Workshop Report: Profiling the St. Thomas Fisheries and Local Stakeholders' Perceptions of Marine Protected Areas

Workshops Conducted By:

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Purpose of the St. Thomas Workshop

Workshops were conducted in St. Thomas from September 12th through the 14th, 2006 to disseminate preliminary information based on more than two years of research that profiled the social, cultural and economic importance of fishing to St. Thomas residents¹. A second component of the research assessed the effectiveness of Marine Protected Areas (MPAs) as perceived by a variety of stakeholders who are directly and indirectly affected by the implementation and existence of MPAs in St. Thomas. These workshops served an education and outreach function of social science research in the U.S. Caribbean, contributed to the rapport-building process with local stakeholders, and provided an opportunity to collect new data and more fully discuss preliminary research findings. Workshops are an important part of socio-cultural research in which additional input and feedback from stakeholders strengthens the analysis for the final report so that management decisions are based on the best available scientific information.

Background

The Magnuson-Stevens Act (MSA), National Environmental Protection Act (NEPA), and Executive Order (EO) 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) require that social impact analyses be conducted when federal agencies propose new regulations. Under National Standard 8 (NS 8) of the MSA, federal agencies are required to consider whether fishing communities are A... substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew, and United States fish processors that are based in such community" (MSA Sec. 3 [16]), with a fishing community specified as ^A...a social or economic group whose members reside in a specific location and share a common dependency on commercial, recreational, or subsistence fishing or on directly related fisheries dependent services and industries (for example, boatyards, ice suppliers, tackle shops)" (63 FR 24235, May 1, 1998). Similarly, EO 12898 (59 FR 7629 [1994]), requires agencies to address environmental justice concerns by identifying federal disproportionately high and adverse human health and environmental effects... on minority populations and low-income populations." Last, NEPA requires that economic and social effects as specific environmental consequences to be examined (40 CFR ' 1508.8).

The development of methodologies to operationally define and identify fishing communities and assess community impacts is a complex undertaking. NS 8 of the MSA, for example, establishes community as a location-based definition, not gear-based or ethnographic-based definition. In addition, NS 8 distinguishes between 'substantially

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dependent' and 'substantially engaged' fishing communities. Substantially dependent implies that loss of access may lead to some change in the character of the community, perhaps a major change, or may even threaten its existence. Substantially engaged, on the other hand, implies participation in a commercial, recreational, or subsistence fishery. Engaged is defined to include harvesting and/or processing activities. In contrast, EO 12898 stresses the need to assess differential impacts on community sub-groups, which opens the door to combine *place* and *non-place* driven categorizations. Anthropological and sociological methods can provide valuable insights about how to better identify and characterize these communities and assess community impacts.

The community profiling research is designed to help make a determination about a community's level of engagement and dependency on the local fisheries. This is a task that measures certain criteria based on both quantitative and qualitative data. And as there appears to be some sort of threshold that must be crossed to be designated a fishing community as opposed to a community engaged in fishing, the threshold is subjective and often must be considered not only at the regional level but at the community level.

The SEFSC Social Science Research Group has been examining the levels of engagement and dependency on local fisheries in various communities throughout the US Caribbean. After having collected and analyzed the data, the next step was to organize the information to determine what it said about the importance of fishing and whether certain areas could potentially be candidate fishing communities. Because St. Thomas is so unique in its size, existence of complex social and economic networks, and historic and contemporary reliance on the local fisheries, the data seemed to suggest the designation of the island rather than individual communities within the island. One way to assist in gathering more data and obtaining feedback about the data already collected is to take the information back to the local stakeholders to discuss the preliminary research findings. This is an important part of the iterative socio-cultural research process that produces a stronger, more accurate final report.

