

Marine Recreational Fisheries: What Are They?

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Tourism is a tremendously important and valuable industry in the Gulf of Mexico and Caribbean region. In fact, tourism is listed as one of the two most important industries in 14 of 32 Gulf and Caribbean countries, states and territories researched. It is clear that the "island atmosphere," warm sunny climate and coastal resources of the region are nearly irresistible to tourists who flock to the region to shop, sightsee and participate in numerous marine recreational activities such as boating, sailing, swimming, beaching and diving. Surprisingly, marine recreational fishing (MRF) has not been developed to its potential as a major tourist attraction. There is growing interest in seizing this opportunity to help bolster the economy of the Gulf and Caribbean region.

To be successful, any attempt to develop marine recreational fisheries as a major tourist attraction must be based on a sound understanding of the intricacies of recreational fisheries and must involve a deliberate process designed to achieve locally realistic goals. The purpose of this paper, therefore is to respond to the question—**Marine Recreational Fisheries—What are they?** In doing so, I hope to accomplish two objectives: (1) to generate a basic understanding of marine recreational fisheries as a tourist or outdoor recreation activity and (2) to provide insights to assist in the formulation of development goals and strategies.

MARINE RECREATIONAL FISHERIES DEFINED

What are marine recreational fisheries? The answers one receives to this question are far from universal and reflect numerous levels of experience, knowledge and interest in recreational fishing. For example, some people view marine recreational fishing as a poor man's sport while others believe it is an activity only the rich can enjoy. To most sportsmen, marine recreational fishing means catching fish for fun, but to a charterboat captain it means catching fish for food.

Regardless of personal perspective, most people will agree that fishing for marine species is recreational when pleasure, amusement, relaxation, home consumption and/or subsistence are the primary motivations. The problem is that few people understand and appreciate the difference between marine recreational fishing and marine recreational fisheries. Marine recreational fisheries, as a term, encompasses all that is essential to the recreational fishing activity. As such it has four important dimensions: the resource base, the users, the support industries, and the public and private organizations which affect or control the first three dimensions. Development of marine recreational fisheries as a tourist attraction requires a proper mixing and balancing of resources, users and support industries as well as periodic stimulation and control by public and private organizations. Each of these dimensions warrant further discussion.

THE RESOURCE BASE

The most basic and critical requirement of marine recreational fisheries is an adequate supply of desirable "fish" to catch. The term fish is used broadly and refers to finfish, crustaceans, mollusks and other forms of marine life. Clearly, the type of

fishery resources available and the health and abundance of the various stocks will dictate to a large degree the types of fishing opportunities that can be packaged and promoted to entice tourists to the area in question. Several issues, therefore, are worthy of mention concerning resource requirements for MRF development in the Caribbean.

First, it is imperative that marine recreational fisheries development proceeds under the umbrella of sound fishery conservation and management principles and practices. Special care is needed to ensure that fishery stocks will be protected from overfishing and that water quality and essential fishery habitat will be maintained and enhanced. An effective management capability is also required to avoid or minimize user conflicts that may arise between commercial and recreational fishing groups and between the fishing community and other coastal/marine resource users.

Second, in evaluating fishery resource requirements for marine recreational fisheries development, several interesting characteristics of sport fishermen should be kept in mind. Some fishermen are highly specialized both in terms of their preferences for and ability to catch target species. Other fishermen are total opportunists—they have no species preferences and are happy with almost anything they catch. For example, over 53% of all fishermen fishing in the Gulf of Mexico in 1979 expressed no target species preferences (U.S. Department of Commerce, 1980). Further, there is often a great disparity between species sought (preferred targets) and species caught. Angler avidity and ability play a large role in these phenomena. A careful evaluation of fishery resources in the local area will provide essential information needed in determining whether “specialty” (e.g. billfish, bonefish, etc.) fisheries, target of opportunity fisheries or combinations of both types will offer the greatest potential for development.

