

2004 Opinion Survey of U.S. Virgin Island Marine Researchers

Jennifer Messineo,

Emmy Smith,

and

K. Roger Uwate

Bureau of Fisheries
Division of Fish and Wildlife
Department of Planning and Natural Resources
U.S. Virgin Islands

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INTRODUCTION

Biological surveys are only one part of any assessment of fisheries and marine resources when developing management strategies (Gordon and Uwate 2003). It is also important that the opinions and insights of user groups be heard and considered. Without such input, assessment and management of these resources would be incomplete.

In 2001, at the request of the St. Thomas/St. John Fisheries Advisory Committee, the Division of Fish & Wildlife (DFW) completed an opinion survey of commercial fishers (see Uwate et al 2001). The results identified issues the user group views as problems and priorities.

In FY 2002, the U.S. Fish & Wildlife Service mandated that each state (and territory) develop a strategic plan for fish and wildlife (see Gordon and Uwate 2003). In response to this mandate, DFW initiated work on a U.S. Virgin Islands fish and wildlife strategic plan.

As part of this plan, user group opinions and insights were solicited and obtained through opinion surveys. Opinion surveys were completed for commercial fishers as well as the marine recreational industry in the U.S. Virgin Islands (Gordon and Uwate 2003). Later, an opinion survey was conducted that targeted recreational fishing club members (see Messineo and Uwate 2004).

The above opinion surveys (for commercial and marine recreational industry, see Gordon and Uwate 2003, and recreational fishing club members, see Messineo and Uwate 2004) did not cover marine researchers unless they were part of the three user groups previously surveyed. In order to gain insight into the opinions of locally based marine researchers, this survey was initiated. This report documents the opinions of marine researchers based in the U.S. Virgin Islands.

METHODOLOGY

The Universe – The universe was defined as marine researchers that are based in the U.S. Virgin Islands. This included staff at the following organizations: (1) Division of Fish & Wildlife, (2) University of the Virgin Islands, (3) The Nature Conservancy, (4) The Ocean Conservancy, (5) The National Park Service, (6) U.S. Fish and Wildlife Service, and (7) private consultants.

An initial list of marine researchers was developed. It was passed to staff at the Bureau of Fisheries, Division of Fish and Wildlife for review and additional names. A total of 37 individuals were identified.

The Questionnaire – The questionnaire used in this survey was modified slightly from the ones used in Gordon and Uwate (2003) and Messineo and Uwate (2004). The draft modified questionnaire was reviewed by DFW staff.

The questionnaire was a single page so that it would not be a burden to respondents. A copy of the questionnaire is attached in the Appendix.

Fielding – Participation in this survey was voluntary and confidential. Fielding began on May 18, 2004. Marine researchers were contacted in person, by phone, and by fax. At least 3 attempts were made to follow-up with marine researchers to complete the survey. Fielding ended on June 25, 2004.

RESULTS

Of the initial 37 identified marine researchers working in the US Virgin Islands, one was no longer in the USVI. The remaining 36 marine researchers were approached to respond to this survey. Twenty eight responded to this survey.

Most marine research respondents worked on St. Thomas (Question 1, Table 1). Some respondents indicated that they worked on more than one island. Therefore the total number of responses (35) was more than the total number of respondents.

Most respondents worked at the Division of Fish and Wildlife followed by the University of the Virgin Islands (Question 2, Table 2). Both of these agencies have offices in St. Thomas and in St. Croix.

Respondents reported their percentage of work time between research, administrative activities, and resource management (Question 3, Table 3). Responses ranged from 100 percent research to 98 percent administrative activities.

Respondents rated the condition of the local fishing resources (Question 4, Table 4) as poor, fair, good, or excellent. Most rated fishing resources as poor or fair. If ratings are converted into numerical values (with poor = 1, fair = 2, good = 3, and excellent = 4), then the average rating is 1.54 (variance 0.34), about half way between poor and fair.

Respondents identified a variety of problems with the local fishery (Question 5, Table 5). Major responses fell into the following categories: overfishing/stock depletion, lack of enforcement, habitat loss/destruction, inappropriate gear types (trap mesh too small), and pollution.

Respondents also made various suggestions on how to improve the fisheries (Question 5, Table 6). Key suggestions included: enforcement of regulations, increasing enforcement, education and gear reduction.