Place and Time

There was fair amount of preparation in order to ensure that local residents as well as government officials were made aware of the workshop. Phone calls and emails were sent to potential participants. Upon arrival on island, trips were made to locations where fishermen sold their fish in order to personally invite them to the workshop and to alleviate any fears they may have had about its purpose. Phone calls were made to local people as a means for assuring other potential participants about the nature of the workshop.

Key personnel were contacted in order to disseminate information by working with the Fishermen's Association. A list was provided by one of the association members and personal phone calls were made to households to inform people of the place, time and content of the workshop. During the process of making contact with key local personnel,

an additional meeting was created for the EPSCoR Program run out of the University of Virgin Islands Marine Affairs Program.

The research findings were presented to people using a Powerpoint presentation for the formal meetings.² (A copy of the presentation was offered to participants if so desired.) During the visit meetings were also held with local stakeholders regarding a variety of issues related to community profiling. It was important to use this time to explain and clarify certain findings. The combination of these efforts was extremely useful for ensuring that a wide audience had access to the research findings and an opportunity to clarify or enhance the final research product by being a part of the iterative research process.

The first meeting was held at the University of the Virgin Islands (UVI) on Tuesday the 12th in the afternoon. This meeting was open to professors and researchers and was intended to demonstrate how the community profiling effort, and to a larger degree social science data, are useful in fishery management and policy. The meeting was well attended as it was initially estimated that only five or 10 people might attend, when in actuality 20 to 25 people attended. The meeting was scheduled to last for an hour, however the discussion was so lively that it lasted for a total of two and a half hours.

A second formal meeting was held later that evening (from 6:30 until 9:00pm) at the Frenchtown Community Center in Frenchtown, St. Thomas. In attendance were members of the St. Thomas Fishermen's Association, St. Thomas fishermen, a staff member of a local Senator, UVI researchers and interested public. There were 25-30 in attendance and the interaction was useful for discussing the research findings. It was especially gratifying to have this amount of interest knowing how difficult it can be to get fishermen and other local residents to attend public meetings.

Outcome of the Workshops

We were very pleased with the feedback from local stakeholders regarding the accuracy of the data. In fact, the majority of the discussion reinforced the preliminary research findings, leading the researchers to conclude that they achieved the research objective and that the sampling and methods appear to have been appropriate. As Julian Magras stated, he was initially very concerned about answering or participating in the research, however, after having seen the workshop presentation he thought that NOAA fisheries had done a first class job at representing the reality of the local fisheries in St Thomas. There were some topics that drew more discussion than others, especially focused on the community designation process and the potential threats to the fishery. The following list of five subcategories related to the two aforementioned topics:

There was some discussion about the following topics:

- 1) what does it mean to have community designation
- 2) how do you get it

² A copy of the Powerpoint presentation is located in Appendix 1

- 3) increased inclusion of quantitative data on value of local fisheries
- 4) why would one designate St. Thomas and not the entire USVI
- 5) what is the role of recreational fisheries

What Does it Mean to be Designated a Fishing Community

Participants were very interested in what it could mean to be designated a fishing community. In the workshop we mentioned to the participants that the community profiling research has only begun nation-wide and that at this time the bounds or parameters of what it means to be designated have not yet been fully explored, tested or defined. However, there was one very clear advantage for participating in the community profiling research process: the knowledge gained throughout this research could be extremely useful for identifying communities that potentially are more impacted by certain kinds of fishery management decisions based on their levels of engagement and dependency on marine resources. Thus this information could be important for mitigating the social and economic impacts on fishing communities and other communities engaged in fishing. However, that having been said we made sure to let people know that beyond the development of a baseline there was no guarantee as to what the designation was to mean or any advantage it might have for fishermen in the future.

