While our waters are becoming heavily congested, it seems that the traffic is commercial rather than private. [416]

Reef destruction following Hugo hurt the diving industry enormously. So far in the areas where we dive, the water quality is still good. As soon as it deteriorates, the dive business is finished. [180]

My guests are here for clean air, clean water, and good snorkeling. Any pollution or destruction of the above will destroy my business. [186]

Yes. The quality and attractiveness of the USVI waters determine if transients come to our area and if they stay long enough to have repairs done. Of course this also applies to sportfishing transients concerned with healthy fish populations. Ultimately our *local* business is dependent on the tourist industry finding our waters (and land) desirable. [441]

Not yet. [465]

No, if any, less quality in "used" areas. [393]

Of course; the more pleasant, less crowded the area, the more visitors enjoy and return. Also, the cleaner the environment, the more pleasant it is for all of us that live in it. [476]

Yes, importance of clean beautiful water. [275]

Yes. [407]

Our business is generated due partially to the marine activities (snorkeling and diving). People are attracted to the crystal blue waters. [115]

Yes, our customers enjoy the beauty and cleanliness of our waters and coast. [370]

Yes, due to predictable air and water conditions, St. Croix is ideal for group dive travel. The west end of St. Croix is especially well suited for travel as we have no lost days due to rough water. There is a wide variety of dive sites on the west end. Also fishing charters don't have to be seasick to catch fish. [204]

Poor environment leads to less visitors and demand for our services. [470]

Teague Bay is relatively pollution free. There are currently over 100 boats docked or moored here. This would not be the case if the water resembled Green Cay Marina or Christiansted harbor. Business would suffer tremendously if the water was affected. [411]

Should the environmental quality of the shores and waters of the Virgin Islands and St. Croix in particular [deteriorate], my business would suffer in direct proportion to deterioration. [173]

Conch is extremely difficult to obtain locally, plus price is far higher than importing. Dolphinfish, wahoo, tuna are scarce, unlike years before. The constant pressure on gamefish (because of nonselective fishing and trap fishing on the reef) is killing the industry. [238]

No, unless it attracts more charter customers, which results in more boats on the island. [353]

Hurricane Hugo did a lot of damage to the reef of Buck Island and outlying reefs of St. Croix. This, the Gulf War and the ongoing recession has been a tremendous loss in income. [429]

Both locals and tourists complain about the trash on the beaches and there is definitely more plastic debris in the sea than ever before. [469]

The USVI marine coast and surrounding waters and our business [are] very much related because if the water is not clean, free of plastic bags and trash, we really have nothing to sell. Our greatest assets we have in marine field are beaches, clean water and picturesque landscape. [434]

Not on St. Croix. [215]

Since we are a 100% tourist business, the cleanliness of our waters and beaches are paramount in keeping tourists coming to our ports. Another thing that would help are moorings placed at certain tourist attractions such as Buck Island so that boats grab a mooring and not drop an anchor. This would serve to protect the bottom. [325]

USVI is one of the finest diving sites in the world on any given day; this positively affects my business. [255]

The marine environment has not progressed from any future planning just like the island in general. The lack of planning has been detrimental to any growth in revenue or quality of services. [185]

If "marine environment" means "ecological", then our marina is dependent on it and it is the primary reason the boats are here. However, the current quality has little or nothing to do with the loss of boats (and business) over the past few years. The complaints we hear the most relate to sewage in the water, primarily the harbor and Red Hook, both of which are (again) primarily attributed to land-based sources and secondarily attributable to boats. [199]

The clarity of the water, the colorful sealife, the magnificent corals, the pure trade winds, the clean beaches, good harbors, all make this one of the best sailing and cruising [spots] in the world! [499]

No. [179]

People regularly complain about the ride in the taxi from the airport -- the smell, and the trash on road. Not many complaints about polluted bays, except Crown Bay by the sewage outflow. [131]

If the quality of the water conditions and fish and wildlife decline due to the environmental problems, so does the marine industry. People come to the Virgin Islands to enjoy clean air and water. [120]

Pristine environment brings charters. [163]

None. [196]