Respondents then rated U.S. Virgin Islands marine resources (Question 6, Table 7) as poor, fair, good, or excellent. The most common rating was fair. If ratings are converted to numeric values (where poor = 1, fair = 2, good = 3, and excellent = 4), then the average rating was 2.0.

Respondents then identified major problems for marine resources that need to be addressed (Question 7, Table 8). Common problems included: pollution, sedimentation, overfishing (overexploitation), lack of enforcement, and habitat/ecosystem degradation.

Respondents also provided their suggestions to fix marine resource problems in Question 7 (see Table 9). Common responses included: more enforcement, education, better resource management, and restrictions on coastal development.

Question 8 asked about the respondent's awareness or possible involvement in the Fisheries Advisory Committee (FAC). Results are provided in Table 10. Most respondents were aware of the FACs. Only about a quarter of respondents were interested in joining the FAC (Table 11). It should be noted that Division of Fish and Wildlife staff (including the 11 who responded to this survey) are not eligible to be FAC members.

Question 9 asked respondents for suggestions on boat ramps and jetties (see Table 12). St. Thomas east end was the most common suggestion. For St. John, Coral Bay, and for St. Croix, Salt River were suggested more than once. Respondents also provided diverse general suggestions regarding boat ramps and jetties.

Finally, respondents were asked for additional comments (Question 10, Table 13). Again, education and the need for more enforcement were the most common responses.

DISCUSSION

Survey responses from marine researchers were lumped together here. Since several respondents indicated that they worked on more than one island (Question 1, Table 1), it was appropriate to lump responses together and not separate out responses by island or district.

Respondents rating of fishing resources was between poor and fair (Question 4, Table 4). On a scale of 1 to 4 (1 = poor and 4 = excellent), the average rating here was 1.54. This is much lower than the ratings indicated by fishing club members (Messineo and Uwate 2004) who rated fishing as between fair and good (2.95 for St. Thomas and 2.63 for St. Croix). It is also lower than the ratings by commercial fishers (2.66 for St. Thomas/St. John commercial fishers and 2.28 for St. Croix commercial fishers, see Gordon and Uwate 2003), and the ratings by marine recreational industry respondents (2.5 for St. Thomas/St. John marine recreational industry respondents and 2.0 for St. Croix marine recreational industry respondents, see Gordon and Uwate 2003).

The ratings of the condition of marine resources were similar to their ratings of fishing resources. In this survey, marine researchers rated marine resources as fair (2.0, see Table 7). This was lower than the rating provided by marine recreational industry respondents of good (2.8 for St. Thomas/St. John marine recreational industry respondents, and 3.0 for St. Croix marine recreational industry respondents, see Gordon and Uwate (2003).

Marine researchers identified overfishing, enforcement, habitat loss, and pollution as major problems in the fishery (see Table 5). These are similar to the main fishing problems identified by fishing club members (Messineo and Uwate 2004), commercial fishers (Gordon and Uwate 2003), and by the marine recreational industry (Gordon and Uwate 2003).

Marine researcher suggested solutions to these major fisheries problems (see Table 6) were similar to those suggested by other user groups (see Gordon and Uwate 2003, and Messineo and Uwate 2004).

Marine researchers identified major problems with marine resources (see Table 8) such as pollution, overfishing, lack of enforcement, and habitat degradation were similar to those identified by other user groups (see Gordon and Uwate 2003, and Messineo and Uwate 2004). Suggested solutions were also similar.

General comments by respondents here on boat ramps and jetties (see Table 12) were diverse and insightful. Development of new jetties was not recommended. One respondent suggested that DFW should only maintain existing jetties and ramps.

Interestingly, marine researchers rate both fishing and marine resource conditions as much lower than other user groups did. This may be related to their broader perspective of these issues, access to historical surveys or reports, or perhaps just to the skeptical nature of a science background. Alternatively, it may be related to the optimistic nature of fishers, whether commercial or recreational.