How Does a Community Get Designated

Participants were interested in the designation process, and in addressing this issue we learned that there were two real underlying questions: 1) what is the political process for designation; and 2) what are the criteria to get designated. It was explained that designation comes from local political and stakeholder influence, which encourages the Caribbean Fishery Management Council to request designation from the NOAA Fisheries Southeast Regional Office. The criteria to be met in order to be designated have not yet been fully defined. However, 29 indicators are identified in a draft copy of the Socio-Practitioners Manual. These indicators include biological, economic and socio-cultural variables. A copy of the draft list of indicators was handed out during the meetings and at individual field site visits.³

The variables were selected because it was believed that they best served the purpose of indicating whether a community was substantially engaged and/or substantially dependent on fishing, or if it is simply engaged in fishing or not engaged at all. This means that there is some sort of comparative scale or inclusion/exclusion factor. NOAA headquarters has suggested the following definitions to be used when examining dependence and engagement:

Dependence standards compare the information about a community to the same information at a different geographic level, such as the national

³ The list of indicators appears in Appendix 2.

average, or median of all in-state communities, or to a selected threshold such as 15%.

Engagement standards compare the information about a community to information about a particular fishery or sector, such as 12 permit holder residences of 500 total permits issued in this fishery, or the preponderance of vessel services for an area.

At the upper end of each of these scales of measurement is a threshold that when crossed means that a community can be designated a fishing community. The problem is that because of the cultural, social and physical differences that exist throughout the Nation and Territories it is difficult to apply a common standard that adequately addresses this variability. For example who is to say that a 15% threshold for any single variable or indicator for communities in the Caribbean is any better than a 20% or 10% threshold elsewhere? For this reason the process is subjective, even though it attempts to justify itself with some sort of quantitative rationale.

Another important issue relates to the definition of a 'fishing community.' As defined in the Magnuson-Stevens Act (1996), a community is a "place-based" entity. This is an imperfect definition when applied to a number of communities engaged in fishing throughout the continental US. For example, many communities along the Atlantic coast that once resembled the definition of a place-based fishing community, communities with strong commercial and recreational fisheries in terms of the amount of fish landed or value of the catch, have overtime changed in appearance due to forces such as coastal redevelopment and gentrification. In fact, with exception of a few places throughout the US, including but not limited to Hawaii, Alaska, and New England, there are few communities that even appear to fit any placed-based definition. This in large part is due to the complex socio-economic networks that currently exist within and outside of the physical boundaries of many coastal communities that are engaged in fishing. The success of and dependency on the local fisheries is based on much more than the relationships that exist within the local community. For this reason, when we compared the concept of a placed-based definition with certain island locations, such as St. Croix and St. Thomas, we found that these places may more aptly represent the levels of dependency and interconnectedness that best resembles the MSA definition of a fishing community. This having been said, when researchers examine communities throughout the US we need to respect the limitations of the definition in its exclusiveness while at the same time acknowledging those socio-economic networks that are impacted by the success and existence of the local fisheries, be they commercial, recreational, and/or subsistence. In doing so we better understand the socio-economic importance of fishing, and can provide decision makers with a more holistic understanding of the fishery that is not confined by the limitations of the current definition.

For the US Caribbean, primarily St. Croix and St. Thomas, an argument can be made that based on a number of factors one should not consider small communities within the island as fishing communities. Rather, we should focus on the social and economic ties that exist and make the island as a whole worthy of designation. Our research appears to support this very conclusion for these two islands and follows the precedence set in the designation of Guam in its entirety as a fishing community.

One of the strongest justifications for designating the entire island as a fishing community was based on the existence of strong community linkages, meaning the social and economic networks that tie the fisheries to other industries and businesses on the island. Other important factors included the cultural and historic connection to fishing on the island and among its residents (which are not necessarily the same thing), the widely dispersed residential pattern of the fishermen throughout the island, and the fact that almost 100% of the fish caught by island fishermen stays on the Island. This means that the money made from fishing comes from residents and businesses of the Island and then circulates throughout the island's formal and informal economies. Hence, dollars spent on fish are dollars that stay on island and support the local infrastructure and economy.