By offering an entertaining and educational experience at Coral World, most visitors become more aware of the marine environment in general and hopefully walk away with a better understanding of our need to protect this environment. Coral World is planning to develop educational programs for local school groups and provide written material oriented towards conservation. Coral World has sponsored "Reef Sweeps" in which the public is invited to join Coral World to help clean debris from various reefs around the island. [197]

The natural environment is the prime contributor to our business. [112]

Yes, the water quality affects the desirability and use of natural resources. [245]

Boaters come to the VI because of our clean waters. [355]

Yes, a quality environment is important to the VI marine business economy. [345]

Catching less and less fish; worse fishing in past year; no dolphinfish. [350]

Yes, naturalist on board to teach conservation; Trunk Bay not a place to snorkel anymore; we hope we are not disturbing the environment. [360]

Absolutely a positive relationship; dirty waste water like at Stouffer last year drives tourist away. [381]

St. Thomas is a dump; certainly see relation between environment and business; he keeps litter, engine blocks, etc. away from his marina; government should make environment a priority; greatest priority is tourist oriented environment a priority; greatest priority is tourist oriented environment economy. [372]

The marine (economic) environment is important; as the boats leave for more welcoming destinations, so our business has dropped. [477]

[No comment from 16 respondents]

Question 9: Please add any additional comments you wish to make concerning your business in the USVI

All these forms and taxes for a small business with 3 employees make it hard to do an honest and competitive business: 6% custom duty, 4% gross receipts tax, 3% excise tax, employer's report to Commissioner of Finance, employer's annual federal unemployment tax return, employer's quarterly wage and contribution report, employer's quarterly VI withholding tax return, and employer's quarterly federal tax return. [207]

The tax laws has [sic] destroyed the boating industry. The 10% luxury tax on boats \$100,000 and more will further deteriorate [sic] this problem. The \$50-100 recreational tax is another problem. The marine industry spends an enormous amount on boats and personnel. This is the cruising capital of the world. I think if the VI government knew how much was brought in by charter guests, there would be more concern and help. [151]

Business steadily dropping off at boatyard during last 2 years, partially due to decrease in bareboat fleets. [142]

Local government policies are ruining the charter business because of over-restrictiveness. Coast Guard rules have the same effect. It's ridiculous. So is on-the-water DPNR enforcement; it's an embarrassment. Too many operators are leaving to other parts of the Caribbean.

Very concerned that marine business not desired by USVI. The BVI has encouraged and solicited a large number of our yachts to base and spend money there, not St. Thomas. St. Thomas seen by boat crews as dirty, crowded, expensive, and dangerous with a high crime rate. Tortola perceived as quiet and laid back, much more positive image. [177]

Attitudes ranging from governmental indifference to local hostility toward tourism will cause USVI to lag behind the economies of more competitive tourist destinations. [188]

Drop off excise tax. [194]

As the tourist demographics become negative, so does customer base. [102]

The sooner the VI government starts running things like a real state and stops infighting and other childish and foolish nonsense, all of our businesses will flourish. Water-borne activities are vital to the USVI, bring in many dollars and employ many people. Wake up or lose this business to the BVI. [168]

Decline in tourism due to government inaction and taxing the industry very heavily (boating) is killing us. [480]

My business is currently too slow to hire anyone. [198]

Machine shop highly skilled work requiring much training. VI schools do not turn out graduates with enough education in math to train. We employ mainlanders. [109]

One concern of many VI businesses that does need comment is crime. The amount of crime definitely hurts our levels of business, and it is. [301]

High rents in ideal retail areas make it impossible for smaller businesses to survive. Especially retail on moderately priced items as opposed to high ticket (jewelry) items. [315]

The VI government sees this multimillion dollar sailing and boating potential as though it does not exist. [341]

Moorings on frequently used dive sites can help reduce coral and sea bed damage. Legislation regarding moorings has "disappeared." [217]

The government has no concept of the pollution that is damaging our environment. The government is driving away the boats with fear of taxes, laws, etc. which are not necessary. The government doesn't realize that there are other countries who want marine industries and that boats can easily move to where they are wanted. The government cannot manage itself, better yet a business and one as sensitive as the marine industry. [492]

