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GUAM'S SPORT FISHING HISTORY, EVOLUTION AND PROGRESS

By

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Guam's Sport Fishing History, Evolution and Progress **By Gerald W. Davis¹ and Raymond Clarke²**

How do you determine when sportfishing began and subsistence fishing stopped? The Pacific islands are rich with fishing history. Anyone who has tried to use a cast net (called a *talaya* in Guam) or has gone free-dive spearfishing knows each method requires considerable patience and skill. Typically, these forms of fishing would be considered subsistence by both Pacific Islanders and western on lookers. However, if one considers it is common for today's typical sport fishing angler to pursue a selected species of fish and keep a few if caught to consume—the similarities are striking—both require specialized equipment, skill and for the most part, some degree of enthusiasm. Free-diving spearfishermen and cast netters have long been judged by their ability to capture highly prized species and therefore in their own way could be considered among the earliest of all sport fishermen.

Culturally, all tropical Pacific islands have to some degree subsistence based fisheries and therefore the idea of catching fish for “fun” is typically not practiced. There may be significant financial benefits in the non-consumptive approach to developing sport fishing industries but certain practices seen a standard for sport fishermen many not be readily accepted in Pacific Island settings. Yet many of the standard western methods or procedures may not be essential to the development of this type of fishery or sector. Both practices (traditional or subsistence or sport fishing as practiced in western societies) can co-exist and be mutually beneficial. For instance the cultural and traditional knowledge associated with harvest of food fish (e.g., species availability, behavior, tides, food, habitat, danger) can be an invaluable attribute for the development of a cadre of local tour guides. Likewise, developing specific areas for sport fishing may offer significant economic opportunities as well as enhance fishery management options. But there may also be some conflicts with other resource users- all these factors require some degree of consideration in attempt to develop sport fishing activities. What is essential is that the local community is fully involved in the plans or optimally provides the impetus for development.

Sport fishing as an open ocean fishery appeared some time in the 1950s using small outboard vessels, 20 ft. in length or smaller in pursuit of tuna, marlin, wahoo, and mahimahi. This is not to say that there were not occasional attempts to sport fish both in boats well before this time but was not common until this time. The early weapons of choice were conventional reels spooled with nylon or monofilament line mounted on stiff cane poles. Artificial lures (lead heads with feathers) were trolled along deep drop-offs or around offshore banks. This fishery originally started as a subsistence/sport activity but soon changed more toward commercial harvest when it was realized that it was easier to obtain large volumes of highly marketable fish. This fishery remained pretty much the same until the mid-1970s until Guam hosted its first fishing derby. The derby idea became popular because it provided a mechanism for business to attract customers and it was good for fishing because it brought fishermen together in a competitive spirit.

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In the mid-1970s shoreline spin casting started to appear on Guam. However, during this time surround netting, cast netting and spearfishing represented much higher activity levels. From this point forward the rod and reel participation grew annually until it passed all other methods in the mid 1980s and now always accounts for more than 50% of the island-wide effort and catch in the non-boat based coastal fishery. As in every recreational/commercial fishery the availability of gear has improved and this made rod and reel fishing easier and more effective.

Sportfishing on Guam is still a relatively new activity and because fishing is considered a food gathering activity for most islanders. Some aspects of the discipline are still considered foreign. For example the concept of catch and release has not been fully accepted. In many ways the sport fishing practiced on Guam is not comparable to sportfishing as it is traditionally defined by westerners. Therefore the development of sport fishing as either a practice by locals or an activity in which locals act as guides may require several conditions that are considered as "given factors" in modern western societies. These would include: the availability of appropriate gear and equipment, and the occurrence of sought after species and finally a sport fishing ethic—which may vary depending on the particular setting. However, the development of sport fishing industries or sectors need not conform to the standards imposed externally.

Guam's coastal fisheries have been declining at a rapid rate over the last 15 years (1983-1998). There are many indicators of this trend. Sport fishing data collected by creel census can be used to demonstrate this overall patterns. For instance the sport fishing catch per unit of effort has shows a decline of 70% during this periods. Interestingly fishing effort has remained relatively constant. Yet there have been significant shifts in actual fishing methods. In addition to the overall general decline, selected highly prized species have nearly disappeared from the harvest and many have been overfished. It has been estimated that this decline has resulted in up to 90% reductions in spawning potential for some species.