Increased Inclusion of Quantitative Data

Some fishermen expressed a desire that the final report about fishing communities include a quantitative assessment of the value of the local commercial fisheries. Dr. Stoffle ensured them that this would be addressed in the final report and that the data were available. Another concern was that they would like to see the same kind of quantitative assessment for the recreational fishery. Dr. Stoffle said that he was not sure if similar data for the recreational fishery were available, but that he would look into it and see if some sort of analysis about the value of the recreational fishery could be or has been assessed. The inclusion of quantitative data is perceived among fishermen to be an important part of "telling the story" because the numbers highlight the actual level to which people are engaged in and dependent on fishing on the Island.

Why would one Designate St. Thomas and not the Whole USVI

This was an interesting question posed by a local fisherman. If the islands were to be designated as individual entities, it might highlight the cultural and physical differences associated with the people, the island economies, and the fisheries. For example, tourism plays a much more significant role on St. John and St. Thomas than St. Croix. Even the type of tourism differs greatly from island to island. From a fisheries perspective, these variations exist as well. An example from a fisheries perspective is local preferences for certain species, something that varies from island to island and has an impact on the fish that are targeted and sold. Even though the USVI is classified as one area geographically (see the CIA fact book on the USVI), the results of this research and other research conducted prior, suggest that the islands are very different from one another. Dr. Stoffle suggested that it might be possible to designate the whole USVI as a fishing community, but at this time his data did not build a strong argument for it.

Fear of Future Closures

Like St. Croix fishermen, St. Thomas fishermen are apprehensive of the word closure. Although they are impacted by various closures, our interviews found that the Hind Bank closure appears to impact them the most. The Hind Bank, in their opinion, was supposed to be an experimental closure only lasting for five years and then reassessed. However, they claim that it became a permanent closure without any further discussion. According to multiple interviews, this frustrated local fishermen for a couple of reasons. They said that they had agreed to a closed area much smaller than was implemented, and that they agreed upon a time frame for evaluation but were never consulted about the extension. These frustrations only contribute to a greater distrust among fishermen and, in their opinion, characterize the relationship between the government and local user groups. For this reason, they have been apprehensive about participating in local as well as federal research projects. This is not a unique sentiment among fishermen throughout the region. However research such as the community profiling research is working to break down these barriers as a means of providing better information about the local engagement and dependency of local communities on marine resources. This is something that can assist both the local community as well as the decision makers in terms of understanding the impact of certain types of regulatory actions on the USVI fisheries.

Recreational Fisheries

There is one key component of the fisheries in St. Thomas that differentiates itself from that of the St. Croix fisheries. This is the recreational fisheries. There is a for-hire fishery that is prevalent on the east side of the island, and that caters to day tourists from cruise ships, weekly tourists and tournament fishermen. These three types of clients are important to the local economy because they create local employment opportunities for crew and interject a pulse to the local economy through their purchases from local marinas, hotels, rental houses, restaurants, bars and convenient stores. While difficult to quantify, the recreational fisheries on the east side of the island are certainly present and visible in terms of the services that exist for recreational fishermen.

Red Hook and the Sapphire Beach area certainly are impacted by the existence of these fisheries. As well, there are those who fish out of these areas that are involved in the for hire sector who have commercial licenses. In fact, a for-hire trip can be blended with a commercial trip, especially when pelagic species such as wahoo and dolphin are targeted. In 2005, researchers observed a catch being brought ashore by one of the local for-hire boats. They brought a normal crew with them for the trip. However, three experienced recreational fishermen, there on holiday but friends of the Captain, went along on the 180 mile trip. As the Captain stated, "We were going on this trip and these guys wanted to go target some big fish. Because we knew that these were no rookies we had no problem letting them come with us. We would never take this trip with in experienced tourists because they could either get hurt or get sick and need to come back to the dock." For their efforts, 19 fish landed ranging in estimated weight from 12 to 70 pounds, the experienced recreational fishermen left with two filleted fish of their choice only for the

cost of the fuel expended on the trip, a pre-arranged agreement. The remainder of the fish was sold on the dock, and the rest to local intermediaries and restaurants.