We started 9-1-91. Two of us own/operate the company. At the present time we hire only contract laborers until we are in a position to hire full time help. We have 1 power boat under management and broker through other companies for our current bareboat needs. We expect to have 5+ sailboats under management by March 92, and hopefully more by fall. This survey would be far more meaningful once we accomplish more of what our goals are. We are too new right now to give you the information you are seeking. [235]

The government is shooting itself in the foot by (1) not allowing the dive industry to place moorings which will protect our reefs, and (2) failure to limit fishing which hurts the fishing and diving industry. [419]

My business is completely dependent on the boating community, and this community is getting smaller all the time. So is my business. It would be a big help if local officials would help in drawing more boats to the territory instead of chasing them away. [356]

Some boaters choose not to stay in St. Thomas due to harassment from DPNR officials and other government agencies. Fewer boaters mean less business in the VI. [136]

As a small business, it's difficult to be competitive with larger and stateside organizations due to our high costs of importing our raw materials, freight, excise, and then gross receipts. [214]

We are primarily a retail lumber and hardware store and carry a few marine supplies such as rope, anchors, buoys and marine hardware as a convenience for our customers. [414]

Yacht club actively promotes youth sailing programs for members and general public. [423]

I feel the government agency in charge of marketing the USVI in general is going to have to do better than currently in order to compete with Jamaica, Cuba, etc. etc. [400]

Tourist department too political and do not promote anything other than taxi tours. [297]

The USVI government should spend more money on advertising our water. The USVI government should have laws to protect the marine life and enforce them: no spearguns, no cull nets, no fish traps. Move DPNR to Fish and Wildlife. [216]

Channels (VI) was closed after Hurricane Hugo. 2/3 of our customers sank and the remaining 1/3 was inoperative. [174]

The marine portion of our business is gone. The commercial yachtsman (i.e., charter industry) has been driven to the BVI and down island by our government's lack of interest and sometimes even hostile attitude. The depressed US economy has added insult to injury. [156]

I went out of business following Hugo. I never received any insurance money from loss (Phoenix Fire and Marine). [371]

Before hurricane Hugo, 15-25% of our total volume was supplying the boating industry with flooring and upholstery material. Today our volume of marine-related sales is 3-5% of total sales. [257]

The charter yacht capital of the world—the Virgin Islands— is in a tailspin. Concerned citizens, the private sector and government must come together with an open mind and a sense of urgency if we are to stop the spin and start on the long road back to the top. There are tremendous outside pressures to respond to and deal with now, as well. [426]

Outrageous taxes!!! Why do we have to pay excise tax on American-made goods? Repeal the gross receipts tax, enact a sales tax if necessary. RENT!!! Unless you are rich, you cannot afford to rent or lease a business space. If your business is located near any high traffic area, your rent is between \$8,000-14,000 per month and that is net; on top of that you have a share of the landlords building insurance, garbage removal, electric, and gross receipts tax on the lease amount. This is the main cause of high prices in the Virgin Islands, taxes are only second. DUTY!!! When we buy products from the United States, duty has already been paid on that product, but we are charged again when the product reaches the Virgin Islands. This also adds to higher prices in the Virgin Islands. EXCISE TAX!!! The excise tax department, they seem to make up their own rules as they go along. Example: If an invoice lists full retail less your discount, you pay excise on the full retail amount, because the excise tax department does not recognize discounts. So instead of paying taxes on the bottom invoice amount, you pay taxes on first amount listed on the invoice. (Retail 100.00 - Discount 40.00 = My cost 60.00, but in this case we pay excise on the 100.00) This happens a lot depending on who is working the window at the excise tax department that day. BUSINESS LICENSE!!! The Virgin Island government considers the United States to be a foreign country. If you own a business you MUST HAVE AN IMPORT LICENSE, you do not need an export license, to sell off island, buy you need an import license to buy from the United States. [anonymous, 354?]

