

Paying the Bill for Marine Recreational Fisheries Development

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Tourism can significantly impact a coastal community by bringing new monies into the region, which results in a substantial increase in its economic base (Daniel, 1974). An important facet of the coastal tourism industry is marine recreational fishing (MRF). In pursuit of their sport, fishermen spend a substantial amount of money on fishing tackle, boats and motors, lodging, travel and many other necessary goods and services. In 1980, about \$2.5 billion was spent for fishing and related activities in the United States by more than 12 million saltwater fishermen (U.S. Fish and Wildlife Service, 1982). Approximately \$92.5 million was spent by these fishermen on food and lodging, \$610 million for transportation-related expenses and \$510 million for fishing equipment. During 1980, an average saltwater angler fished 12 days in saltwater, spending about \$100 for the year, or \$16 per fishing day.

Traditionally, studies regarding MRF have focused upon on-site harvest. Data have been generated which enumerate fishermen, their catch and their effort. Unfortunately, very few works have examined the role MRF plays within the overall tourism system. Gunn (1979) has described tourism as a functional system composed of five interrelated components: attractions, services and facilities, transportation, information and tourists.

With regard to MRF development, it is simply not enough to have an attraction (i.e., a fishery resource). For opportunities in marine recreational fishing to exist, all five components of Gunn's system must be present. In particular, development of future MRF opportunities depends upon adequate access, both to the tourism areas and the water, and a support infrastructure which includes all the services and facilities that the fishermen need and desire.

Our host country, the Bahamas, exemplifies the typical Caribbean country and its opportunities for MRF development. Here, the excellent year-round weather provides daily opportunities for visiting anglers to pursue their favorite sport fish. In fact, the Bahamas boast 21 of the 50 recognized marine game fish in the world, including amberjack, barracuda, bonefish, dolphin, Atlantic marlin, sailfish, tarpon and tuna. Almost any method of angling, from fly fishing to deep-sea trolling, can be enjoyed by the avid fisherman (McClane, 1974). With such a valuable resource base to utilize, the Bahamas should develop the necessary support infrastructure to accommodate a viable marine recreational fishing/tourism industry.

A simple strategy for developing MRF opportunities is as follows. First, it is necessary to inventory the fishery resources in an area. Determine which of the resources would be available to marine recreational fishermen. Second, decide which of the available species should be focused upon in developmental and promotional efforts. Then, determine the feasibility of developing the selected species by examining the available socio-economic aspects of the fishery and by determining the cost-effectiveness of the effort. If indeed development of a species/area appears to be feasible, then the third step is to determine what support services and facilities are needed for development of the fishing opportunity. Included here are: adequate access to the area as well as to the water; services such as live bait sales, charter and party boat operations; and facilities, including hotels and motels, campgrounds, tackle shops and restaurants. The fourth step is development of a means to pay for

the research, both biological and socio-economic, necessary to maintain and manage a viable fishery. Funding, the fifth and final step, is imperative to support the development and promotion of the MRF opportunity. It is this last step which is examined in this paper. A general overview of the methods which have been employed to pay for marine fishery development programs in the United States is provided. Subsequently, innovative and untried methods will be suggested.

The federal government of the United States has been involved in the development of recreational fishing opportunities through several programs. In particular, the Land and Water Conservation Fund and the Dingell-Johnson Program have aided many sectors of the industry in acquiring lands, constructing facilities and providing services.

In 1964, the Congress enacted the Land and Water Conservation Fund Act [Public Law (PL) 88-578] for the purpose of "preserving, developing and assuring accessibility to all citizens...such quality and quantity of outdoor recreation resources as may be available and are necessary and desirable." The fund, as originally created, was to be comprised of receipts from user fees on federal lands, proceeds from the disposal of surplus federal property and the federal motorboat fuels tax. In 1968, an amendment to the Act called for the addition of unappropriated Treasury funds and miscellaneous receipts under the Outer Continental Shelf Lands Act to be appropriated in order that the annual income be at least \$250 million. In 1971, this minimum was raised to \$300 million and in 1978 the fund was authorized at its highest level, \$900 million.

Sixty percent of the fund's annual appropriation has been given to the individual states for "planning, acquisition, and development of needed land and water areas and facilities." The remaining 40% has gone to the federal government for "acquisition and development of certain lands." Before a state could receive its portion of the fund, approval of a comprehensive statewide outdoor recreation plan was required.

Recently, the Congress has seen fit not to appropriate any monies for the Land and Water Conservation Fund (LAWCON). Receipts from the leasing of Outer Continental Shelf (OCS) tracts have been the primary sources of revenue for the fund in recent years. In fiscal year (FY) 1981, \$900 million was paid into the fund, including a \$840 million contribution from OCS receipts (U.S. Congress, 1982). Approximately \$150 million was appropriated for federal projects. The remaining \$750 million, as well as the \$900 million authorized for FY 1982, await appropriation. The Reagan administration has opted to place these monies in the general treasury rather than into the fund.