Conclusion

A draft report prepared by contractors from Impact Assessment, Inc., suggested that there are three candidate fishing communities in St. Thomas--northside, southside and eastside. These communities encompass multiple communities and estate lands. Preliminary findings from Dr. Stoffle's research suggest that the data support an island-wide designation as opposed to multiple communities within the island. Again, while it is still unknown what advantage exists for being designated a fishing community, fishermen are in support of pursuing and obtaining the designation. They anticipate that being designated potentially means that they will have a greater and more legitimate voice in As well they perceive that the research will better provide the policy process. information necessary to determine how fishery management decisions may impact their community, and that the impacts on their community will then be more fully understood when considering future management decisions. The research findings suggest that many individuals and families are tied to the success of the local fishery and the protection of marine resources. In an effort to create sustainable management of the local fisheries, the fishermen hope that by participating in the research process their involvement and their reliance on the local fishery will be more fully understood in the policy process.

APPENDIX 1

Profiling Fishing in St. Thomas:

An Examination of the Social, Cultural and Economic Importance of the St. Thomas Fisheries and the Community Designation Process Dr. Brent Stoffle, NOAA Fisheries Dr. Juan Agar, NOAA Fisheries

Research Objectives

- To Profile Fishing in St Thomas and Determine Whether it Meets the Magnuson-Stevens Criteria for Being Designated a Fishing Community
 - To do this must determine the social and economic value of fishing and the fisheries to the Island
- Assess Local Stakeholders Perspectives Regarding the Effectiveness of Local Marine Protected Areas

Preliminary Findings have not been peer reviewed

National Standard 8 and MSA

The term "fishing community" means a community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew and United States fish processors *that are based in such community.*

Preliminary Findings have not

MSA's Definition of Fishing Community

- Substantially Engaged or Dependent in Fishing Activities the difference is that engaged communities are participating in fishing activities, regardless if they are commercial, recreational, or subsistence, and dependent communities are those that when experiencing a change in the fishery or loss of access, it creates a change in the character of the community, perhaps even threatening its very existence
- Problem throughout much of the US is that community is defined as a placed based entity; problem in the USVI?

reliminary Findings have not

What Is the Advantage of Being **Designated a Fishing Community**

If designated it means that increased information about the levels of engagement and dependency of locals on the fisheries has been disseminated to policy decision makers, thus providing people with a better understanding of the potential social and economic impact of certain management decisions.

Is St. Thomas a Fishing Community?

- Cultural Connection to the Sea
- Engagement and Dependency
 - Commercial, Recreational/Charter, Subsistence
 - Employment
- Marine Protected Areas
- Conclusion

Preliminary Findings have not

Methods and Sample

- Field Visits in 2004, 2005 and 2006
- Formal and Informal Interviews
- Conducted Interviews with individuals as well as groups
- 35 In-depth Interviews (IAI), 40 Surveys (NOAA)
- Interviews and Surveys Conducted with Stakeholders
- Stakeholders Include:
 - Commercial Fishermen
 Recreational Fishermen

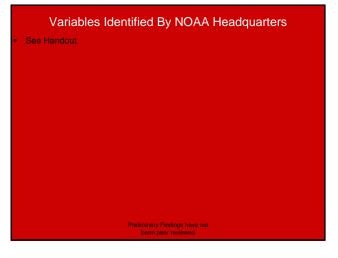
 - Dive Shop Owners/Captains

 - Local Fishery Managers
 Local Fisheries Enforcement Officers
 - National Park Service
 - Tourists/Divers