Results of these surveys provide insights into the priority areas, as perceived by marine researchers. These priorities are real to the respondents. It appears that the views of marine researchers, in terms of problems to the local fisheries and marine resources, are very similar to those views and opinions by other user groups (see Gordon and Uwate 2003, and Messineo and Uwate 2004). Results here validate and support the priorities previously identified. Clearly the issues identified by researchers and the different user groups are priority areas that should be included in any fisheries or marine resources planning activities. These priorities may be unknown or not yet significant to policy makers. Therefore, a summary of these reports should be circulated through related government agencies and to policy makers. Only through making results like these available (especially when fishers and researchers agree on issues) can policy makers learn of these priorities and take action to address these priority issues.

Public dissemination of these results will be done when the draft strategic plan (that will include a summary of results here) is completed and sent out for public and governmental review later in 2004. Once the plan is reviewed and accepted, projects can then be developed to address these priority issues.

REFERENCES CITED:

Gordon, S. and K.R. Uwate. 2003. 2002 Opinion survey of U.S. Virgin Island commercial fishers and the marine recreational industry. Bureau of Fisheries, Division of Fish and Wildlife, Department of Planning and Natural Resources, U.S. Virgin Islands. 13 pp.

Messineo, J., and K.R. Uwate. 2004. 2003 Opinion Survey of U.S. Virgin Island Recreational Fishing Club Members. Bureau of Fisheries, Division of Fish and Wildlife, Department of Planning and Natural Resources, U.S. Virgin Islands. 14 pp.

Uwate, K.R., W. Tobias, P. Nieves, H. Rivera, W. Ventura, and L. Critchley. 2001. Survey of U.S. Virgin Islands commercial fisher opinions and usage of new national monument areas (Buck Island and south of St. John). Bureau of Fisheries, Division of Fish and Wildlife, Department of Planning and Natural Resources, U.S. Virgin Islands. 13 pp.

ACKNOWLEDGMENTS

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Island	No. of Responses*	Percentage (%)
St. Thomas	15	42.9
St. Croix	7	20.0
St. John	13	37.1
total	35	100.0
*note: Some respondents worked on more than one island. Total number of respondents was 28.		

Agency	No. of Responses	Percentage (%)
DFW	11	39.3
UVI	6	21.4
TOC	1	3.6
TNC	1	3.6
NPS	3	10.7
USFWS	2	7.1
USGS	1	3.6
private consultant	3	10.7
total	28	100.0

	Research*²	Administrative	Resource Management	Other*³
Average	41.3	40.1	35.3	40.0
Minimum % * ⁴	5.0	10.0	2.0	5.0
Maximum % * ⁴	100.0	98.0	80.0	100.0
# responses* ⁵	24	21	18	6
*notes: 1. Sum of percentages for all respondents did not equal 100 since some respondents did not respond to each category of response. 2. Responses of grant writing, data entry, and surveys were lumped into research. 3. Other activities included: education, enforcement, and conservation planning. 4. Minimum and maximum percentage is the range of time (in percent) that a respondent spends on each activity. 5. # responses is the number of respondents that responded to the category of question.				

rating	No. of Responses	Percentage (%)*
Poor	13	50.0
Fair	12	46.2
Good	1	3.8
Excellent	0	0.0
total	26	100.0
*note: Some respondents did not respond to this question. One respondent provided 2 responses.		
If poor =1, fair =2, good = 3, and excellent = 4, then the average rating of the fishing resource = 1.54; with variance = 0.34		

	No. of Responses*	Percentage (%)
overfishing/stock depletion (loss of top predators, inshore depletion, catch of small fish, few fish, too many fishers)	24	32.4
lack of enforcement	16	21.6
habitat loss/destruction (wetlands, juvenile fish habitat)	6	8.1
pollution (non-point source, sedimentation, runoff, land, and marine)	5	6.8
traps (abandoned, destroy habitat, kill little fish)	3	4.1
inappropriate gear types (mesh too small, non selective gear)	3	4.1
landings statistics (documentation poor, data collection poor)	2	2.7
gillnets (no monitoring)	2	2.7
no management	2	2.7
no accountability	2	2.7
illegal fishing	2	2.7
lack of knowledge (fishers don't understand susceptibility of resources, lack knowledge of fishing impacts)	1	1.4
longliners	1	1.4
funding cuts	1	1.4
poor communication between agencies	1	1.4
overdevelopment	1	1.4
global climate change	1	1.4
spearfishing with SCUBA	1	1.4
theft (gear, catch)	1	1.4
total	74	100.0
*note: Some respondents provided multiple responses here.		