When receipts from OCS activities were channeled into LAWCON, it was based on the philosophy that the revenues generated from the exploitation of nonrenewable resources should be used to ensure the long-term productivity of renewable natural resources. This philosophy is reaffirmed in legislation presently before the United States Congress. On 29 September 1982 the House of Representatives passed H.R. 5543, which calls for the establishment of an Ocean and Coastal Resources Management and Development Fund. The monies derived from the leasing of OCS tracts, up to \$300 million annually, would be distributed in the form of block grants to coastal states for coastal zone management activities, coastal energy impact programs, living marine resource programs and natural resources enhancement and management. Ten to 20% of the entire fund would support the National Sea Grant College Program. Of importance to MRF development, this Act proposes that a portion of each state's block grants be used for fishery programs, including those created by the Anadromous Fish Conservation Act, the Commercial Fisheries Research and Development Act, and various interstate fisheries programs such as the Interstate Fisheries Management Program and the Marine Fisheries Commissions.

The Senate has similar legislation pending before it. However, the Reagan administration has gone on record opposing any such legislation for several reasons and would probably veto it. Primarily, they believe that the earmarking of funds is inconsistent with sound budgetary principles and exacerbates the problem of budgetary control.

Perhaps the most significant federal funding mechanism for the development of recreational fishing opportunities has been the Federal Aid to Fish Restoration Act of 1950 (PL 81-681). Better known as the Dingell-Johnson Act, or simply D-J, this legislation has provided an average of \$11.3 million per year, with a record high of \$30,950,000 in FY 1981, to individual states for the purposes of developing and improving fisheries management techniques, protecting aquatic habitat, providing public access to fishing waters and constructing new fishing lakes.

The funds for this program result from a 10% excise tax on fishing rods, creels, reels, artificial lures, baits and flies which is imposed at the manufacturer's or importer's level. The monies are apportioned to the states on the basis of a formula which incorporates total land and water area and the number of sport fishing licenses issued. Each state receives at least 1% of the annual collections and no more than 5%. The administrative costs incurred by the U.S. Fish and Wildlife Service can be no more than 8% of the total collection. The funds are distributed to the states on a 3-to-1 matching basis, three federal dollars for every one state dollar.

The Dingell-Johnson program operates on the philosophy that those who use a resource should pay for the maintenance, management and development of that resource. Therefore, fishermen contribute to the protection and development of the fishery resource and to the development of facilities such as boat launching ramps.

As mentioned earlier, apportionment of the Dingell-Johnson funds is partially determined by the number of licensed recreational fishermen in a state. Monies from the sale of these licenses are also used to aid the fishery resource and the overall quality of the fishing experience. Several states have specific use stamps, such as the California Striped Bass Stamp, which license fishermen to pursue certain species. The monies realized from these stamps are designated specifically for the management and enhancement of the target species.

Individual states also realize funds for the maintenance and construction of facilities such as boat launching ramps from the fees charged for the use of these facilities. Many public recreation facilities charge a minimal fee to enter the area or to launch a boat. These funds are generally used to cover administrative costs of the facility. Excess monies can be used to acquire new facilities or to expand existing ones.

Some states have benefited from allocations of general taxation receipts designated to fund fish and wildlife programs. However, each year the proportion of these monies directly aiding recreation and wildlife programs has been steadily decreasing. Therefore, many states, and some local governments, have raised funds through special taxes. For example, Missouri added $\frac{1}{8}$ cent to its state sales tax to fund fish and wildlife activities, including management, restoration, regulation and the acquisition of property. The State of Washington directs revenues from the sale of personalized automobile license plates to wildlife resource programs.

In addition to the federal tax on marine fuels, many states have placed their own tax on these products. In 1979, this tax generated about \$310,000 for Indiana and \$615,000 for South Carolina. Louisiana has a severance tax on natural resource products, including oysters, shrimp, oyster shells, clam shells and fur. Recently, these taxes totaled about \$2.7 million in one year (Wildlife Conservation Fund of America, 1980).

The sale of public or municipal bonds is yet another alternative available to state

and local agencies for the funding of recreational fishing development. The State of Washington's Department of Fisheries recently used funds from their Capital Outdoor Recreation Budget to construct several recreation and habitat enhancement projects, including the Edmonds Public Fishing Pier in Puget Sound. The monies for this budgetary fund accrue from a matching grant fund: 50% state funds from the sale of voter-approved Referendum Bonds for recreation, 50% federal funds from the Land and Water Conservation Fund. The monies were used in construction of both the pier and a series of artificial reefs located near the pier to increase the production of resident fish species and aid in the aggregation of transient species (Buckley, 1982).