Preliminary Findings have not

Data

- Both Quantitative and Qualitative
- Primary and Secondary
- Primary Data
- Face to Face Formal and Informal Interviews and Formal Surveys
 - Phone Surveys
 - **Group Interviews**
- Attended Local Meetings, St. Thomas Fishermen's Association
- Secondary
 - Fishery Dependent and Independent Sources
 - Census (USVI Fishermen and U.S.)
 - Websites
 - Preliminary Findings have not
 Cocal Newspapers been peer reviewed



Cultural Connection to the Sea

- Place: Long History of Use and Dependency which predates Slavery and is continuous throughout history
- People: Many current participants in the commercial fishery have a strong cultural connection to fishing, but have only two or three generations of fishing in St. Thomas even though many have a much longer family history of involvement which predates arrival to St. Thomas.

Preliminary Findings have not

History of Fishing

- Slavery
 - Cases of Slaves fishing for subsistence as well as profit
 - Sold fish along with agricultural products to generate income (which they were allowed to keep)
- Post Slavery Era
 - Near Shore collection as a means of subsistence
 - Fish Pot used and tended
 - Seining later became an important method.
- Society was organized in large part around the activities of kin groups cooperating for purposes of subsistence.
 Preliminary Endings have not

French Immigrants and Fishing/Farming

- There is limited information about fishing among French settlers in the Virgin Islands during the late nineteenth century.
- Residents of French descent began to emigrate to St. Thomas from St. Barthelemey (St. Barts) around 1850.
- Shaw (1935) describes populations of French fishing families on St. Thomas.
 - I nomas.
 The majority lived in the more populous port community of what was then called Carenage, now Charlotte Amalia. These fishermen tended to use traps along the south side of the island. The group gradually established a marketplace on the waterfront and resided in a quarter of town called "Cha-Cha."
 - town called "Cha-Cha."
 Another smaller group of French settlers lived on the north side of the island around Hull Bay, where they fished in the Atlantic Ocean with nets and grew fruits and vegetables for purpose of subsistence and limited trade and sale in Charlotte Amalie. Relatively large plots were originally farmed, but these have been subdivided over the years.

reliminary Findings have no



Impact of Tourism in the 1960s

- Big Push for Resorts (much of it from Outside Funding— following Investment By Invitation Strategy Employed Throughout the Caribbean)
- Cruise Industry Became the Busiest Port in the Caribbean
- Direct Air Service From New York
- All this create initial economic boon however many locals did not experience long term benefits (low wage construction and service industry jobs)
- The increase in tourists did however create a greater demand for an already valued local product; fresh fish.

Preliminary Findings have not

Yachts in Town



Development of Viable Commercial Fishery

- The work of Swingle et al. (1969) makes clear that fish traps, or "pots" were the principal gear used by the majority of fishers during post-World War II era, though less than half used pots exclusively.
- St. Thomas fishers reported to be a multi gear fishery; including the use of hand lines and haul seines, though investment costs were cited as obstacles to expanded use of those particular types of gear. Average market prices for fish had increased from \$0.10 per pound in 1930 to \$0.50 in 1968.
- ٠
- The overall volume of landings in the Virgin Islands increased from 616 pounds in 1930 to 1.5 million pounds in 1967.

Contemporary Description of Fisheries

- Commercial
- Recreational/For Hire

Ethnic Diversity

- French Whites
 - numerical majority of Fishermen
- West Indian/Black
- Continental Whites
 - Mostly engaged in Recreational/For hire Fishing

Preliminary Findings have not been peer reviewed

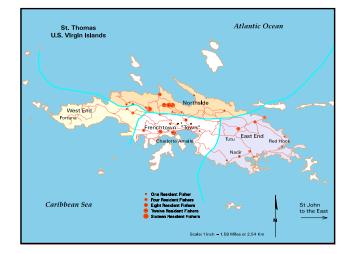
Preliminary Findings have not been peer reviewed