Third, assuming that the fishery resources and traditional fisheries of other Caribbean countries are similar to those of Puerto Rico and the U.S. Virgin Islands, marine recreational fishery development efforts should probably steer away from substantially increasing fishing pressure on reef fish and billfish resources. Instead, presently underutilized species should be the prime targets for recreational development. In this respect, pelagic species such as the mackerels, rainbow runner, dolphin, blackfin and yellowfin tuna and wahoo will probably offer the greatest potential. These pelagic species are considered highly desirable by most sport fishermen and coincidentally, they are in greatest abundance in the Caribbean during the winter months at the peak of the tourist season. Technological advances in artificial reefs and fish aggregating devices should help to improve inshore fisheries production and to make pelagic species more accessible to sportsmen.

THE USERS

Recreational fishermen constitute the second important dimension of marine recreational fisheries. There is considerable discussion and debate regarding the definition or description of a recreational fisherman. The truth is that marine recreational fishermen constitute a heterogeneous group which is more easily sub-divided based on attitudes, fishing patterns and preferences. Recognition and understanding of marine recreational fishermen will be particularly critical to the success of fisheries development in the Caribbean where it will be necessary to attract fishermen from other areas, both within and outside of the Caribbean area. A few examples better illustrate this point.

Charter and head boat captains in the United States depend heavily on tourists for the majority of their business income. A survey of fishermen using Texas charter boats was conducted in 1976 by Ditton, et al. (1978) to better understand the characteristics and motivations of these fishermen. Ditton found that participation in char-

ter fishing could be characterized by the relationship of the persons in the charter fishing group, and identified the following five groups: (1) family members, 27%; (2) friends from work, 13%; (3) other friends, 21%; (4) business clients, 11%; and (5) combinations of the above, 28%. The dominance of family members as one single entity is clearly shown by this survey in Texas. Ditton also determined the importance of 13 different motives of this group for going fishing; that are in order of importance: have fun, escape, adventure experience, affiliation, learn about nature, catch fish, outdoor coastal experience, fishing challenge, convenience in fishing, to eat fish, personal achievement, establish/maintain business relationships and status achievement. Sixty three percent of all fishermen said they do not need to catch a lot of fish to be satisfied, but they do want to catch something.

Ditton's work, as well as the work of other dedicated researchers, is helping to foster a greater sensitivity to an understanding of marine recreational fishermen. We are learning that people who fish recreationally in salt water are as diverse a group of animals as are the fish they seek. Their preferences vary greatly with respect to target species, mode of fishing (private boat, charter/head boat, beach/bank or bridges/piers/jetties) area of fishing (estuaries, bays, rivers or offshore) and even the company they keep while fishing. Recognizing and understanding these preferences and attitudes is critical to any marine recreational fisheries development program. Good fishermen have a higher catch rate because they understand the nature of the fish they seek. All of us involved or interested in marine recreational fisheries and tourism development need to understand fishermen and tourists so that we can bring them to gaff more effectively.

THE MRF SUPPORT INDUSTRIES

Marine recreational fishing support industries comprise the third and most frequently misunderstood and ignored dimension of marine recreational fisheries. Saltwater anglers are conspicuous consumers who purchase a wide variety of goods and services in pursuit of their sport. Each year, anglers in the United States spend increasing amounts of money on fishing tackle, bait, ice, fuel, boats, motors, boat trailers, boat accessories, food, lodging, travel, marina services, charter/head boat/guide services, boat insurance, navigation/communication equipment, fishing fees, licenses, fishing publications, beer and numerous other goods and services. The private businesses which manufacture and provide these goods and services are collectively referred to as the marine recreational fishing industry. These businesses employ thousands of people, account for substantial capital expenditures, contribute to the Nation's gross national product and are a major stabilizing force to the economies of many coastal communities.

To put things in perspective, in 1975, saltwater anglers in the United States spent an estimated \$4.5 billion on assorted goods and services exclusive of licenses (U.S. Department of Interior, 1977). This national survey grouped the \$4.5 billion expenditures of the saltwater anglers in five categories: (1) transportation, 35.4%; (2) food, 21.4%; (3) fees, 18.3%; (4) equipment, 16.4%; (5) lodging, 8.5%. Note that food, lodging and transportation accounted for 65% of these expenditures while fees and equipment constituted the remaining 35%. Shifts in these expenditures occur over time, but this breakdown provides an idea of the types and relative magnitudes of expenditures. One would certainly expect that fees, food, lodging and transportation would account for the majority of expenditures that would be made by tourists traveling to Caribbean countries for saltwater fishing and related purposes. Most would probably bring their own gear or rent it on location as opposed to purchasing large quantities of it.