Two federal programs which have aided the commercial fishing industry in the past show promise for MRF development in the future. Recently, monies from both the Saltonstall-Kennedy Grant Program and the Fishing Vessel Obligation Guarantee Program have aided in the development of MRF activities and facilities.

Monies for Saltonstall-Kennedy (S-K) grants accrue from an import duty on edible fish products. Thirty percent of these monies are to be spent on marine fishery development programs. Traditionally, S-K monies have financed commercial fishing programs. Today, the program has been opened up to the recreational fishing community as well. S-K monies have sponsored studies which examined the productivity of artificial reefs, and presently these monies are supporting the Sport Fishing Institute's effort to analyze the development opportunities in marine recreational fishing.

The Fishing Vessel Obligation Guarantee Program (FVOG) has normally supported construction of commercial fishing vessels and commercial sport fishing vessels such as party boats. However, the Southwest Region of the National Marine Fisheries Service recently extended the application of this program to the placement of two sport fishing barges. Two stationary fishing platforms or barges were anchored in southern California waters. Both barges are serviced by hourly boat from shore-based piers. A basic admission fee is charged by the private owners, which includes parking, the shuttle to the barge, bait and the use of restroom and galley facilities.

The above funding mechanisms are the major ones which have been used in the United States to fund recreational development programs. There are some other methods which have not been mentioned and a few which are untried. These latter techniques will be discussed with regard to MRF development in the Caribbean.

The need for a system of marine recreational fishing licenses exists in the Caribbean countries. Substantial revenue could be generated from the sale of licenses to visiting anglers. These monies could in turn be used to build and maintain the facilities needed to support an MRF industry. Specifically, these monies could be used for marina development and the services which marinas provide. Boat launching ramps could be built as well; however, fishing in the Caribbean is not generally a trailerable-boat fishery. Most anglers are visitors from foreign countries who have not brought a boat with them. And, as many of the species sought in the Caribbean waters are found offshore, it is necessary to have relatively large boats to fish from. Thus, visiting anglers are more likely to charter a boat and crew that can provide the transportation and fishing experience to ensure a successful trip.

Possibly some of the monies resulting from license sales could be used to promote the recreational fishing opportunities available to potential foreign visitors. Taxes, similar to license fees, could fund promotional efforts as well. Many countries impose a room tax on every hotel and motel room. These revenues are specifically collected to aid the tourism industry, generally in the form of promotion.

Promotion of fishing opportunities is the one area where a governmental entity

can aid the entire tourism industry, instead of singling out a certain sector such as marinas. In this way, all tourism-related businesses will benefit and no one can argue that the government is showing favoritism to a particular sector of the industry.

To focus attention on the Bahamas' recreational fishery resources, the government should explore sponsoring major international fishing tournaments. Short-duration events such as fishing tournaments can produce a significant positive economic impact. Tournaments also serve to attract fishermen to an area that they may not ordinarily visit. And once the fishermen visit an area, there is a good chance that they will return for future visits.

Countries with a viable commercial fishing industry might explore the possibility of taxing or licensing their commercial fishermen. A portion of the funds collected could then be used to protect and enhance the common fishery resource, which would aid both the commercial and recreational fishing industries. In areas of conflict between recreational and commercial fishing, high license fees or taxes may result in reduced entry into the commercial fishing industry. In turn, a larger portion of the fishery resources could then be allocated to recreational fishermen.

To increase MRF activities in a country, the support infrastructure must provide the services and facilities desired by recreational fishermen. At present, fishing in the Caribbean consists primarily of trophy fishing. Very little of the recreational catch is eaten, for a number of reasons. As most visitors to the Caribbean countries are a long way from home, few, if any, can transport their catch back with them. Also, there may be restrictive export-import regulations regarding the international transportation of fishery products. Export laws of the Caribbean countries or import laws of the visitors' home countries may prohibit the movement of recreationally caught fish. Thus, an area for development within the MRF support infrastructure is the provision of restaurants, particularly those associated with hotels, which will prepare the anglers' catch in order that they may consume it during their visit. Most anglers will be staying in a hotel or motel and therefore will have little access to kitchen facilities. If a restaurant would cook the fish for the fishermen, a small but important service would be provided.

There are other ideas which should be explored by the Caribbean countries regarding MRF development. Unfortunately, it is beyond the scope of this paper to explore them all. Hopefully, this overview of funding mechanisms which have been successful in the United States provides some insight into possibilities which exist for the Caribbean countries.

One last, but important, point remains to be made. Any country intent on developing its fishery resources should allocate a portion of the monies it derives from development activities to fund data collection. Statistics regarding the biological, social and economic aspects of the recreational fishery should be collected from the earliest possible date. Data such as these will provide necessary information to aid in the protection, enhancement and development of the recreational fishery.

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