Residence Patterns

- Eastside
 - 41 or 25.7%
- Northside

 53 or 30.6%
- Southside - 53 of 30.6%
- Westside
 - 10 or 5.8%

Preliminary Findings have not been peer reviewed



Multi-species Fishery





Preliminary Findings have not

Species Targeted

- Tuna
- Grouper
- Snapper
- Ole Wive
- Other Reef fish
- Jacks

Preliminary Findings have not been peer reviewed



Multiple Gear/Harvesting Strategies



Preliminary Findings have no been peer reviewed

Gear Utilized

- Fish Pots
- Lobster traps
- Handline/hook and line
- Seine Nets

Preliminary Findings have not been peer reviewed

Crew

- 160 Active Fishermen
- 1.25 Crew Members
- Approx. Total of 360
- Survey identifies that the majority of fishermen perceive it to be difficult to find good crew.

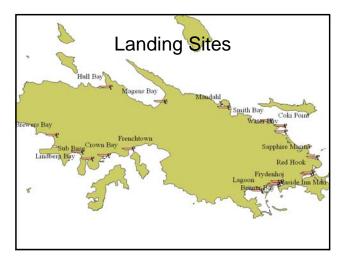


Preliminary Findings have no been peer reviewed

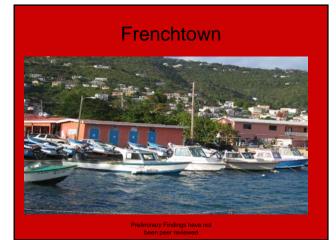
Fish Cleaning Station

- Fish cleaning another wage earning activity
- \$1 per pound
- According to people in Smith Bay, numbers of fish cleaners decreasing





Preliminary Findings have not been neer reviewed











Strength of Fishermen's Association

· An Entity with a Voice

- Politically Motivated and Educated
 Market Square
- Caribbean Council's SFA
- Motivated to Cooperate in and Lead their own
- Scientific Inquiries
- An important source of environmental knowledge for fishery managers
- Important Part of Local Community
 - An association of individuals who provide a low cost/high protein source
 - Providers of food and sustenance in times of crises, i.e. hurricanes

Preliminary Findings have not been peer reviewed

History of Recreational Fishing

- Post World War II with advances in hull materials and design, and ongoing improvements in outboard engines and marine electronics preceded a burgeoning recreational boat fishery. Increasing numbers of citizens were finding the time and wherewithal to afford private recreational vessels, and to engage in fishing for pleasure. For-hire boats became increasingly common, and pelagic species were pursued for enjoyment. This was the case for relatively affluent residents of the Virgin Islands, and the Caribbean in general has achieved a reputation for Continentals seeking good charter and private recreational fishing by boat. The region is renowned for pursuit of blue marlin (USVI DFW 1996)
- The region is renowned for pursuit of blue marlin (USVI DFW 1996), and the charter fleet at Red Hook has served patrons from around the U.S. and abroad for many years.

Preliminary Findings have not been peer reviewed

Offshore For Hire Boat



Recreational Fishing and Tourists

- Cruise Ship Tourists are an important portion of For Hire fishermen clientele
- Other tourists make up the remainder of clientele
- Tournaments bring in large number of people from outside of the Virgin Islands
- A number of local people that fish recreationally, both from boats and from shore

Preliminary Findings have not

Species Targeted

- Blue Marlin
- Wahoo
- Dolphin
- Tuna
- Highend Commercially viable species sold to Restaurants, Tourists, and Locals
- Reef fish for Recreational Spearfishermen

Preliminary Findings have not been peer reviewed

Commercial and Recreational Fisheries Linkages to Local

- Economic Community
 - 100% of Landings Caught are Sold on Island
 - This means that a large portion of the money the made on the sale of fish circulates throughout the Island and supports the islands economy and stability
 - Service Vessels, Service Engine, Purchase Equipment and Fuel,
 - Provides Tourism Industry with High Quality Fresh Seafood
 - Marinas, Grocery Stores, Bars, Restaurants, Hotels Preliminary Findings have not