People come from all over to see "our" (I was born here in '59) natural beauty, not our big hotels, etc. Stop building, limit or prohibit (preferred) traps and nets, regulate territorial and federal waters with Florida laws. [310]

The STSA's long-term goal is to construct an aquatic center. Experience and statistics show the "ocean" environment is not conducive to safe, consistent and control for educational and competitive aquatic programs. The concern/desire for more "local residents to participate in and benefit from our marine environment can be addressed and is addressed by our non-profit association. Participation in any and almost all aspects of the marine industry must demand a first, basic skill/water safety knowledge and swimming skills. [422]

Marine business on the whole have a difficult time making a profit in the USVI. It is time the local government realizes the potential and acts to preserve those that are left. [416]

A mooring program is badly needed. The VI government seems decidedly uninterested. [180]

I was recently fined \$500 for sailing in British waters. Better customs laws and fairer enforcement practices in both USVI AND BVI will help encourage tourism and business. [186]

I am phasing out of business in the Virgin Islands. The public/community attitude as well as new fees and regulations is not conducive to marine businesses. I will relocate to an area where people actually want and welcome us instead of penalize us. This is after 10 years in the VI. [302]

I am getting too old to work hard due to back pain and arthritis. [114]

Dependent upon more cruise ships and more air arrivals. St. Croix needs more promotion and more hotel rooms. [317]

A good political environment is also important. Government needs to provide popular guidelines for society; people themselves *are* (should be, could be) responsible for following these guidelines. Quality education is therefore the most important thing society can provide to its people. [476]

We would like to see a better attitude toward private industry from the VI government, especially Bert Bryan! [275]

There has to be a more positive attitude by the VI government toward tourism in general. Especially they need to realize the value of water related activities in drawing large groups of vacationers. The impact of a group of 24 in Fredericksted for one week is tremendous. We presently have the capacity for 48-50 per week which in itself should boost the F'sted economy tremendously. [204]

The bread and butter of our economy is the tourist and the marine activities. The population should show more awareness, concern and response to this issue. [470]

Competition with the BVI is having the greatest effect at the moment by attracting charter companies away from USVI. Also the economic barriers erected against US-based pleasure boats restrict the benefit of basing a boat in USVI. [190]

The purchase of boats and yachts is dependent on the financial climate of the islands; poor business conditions in general mean a marked drop in boat sales. Since many sales are made to persons from Europe, Canada and the U.S. mainland, world economic conditions have an even more marked effect on sales activity. [173]

Its ridiculous to pay gross receipts on low mark-up (seafood) which is high anyway. The locals and some larger supermarkets don't have hygienic stands and don't care about size or species of fish. It's about time some sort of season is enforced, but that will *never* happen on St. Croix because of politics and dumb outlook. [238]

Second-tier (regulatory bureaucracy) government *has* to stop harassing visiting boaters. [353]

The VI government should sponsor a lot of family trips for travel agents just to get their favorable recommendations. [429]

We are here for the long haul. We grew up surfing and sailing here and intend to stay in the industry. Thank God for the new national park at Salt River. We would like to be involved in making that the model site for the co-existence of marine industry and recreation. [469]

If numerous vessels using our marine facilities were paying their fair share for the use of our waterways (since they are using them for their economic well-being), our surrounding waters and coastlines would be better respected and cared for. [434]

Two other things that would help the Virgin Islands are (1) friendliness to all our visitors, not rudeness, people like to be treated as human beings, not cattle; (2) the second and equally important are the prices are rising far too fast and most of that is caused by excessive commissions by middlemen and tour operators who want bigger shares of the profits and therefore keep jacking prices to the consumer. [325]

I hope government doesn't start overtaxing. Idea of a license for a sailboard is bad. There is too much taxation. [255]

Lack of a future plan of services for the marine industry such as refuse disposal areas, access areas, recycling program and heavy taxation from non-performance of the government supplied so-called services is only part of the decline of a viable, efficient and prosperous marine environment and industry. It's called taxation without representation. [185]

Marine industry is an important and substantial part of the tourist industry, which is the primary provider of jobs and tax revenue in the USVI. Without the tourism industry, I believe the USVI government would lose 80-90% of its revenue that is generated by the private sector. [199]

Chartering is in bad shape. No. of charters way down. No. of boats down. It's tough to make a living these days! [499]

It's a very hard business. Small businesses are overtaxed. New employment would only be hampered due to increased tax burden associated with taking on a new employee. Gross receipts tax structure unfair, burden disproportionately carried by small businesses; large

companies of 10+ employees can file status to avoid paying gross receipts tax (IDC tax incentive?) while small businesses cannot avoid gross receipts tax. [179]

Our operation competes with Puerto Rico and Miami. Our overhead is much higher in the VI. We don't show much profit. [163]