Fishing and its impact on the marine environment has been in part attributed to the decline of the overall coastal fish populations. A tremendous demand for fish created by boom economy of the mid 1980s was precipitated by a sudden increase in Japanese tourists coming to Guam. This resulted in a significant number of fishermen who normally fished only for home consumption to realize they could make more money fishing the reefs and selling their catch than they could at their regular day-jobs. This caused fishermen to be less selective of the species, size and volume of fish landed. Spearfishing was the primary method used for harvest during this period. Initially, snorkel spearfishermen fishing at night with underwater flashlights targeted sleeping or less active fish (e.g. parrot fish). In a relatively short period of time, catch rates dropped and spearfishermen resorted to using SCUBA gear at night. This trend continues and the activities continue to move to more remote areas and into deeper waters. The second major impact has been the use of gill nets. They are used both in fine and large meshes up to 1000 feet in length on Guam. This method of fishing tends to be indiscriminate, catching everything a portion of which is not kept by the fisherman but still lost to the ecosystem.

Yet it must be noted that these changes—typically declines—are the result of a wide variety of factors. Declines in the relative abundance of near shore species targeted by fishermen—sport, subsistence or commercial are believed to be just one of the root causes for these declines. There are a host of non-fishing related impacts that are believed to be responsible for this overall decline. While fishing, and in part sport fishing, has certainly contributed to resource

decline of many coastal fish species, the likes of storm drainage high in petroleum and freshwater, sewage outfalls, pesticides, herbicides, and sedimentation have all caused large scale habitat degradation or loss. Additionally, research at the University of Guam has demonstrated that all of these contaminants, particularly the use of land based pesticides and herbicides, can reduce or stop reproduction of fish, corals and other invertebrates. Field surveys have found there has been an island-wide decline in coral cover-- in many areas with 40 to 60% less coral than only 15 years ago. There has also been observation of very low levels of coral recruitment during this same time period. The habitat loss is further compounded by the significant problems caused by personnel watercraft (jetskis) that are being operated in shallow reef flat areas. The sedimentation and petroleum products produced by these vessels has caused the loss of habitat. Other areas have been negatively impacted by high recreational use by beach walking, snorkeling, or diving--activities typically considered rather benign.

In the early 1980s tourism had grown on Guam to the point that charter fishing began to be a viable marine based recreational activity. With increased demand local entrepreneurs responded and developed a local sport fishing charter boat industry. These vessels were generally larger, 27 ft. range and concentrated on trolling. By the late 1980s the charter industry had grown to a fleet of approximately 20 vessels, taking advantage of the ever increasing number of Japanese tourist coming to Guam. This success also marked a shift in thinking for many local fishermen, who may of taken the occasional paying customer out fishing on a weekend. A significant number of the charter operators were once full-time commercial fishermen. The shift from what once a standard commercial fishing operation shifted to a service oriented industry based on the marine environment-- this represented a sound economic decision given the strength of the economy in Guam and the increasing demands for marine based recreational activities by the growing tourist industry. The sport charter sector or options represented equivalent or greater income but a significantly less risk. It was certainly less physically demanding than commercial trolling.

On Guam the success of the sport charter business in part relies on the proximity of fishing grounds and the high probability of catching small Pacific blue marlin, mahi-mahi, small yellowfin, skipjack (*bonita*) or wahoo. Although these fish are small, the typical clientele are not looking for trophy fish but rather the prestige of chartering a large vessel and hoping to have some fresh sashimi. This industry continues to grow and now has expanded to bottomfishing as an alternative to pelagic trolling. The bottomfishing experience is also not focused on catching a lot of large fish but rather is using light spinning gear to catch small reef fish. Guam's sport charter industry would not normally fall in to the true sportfishing category but more reasonably be considered recreational fishing since the anglers are not necessarily there for the fight but more the opportunity.