Table 6. Respondent Identified Solutions for the Fisheries (Q5)		
	No. of Responses*	Percentage (%)
enforce regulations (better regulations, more regulations, increase fines, enforce coastal development, protect wetlands)	10	18.5
enforcement (more officers, overhaul system, involve federal government)	11	20.4
education (public awareness, fisher education)	4	7.4
gear reduction	3	5.6
closures (random area, seasonal)	3	5.6
limited entry for commercial fishers	3	5.6
management (innovative, better)	3	5.6
ban nets	2	3.7
more research (data)	2	3.7
change political priorities	1	1.9
ban SCUBA commercial harvest	1	1.9
territorial parks	1	1.9
regulate development	1	1.9
limit harvest	1	1.9
more protected areas (wetlands)	1	1.9
ban traps	1	1.9
close spawning aggregation areas seasonally	1	1.9
close areas that benefit VI tourism	1	1.9
establish adequate setbacks	1	1.9
more regulations	1	1.9
better landings (increase landings)	1	1.9
purchase surrounding land (for setbacks)	1	1.9
total	54	100.0
*note: Some respondents provided multiple responses here.		

Table 7. Respondents' Rating of Marine Resources (Q6)		
Rating	No. of Responses	Percentage (%)*
Poor	7	21.9
Fair	18	56.3
Good	7	21.9
Excellent	0	0.0
total	32	100.0
*note: Some respondents provided multiple responses.		
If poor =1, fair =2, good = 3, and excellent = 4, then average rating of the marine resource = 2.00, with variance = 0.45		

Table 8. Respondent Identified Problems with Marine Resources (Q7)		
	No. of Responses*	Percentage (%)
pollution (water quality, non-point source, terrigenous stress on reefs, marine pollution, land based marine pollution, poor waste treatment, sewage, St. Croix large industry)	22	31.9
overfishing	8	11.6
lack of enforcement	8	11.6
overexploitation (too many people, too much development, too many marine businesses, uncontrolled coastal development)	7	10.1
sedimentation (runoff, no enforcement of new construction sediment barriers, land fill)	6	8.7
habitat/ecosystem degradation/destruction	5	7.2
mooring (poor design, mooring unregulated, anchor damage)	3	4.3
illegal fishing (in protected area, or for protected species)	2	2.9
coral reef damage/diseases	1	1.4
jet skis	1	1.4
loss of public beach access on St. Thomas	1	1.4
lack of respect for marine resources	1	1.4
lack of education	1	1.4
global climate change	1	1.4
no management	1	1.4
lack of land/water use plan	1	1.4
total	69	100.0
*note: Some respondents provided multiple responses here.		

Table 9. Respondent Identified Solutions to Marine Resources Problems (Q7)		
	No. of Responses*	Percentage (%)
more enforcement (more funding, more patrols)	10	22.7
education (public awareness, sedimentation, runoff education, research results to fishers)	5	11.4
restrict coastal development (stricter regulations, more regulations, limit close to sensitive areas)	4	9.1
pave roads (improve conditions)	3	6.8
management (innovative, better)	3	6.8
better resource management (actively manage the fisheries)	2	4.5
research	2	4.5
septic tanks (eliminate, proper use)	2	4.5
improve waste management	2	4.5
better landfill requirements (better waste management plans)	1	2.3
more permitting for development	1	2.3
reduce fishing effort	1	2.3
more moorings	1	2.3
regulate large industries (HOVENSA, Cruzan Rum, etc.)	1	2.3
don't allow politics and money to buy way through regulations	1	2.3
territorial parks	1	2.3
better strategic plan and follow it	1	2.3
recycle	1	2.3
storm water management	1	2.3
pump out facilities	1	2.3
total	44	100.0
*note: Some respondents provided multiple responses here.		