Most of our employees are partners and wives. We specialize in sailing craft and diving. Water quality is due to global environmental pollution, not local or tourist related inputs. [196]

We need to do a better job in training local human resources to cope with current and future tourism opportunities. We need to clean up the island (landside garbage) and reduce our overall crime rate. [112]

The VI government needs to recognize the economic value of marine industry and allocate natural resources and infrastructure for this industry; the industry could double in five years with assistance. [245]

Government doesn't help, no fishing advertisement despite record catches in USVI. [350]

Wildlife lots of information; no problems. [360]

Marine business should be promoted, also the regattas, fishing tournaments. [381]

Don't screw up the ocean. [372]

Prior to 1989, we supplied all major charter companies with books, charts, boutique items and provided snorkeling gear to all bareboat fleets (over 50 in 1988). Today, our business with the marine industry is only 25% of 1988 figures. [477]

[No comment from 36 respondents]

PART II

**TECHNICAL REPORT ON THE MARINE
SURVEY RECOMMENDATIONS WORKSHOP**

held on
28 January 1993

at

The University of the Virgin Islands
Eastern Caribbean Center

by:

Lynne MacDonald, Marine Advisor
Virgin Islands Marine Advisory Service

May 1993

Introduction

The U.S. Virgin Islands boasts some of the finest marine recreational resources in the world. These resources draw thousands of visitors to the territory each year and provide residents and visitors with unique opportunities for marine-related recreation activities and enterprises. Marine recreation activities are fundamental to the economy and conduct of business in the Virgin Islands, but surprisingly little research has been done to document the industry or its contribution to the Territory's economy.

This lack of information was identified, by the marine industry itself, as a serious problem in their efforts to convey to its own members and to the public at large just what the marine recreation industry encompasses and how it contributes to the economy and commercial vitality of the Virgin Islands. In order to quantify the contribution of the marine industry to the Territory's economy, the Virgin Islands Marine Advisory Service of the Eastern Caribbean Center at the University of the Virgin Islands, under the auspices of the University of Puerto Rico's Sea Grant College Program, undertook a study to identify the sizes and types of marine recreation business in the Territory, determine their contribution to the growth and maintenance of the tourism sector and overall economy, and develop baseline economic and demographic data about the industry which would assist in implementing future initiatives. The study also examined the industry's interest in and awareness of the marine environment.

The study was completed in July 1992. Information was gathered through a self-reporting survey form that was distributed to all identifiable businesses engaged in the various aspects of marine recreation, and through personal interviews with representatives of marine industries. This information was then analyzed and incorporated into the "**Survey of Marine Recreation Services in the U.S. Virgin Islands**" (Strickland and Quinn, 1992) and the draft document was distributed to interested parties for review.

On January 28, 1993 the University of the Virgin Island's Eastern Caribbean Center (ECC) hosted the "**Marine Survey Recommendations Workshop**"; participants included marine industry and government representatives. The Workshop's objectives were: to allow parties with an interest in the "**Survey of Marine Recreation Services in the Virgin Islands**" to review and comment on the draft report's findings; to discuss the primary issues brought to light by the study; and, to make recommendations on how this study can be used as a tool to mitigate these issues.

The study and workshop establish a base from which interested parties can initiate further action, investigate the issues that were identified in order to expand the existing information base, and develop a more accurate understanding of the marine recreational industry's contribution to the Virgin Islands economy.

Reaction to Study Content

Workshop participant's response to the study was generally positive. While very few participants consider the report a "final document", most feel it fills an existing information gap. Participants agreed that the report provides an excellent starting point for future studies, and for promoting cooperation between marine recreational industries and the government.

Participants were asked to react to the contents of the survey with regard to data completeness and sufficiency in an effort to identify any areas that were inadequately covered or overlooked. Some of the reactions to the content that can readily be addressed and incorporated into the report are to:

- separate the information by island, i.e. do not treat St. Thomas and St. John as one entity. Along these lines, St. John numbers were reportedly incorrect (low); these discrepancies could possibly be remedied by using island-specific data;
- confirm the data through cross references with data compiled by the Departments of Planning and Natural Resources (DPNR) and Licensing and Consumer Affairs, and with the results of the Department of Economic Development and Agriculture's Exit Survey, and other available records; and,
- refine the definition of "marine industry" (what definition(s) have other studies used? are jet skis included? do the numbers reflect boats, or businesses, or both?)