Perhaps the easiest way to identify the needs of fishermen with respect to goods and services is to divide a fishing trip into its three major stages (trip planning-preparation; fishing excursion; post-trip) and to consider needs associated with each stage. Table 1 outlines each stage and associated goods and services needed. Using the list as a guide, an assessment can be made to determine gaps or weak areas in the support industries. Action can then be taken to encourage and assist the business community in filling the gaps.

It is quite possible that such an analysis will reveal a near absence of support industries in some Caribbean areas. This need not be considered an insurmountable problem. Some fishermen, like wilderness campers, prefer primitive settings for their fishing excursions. The "pack-it-in" approach, where the user or an outfitter provides all necessary gear, could be used in less developed areas. Other areas that are more complete in terms of support industries could be promoted to serve the

Table 1. Major stages in a recreational trip and related requirements for goods and services

Trip Stage and Requirements	
PRE TRIP	TRIP
Fishing equipment	Gas, oil (boat, car)
Fishing information (nautical charts, facilities, target species, hotels, restaurants, charter/headboat, guide services)	Fishing access services (boat ramps, marina services, piers, charter/headboat/guide/dive/boat services)
Fishing licenses	Bait, tackle, ice, accessories
Fishing clothes, accessories	Food, lodging
Boat repair, maintenance	Boat repairs, supplies
Boat accessories	
Car repairs, maintenance	POST TRIP
Travel arrangements (airplane, bus)	Supplies and/or services for catch handling, preparation, storage, shipping
Diving equipment	Boat/car maintenance, repair
Car, boat insurance	Fishing equipment replacements
	Transportation home

whims of fishermen who prefer less primitive settings or are less well-equipped in terms of fishing gear.

The important message with respect to the industry dimension of marine recreational fisheries is that an area's ability to provide essential goods and services for fishermen will be critical to the success of any recreational fisheries development effort. Furthermore, it is this service industry that will capture and produce the greatest economic benefits from recreational fisheries for the area in question.

PUBLIC AND PRIVATE ORGANIZATIONS

The fourth and last dimension of marine recreational fisheries includes the numerous public and private organizations that directly or indirectly influence marine

recreational fisheries. Typically, the activities of these organizations affect the fishery resource base, the fishermen and/or the support industries. Examples include resource management agencies, outdoor recreation, tourism and economic development organizations, sport fishing clubs, private and public research institutions and the business community at large.

Collectively, these organizations can make or break any effort to develop marine recreational fisheries and must therefore be factored into the development process in a well reasoned manner. For example, in many areas of the Gulf of Mexico, access to coastal waters and fishery resources is a major limiting factor. Shoreline access is controlled by outdoor recreation development, economic development and land use planning agencies at the city, county, state and national levels. Despite the good intentions of marine fisheries agencies interested in developing recreational fisheries, the objectives can not be reached without the cooperation and support of the other involved agencies. Development initiatives of this type will often require multi-agency task groups.

SUMMARY

The purpose of this paper has been to respond to the question: Marine Recreational Fisheries—What Are They? It has demonstrated that the answer is not simple. Marine recreational fisheries have four major dimensions: the resource base, the users, the industry and public and private organizations. However, like many other complex entities, marine recreational fisheries are not simply the sum of their individual parts or dimensions. Beyond a doubt, all four dimensions must be present to create recreational fisheries that will provide satisfying experiences to the fishermen and to be of great social and economic significance to Caribbean countries. However, like many complex chemical reactions, development of marine recreational fisheries often requires a catalytic agent to start the process. In the United States, we are finding that government is often in the best position to serve as the catalyst, recognizing of course that non-governmental entities may also serve in this catalytic role.

Regardless of who serves as the catalyst, it is extremely clear that to be successful, any effort to develop marine recreational fisheries in the Caribbean will require a well developed plan with locally realistic objectives, a tremendous commitment on the part of many agencies and a bit of good old fashioned enthusiasm.

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