The concept of sportfishing in the Pacific Islands is very different from the conventional forms practiced in the United States. The focus on sportfishing tournaments, although valuable to business and to fishermen, in the big scheme of things represents a small segment of the sportfishing effort within Guam's community. Tournaments can provide important biological and effort data for fisheries management purposes but it is important that the data is scrutinized carefully if compared or expanded. For instance on Guam we have found that confounding factors such as changes in fishing strategy and catchability during tournaments makes gathering the tournament data a lower priority than conducting random survey throughout the year. The Guam Department of Agriculture, Division of Aquatic and Wildlife Resources has conducted recreational coastal fishery effort and harvest surveys, typically

creel census, for 20 years. This information reports effort by gear type and harvest for the entire island. While this data collection program has proven relatively effective at monitoring the local fisheries it come at a cost of significant manpower and financial investment annually. While the data collected has been very valuable in managing local fisheries there is the constant need to ensure that biologists and managers understand the variables and confounding factors before falsely comparing dissimilar data.

Sportfishing has a bright future in Guam but only if community awareness, significant water quality improvement and the use of special management areas are employed. There is a growing consensus that coral reef and open ocean resources are limited. Most Pacific Island areas, including Guam have experienced at varying levels the negative impacts of pollution and over-exploitation. We recommend that other Pacific Islands interested in developing sport fisheries focus management efforts on special management areas that employ limited takes or catch and release fishing, with a concerted effort at preserving traditional or cultural activities. To take full advantage of this unique opportunity it is critical that the managers and developers consider the culture and the resource together. Community involvement from the beginning is considered a fundamental determinant of success.

Timetable

The attached table outlines the schedule of meetings and events in the lead up to the Special Session.

Annex 1

TIMETABLE OF PREPARATIONS FOR 1999 UNGASS ON SIDS

DATE	EVENT	RESPONSIBLE AGENCY	OUTPUT
1998 14-18 September	SPREP Meeting	SPREP	<ul style="list-style-type: none"> agreed process environment priorities discussed
... September	SOPAC Governing Council	SOPAC	<ul style="list-style-type: none"> agreed process freshwater, energy priorities
... September	CRGA	SPC	<ul style="list-style-type: none"> agreed process fisheries, land priorities discussed
... 10-13 November	Workshop linking GEOII and preparations for CSD and UNGASS (Samoa)	<ul style="list-style-type: none"> SPREP/UNEP to coordinate inputs from countries, SPOCC agencies, and UNDP (particularly on project profiles) 	<ul style="list-style-type: none"> progress on implementation of BPoA priorities for the 1999 Donor Roundtable, CSD and Special Session input relevant to other CSD agenda items
... 15-16 November	Environment Ministers Roundtable (Samoa)	<ul style="list-style-type: none"> SPREP to coordinate inputs from other SPOCC agencies 	<ul style="list-style-type: none"> political endorsement of priorities at regional level
1999			
... 1-4 February	Inter-regional Meeting and IGO Secretariat Meeting (Samoa)	AOSIS and relevant Secretariats	AOSIS priorities for: <ul style="list-style-type: none"> Donor Roundtable CSD and Special Session

... 24-26 February	Donor Roundtable (New York)	Forum Secretariat to coordinate input from SPREP, and UNDP	<ul style="list-style-type: none"> • agreed portfolio of projects • investment priorities
... 1-5 March	CSD Working Group on Oceans and SIDS (New York)	SPREP and Forum Secretariat to coordinate	<ul style="list-style-type: none"> • draft decisions for CSD
... 19-30 April	CSD - 7th Session	SPREP and Forsec to coordinate	<ul style="list-style-type: none"> • draft decisions for UNGA Special Session
... May-June	Consultations as needed	All countries	<ul style="list-style-type: none"> • removal of obstacles in negotiations • further elaboration of the region's preferred outputs for UNGASS
... July	Ministerial/private sector round table on tourism and environment	TCSP/SPREP/ACOPS	<ul style="list-style-type: none"> • platform for discussion of the region's priorities for tourism and the environment at UNGASS
... August	Forum	Forsec	<ul style="list-style-type: none"> • political endorsement of final positions
... September	UNGASS on SIDS	Forsec and SPREP to coordinate TSCP/CTO Cultural Event	<ul style="list-style-type: none"> • agenda for implementation • political declaration • tourism/environment/private sector initiative • increased understanding of island priorities and cultures