Other reactions that would require further studies, perhaps beyond the scope of our present capability, were:

- the environmental impacts of the industry should be examined more closely. What resources are used, where are they located?
- more detailed information should be provided on the worker pool (who fills the positions; and, wage information, including revising the statistics to reflect the many small operations where one person fills multiple positions [e.g., bookkeeper and secretary, or reservations agent and office manager]); and,
- the demographics of the business need further examination.

Primary Issues

The Survey illuminated many issues that need to be addressed in order to maximize the contribution of the marine industry to the economy of the Virgin Islands. Workshop participants specifically felt the following issues require attention:

- the Territorial Government's need to review its stance on taxation, regulation, and how they "serve" the industry;
- the development of methods to achieve effective communication and interface between government and industry;
- the identification of strategies to address the above issues (such as convening an advisory committee);
- the determination of the status and future health and size of the industry (is it really declining, or are there fewer boats with greater capacity serving the same, fewer, or more consumers?);

- an evaluation and examination of the impact or effect of the marine recreation industry's dynamic nature (changing marketing strategies, technology, target markets...);
- the development of a comprehensive training strategy for marine related occupations; and,
- the evaluation and quantification of the impacts, responsibilities, and contributions of all user groups to the marine environment.

Workshop Recommendations

In order to provide as useful and comprehensive a document as possible, workshop participants made the following five recommendations, based on their reactions to the preliminary report and the issues they determined to be of the highest priority.

1) **Expand the survey** to include number of boats, number of customers, and all sources of income to the territory from the marine recreational industry. Included in this should be data that reflect normal or expected "leakage" rates of income that comes into the territory but is not spent here (provisions purchased from off-island, advertising elsewhere, etc.) Also, more user demographics information is needed: where do they come from? how much do they spend on various goods/services, e.g. airfare, restaurants, taxis.

2) **Continue and expand data collection** on above mentioned parameters and issues relevant to the industry.

3) **Create a forum** to address the loss of boats to the USVI (possibly a **joint task force** of industry and government leaders from both the legislative and executive branches). The task force could research causes of industry decline, as well as lobby the legislature, address existing and developing issues, and evaluate the contribution of the industry to the VI economy.

4) **Designate or obtain an advocate** for the marine industry within the Virgin Islands Government.

5) Provide **written recommendations to the VI government** on measures needed to encourage industry growth.

Conclusion

Using the information from the Workshop, ECC can now incorporate as many of the recommendations and reactions as possible into the report, and distribute the report and the workshop recommendations to those persons or agencies that can initiate further action. While ECC's future participation or endeavors in this area will be limited, the Center can continue to offer direction and some assistance with further studies in this area.

The Eastern Caribbean Center and the Virgin Islands Marine Advisory Service wish to thank all those input, participation, and assistance made to study and the workshop successful and productive endeavors. These include Dr. Richard Strickland and Dr. Norman Quinn for preparing

the draft report, the University of the Virgin Island for its support of the Center, the E.C.C. staff for organizing the workshop, and the University of Puerto Rico's Sea Grant College Program for sponsoring the study. We also wish to extend our appreciation and thanks to the workshop participants: Mr. Alan Balfour (Crown Travel); Mr. John Bernier (Sen. Bingley Richardson's office); Mr. Harp Didier (Regency Charter Service); Mr. Tom Dunn (Sen. Lorraine Berry's office); Mr. Simon Ferguson (VIP Charters); Capt. Gary "Fatty" Goodlander (marine journalist); Mr. Dan Inveen Oszust (Atlantis Submarines); Mr. William Roebuck (Industrial Development Commission); Mr. Aubrey Roumo (Dept. of Labor); Mr. Levette Ruan Sr. (Tropical Marine Service); Mr. Mark Sabino (Atlantis Submarines); Mr. Gabriel St. Surin (Dept. of Planning and Natural Resources); Mr. Ron Sherwood (VIMI); Ms. Lorna Thomas (Governor's Office); and Dr. Ed Towle (Island Resources Foundation).