Community Linkages

Social

- 6000 signatures in support of local fishermen from local community members
 Important form of security in times of crises,
- especially hurricanes
- Local people "love their fish"
- low cost-high protein and fresh
- It's a profession valued not only by the people who do it but others within the community as well
 More than 70% of local fishermen state that they are satisfied with fishing as a career, many of those unsatisfied are dismayed by recent regulatory restrictions

Preliminary Findings have not been peer reviewed

Fun Day 2005



Preliminary Findings have not been peer reviewed

Fun Day 2005



- Support from Local Businesses
- Possibility of building it in as a part of local tourism

Marine Protected Areas

- Hind Bank
- Grammanik Bank
- NPS Parks and Monuments in St. John
- De facto closure because of BVI
- Buck Island

Preliminary Findings have not been peer reviewed

Effectiveness of MPAs

- Local Fishermen overwhelmingly agree that MPAs as a concept are not inherently a bad idea
- They also overwhelmingly agree that they have created economic hardships for fishermen and their families – from displacement and overcrowding
- They believe that the solution to this is to be involved and consulted with at a greater level so that there can be discourse about the kind of MPA and where it should be placed. This would mitigate the negative impacts on fishermen while achieving biological objectives

Preliminary Findings have not

Conclusion

- Certainly appear to be substantially engaged and dependent on the local fisheries, especially if you look at commercial, recreational and subsistence activities/fisheries
 - Other than the individual fishermen, crew and their families, there are a large number of businesses directly and indirectly impacted by success of local fisheries, especially hotels and restaurants

Preliminary Findings have not

Conclusion

- IAI Recommends or suggests that three areas, North, South, and East can be designated.
- I would suggest that the whole island be designated based on the fact that the local fisheries to some degree directly or indirectly affect the entire population
- Either way if designated, the community profiling process can assist fishery managers in understanding how regulatory change might impact local employment, income and/or availability of food

Preliminary Findings have not

Conclusion

- Need to Recognize that there are cultural and physical differences between Islands managed by CFMC
 - Fish Targeted/Preferred, Amount of Bottom Habitat, Ethnically Distinct
- Why? Because regulatory actions could differentially impact local stakeholders

Preliminary Findings have not been peer reviewed

APPENDIX 2

List of Data Types That Will Be Used to Create Indicators for Identifying MSA "Fishing Communities"

Note that not every one will be used in each region because data availability is not uniformly distributed. They will need to compile it for the maximum set for which it is available. See regional notes for what each region currently finds itself able to compile.

Level and Type of Fishery Related Activity

- 1. Pounds of fish landed in the community
- 2. Value of fish landed in the community
- 3. Number of vessels landing fish to that community
- 4. Number of processors in community
- 5. Value of fish processed in the community
- 6. Pounds of fish processed in the community
- 7. Number of dealers and buying stations in community
- 8. Number of permit holders residing in the community
- 9. Number of crew members residing in the community
- 10. Number of fishing vessel owners residing in the community
- 11. Number of fishing vessels homeported in a community
- 12. Number of processing workers based in the community
- 13. Sport fish total catch in the community compared to appropriate standard.
- 14. Number of sportfish trips originating from
- 15. Number of sportfish for-hire businesses (charter boats, party boats, guide boats, head boats) operating or landing in the community
- 16. Number of tackle retailers & bait stores operating in the
- 17. Number of sportfish licenses sold in the community or number of sport fish license holders in the community
- 18. Number of households participating in subsistence harvest or consumption in the community
- 19. Number of subsistence fish landings in the community

Economic Role and Importance

- 20. Amount of base economic activity generated by fishing or directly related fisheries-dependent services
- **21.** Percent of community jobs related to fishing or directly related fisheriesdependent services

Social and Cultural Role and Importance

- 22. History of fishing in the community
- 23. Perceived importance by community members of fishing to the continuity or self-identification of the community