Table 10. Respondents' Awareness of FAC (Q8)		
	No. of Responses	Percentage (%)
Aware	26	96.3
Not aware	1	3.7
Total	27	100.0

Table 11. Respondents' Willingness to Join the FAC* (Q8)		
	No. of Responses	Percentage (%)
Willing to Join	4	26.7
No	11	73.3
total	15	100.0
*note: DFW staff are not eligible to become members of the Fisheries Advisory Committee		

Table 12. Respondent Suggestions on Boat Ramps and Jetties (Q9)		
	No. of Responses*	Percentage (%)
St. Thomas		
East end St. Thomas (American Yacht Harbor, or National Park area)	5	20.0
West end St. Thomas	1	4.0
improve Nadir	1	4.0
St. John		
Coral Bay	2	8.0
Cruz Bay	1	4.0
Enighed Pond	1	4.0
St. Croix		
Salt River	2	8.0
Long Point	1	4.0
Turner Hole	1	4.0
Remove Cane Bay (not being used)	1	4.0
Remove Salt River	1	4.0
General		
use qualified contractors/engineers	2	8.0
avoid jetties	2	8.0
build a commercial fishing pier with free docking in exchange for valuable data	1	4.0
jetties will change sand flow/deposition, resulting in more man made structures	1	4.0
install in strategic low impact areas	1	4.0
don't construct new ones, maintain old ones	1	4.0
total	25	100.0
*note: Some respondents provided multiple responses here.		

Table 13. Respondents' Additional Comments (Q10)		
	No. of Responses*	Percentage (%)
education (conservation starts with education, more people with education as part of their job, DFW to hold meeting to present results)	5	17.9
need more enforcement (DEE should work weekends, need more enforcement people)	5	17.9
better relationship between all parties (fishers, DFW, other agencies, communication)	3	10.7
DFW needs to address critical research needs	2	7.1
too many personal agendas on FAC/councils	1	3.6
need more fish houses (Hull Bay, east end St.Thomas, Cruz Bay)	1	3.6
more fisher involvement in decision making	1	3.6
survey inappropriate for gathering management information	1	3.6
allow USVI researchers to review strategic plan	1	3.6
DFW needs help	1	3.6
more bio-statistical data	1	3.6
restructure kingfish tournament regulations (fish needlessly killed)	1	3.6
don't blame no money, solve problems with hard work and commitment	1	3.6
VI Government needs to allocate more funds to DFW	1	3.6
develop better regulations	1	3.6
monofilament line becoming a problem on reefs	1	3.6
don't be terrified of federal resource management agencies doing their jobs	1	3.6
total	28	100.0
*note: Some respondents provided multiple responses here.		

APPENDIX
DIVISION OF FISH & WILDLIFE
OPINION SURVEY OF USVI MARINE RESEARCHERS
MAY 2004

The Division of Fish & Wildlife is seeking your valuable opinions, and insights regarding fisheries and marine resources issues in the U.S. Virgin Islands. Your responses are confidential. They will be compiled together and will provide DFW with insight into the priorities and problems identified by you. This will assist DFW in designing projects to address priority issues.

1.	Where do you work? <input type="checkbox"/> ST. THOMAS <input type="checkbox"/> ST. JOHN <input type="checkbox"/> ST. CROIX
2.	What agency do you work for? <input type="checkbox"/> DFW <input type="checkbox"/> UVI <input type="checkbox"/> TOC <input type="checkbox"/> TNC <input type="checkbox"/> NPS <input type="checkbox"/> USFWS <input type="checkbox"/> USGS <input type="checkbox"/> private consultant <input type="checkbox"/> other (please specify): _____
3.	What percentage of your time is spent on: _____% research _____% office administration _____ % resource management _____ % other: (please specify): _____
4.	How would you rate fishing resources in the U.S. Virgin Islands? POOR FAIR GOOD EXCELLENT
5.	What are the major fisheries problems that you see? How can they be fixed? _____ _____
6.	How would you rate the marine resource conditions in the U.S. Virgin Islands? POOR FAIR GOOD EXCELLENT
7.	What are the major marine resource problems that you see? How can they be fixed? _____ _____
8.	Do you know about the Fisheries Advisory Committee? <input type="checkbox"/> YES <input type="checkbox"/> NO [For non-DFW respondents only] - Would you be interested to volunteer to be on the Fisheries Advisory Committee? <input type="checkbox"/> YES (print name/contact number): _____ <input type="checkbox"/> NO
9.	Do you have any suggestions for new boat ramps and public jetties? _____
10.	Do you have any additional comments? _____ _____ _____

Thank you for taking the time to answer this questionnaire.