

PACIFIC ISLANDS FISHERIES SCIENCE CENTER



Traditional Fishing Patterns in the Marianas Trench Marine National Monument

By

Dawn Kotowicz and Laurie Richmond

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Traditional Fishing Patterns in the
Marianas Trench Marine National Monument

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ABSTRACT

This research documents past and contemporary fishing patterns in the three northernmost islands of the Mariana Island chain—Uracas (also known as Farallon de Pajaros), Maug, and Asuncion—the area that is now called the Islands Unit of the Marianas Trench Marine National Monument (Monument). This report describes traditional indigenous use of and fishing in the waters and on the islands located within the Islands Unit. The purpose of this study is to provide managers and regulators with information about these practices as they design guidelines for traditional indigenous fishing in the Islands Unit of the Monument. This research aims to document trips to the waters and lands of the Islands Unit; describe perspectives and experiences of the participants on these trips; and explore the historical and cultural importance of the northern islands¹, especially the Islands Unit, to residents of the Commonwealth of the Northern Mariana Islands (CNMI) and Guam.

Through oral histories, researchers documented accounts of 129 trips to the waters of the Islands Unit from 1939 to 2009, an average of 3.8 trips per year. The primary reasons for these trips included: fishing, scientific research, bringing supplies, visiting and exploring, tourism charters, and charter trips for purposes other than tourism. Regardless of the stated purpose of the trip, these infrequent trips often served multiple purposes for the benefit of community members in addition to the participants. For example, while on many trips fishing operations intended to make a profit and sell a large portion of their fish, nearly all upheld a policy of giving a good deal of the catch away to family, friends and the local community. Additionally, accounts of these trips indicate there were motivations beyond profit for maintaining fishing operations in the northern islands since many of the fishing ventures continued to operate even when they were not profitable. Discussions with trip participants suggest these trips provided an opportunity to maintain an important connection between communities in the more populated, southern islands (i.e., Saipan, Tinian, Rota and Guam) and those of the northern islands (the islands of Pagan and northward) via trade of food and supplies. Fish from the waters of the northern islands were found to serve several purposes for the trip participants. Portions of the catch were sold to pay for trip costs, bartered, given to crew members, shared with family and community members, or consumed.

This research provides evidence of formal and informal exchange of marine resources from the northern islands' waters which provide a food source, maintain a culturally important connection and allow for monetary transactions independent of commercial markets to the communities where these fishermen reside in the CNMI and Guam. Residents of the Marianas assign cultural importance and non-use values to the waters and lands of the northern islands which can be at least partially attributed to their continued visits to this area and to the exchange of marine resources between the southern and northern Mariana Islands. Access to the Islands Unit has served as a significant link to this historically and culturally important place for residents of

¹ Throughout this report, the term 'northern islands' refers to all islands north of Saipan in the Mariana Archipelago to distinguish this region from the more heavily populated southern islands (i.e., Saipan, Tinian, Rota, and Guam).

CNMI and Guam. The importance of this area should be considered when regulating access and traditional indigenous fishing in the Islands Unit of the Monument.

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I. INTRODUCTION

This report describes traditional indigenous use and fishing in the islands and waters of the three northernmost islands of the Mariana Island chain—Uracas (also known as Farallon de Pajaros), Maug, and Asuncion—the area that is now called the Islands Unit of the Marianas Trench Marine National Monument (Monument). This study arose from a need to document past and contemporary fishing patterns to inform managers and regulators as they design guidelines for traditional indigenous fishing in the Islands Unit of the Monument.

On January 16, 2009, U.S. Presidential Proclamation 8335 (Proclamation) established the Marianas Trench Marine National Monument. The proclamation directs:

[T]he Secretaries of the Interior and Commerce shall take appropriate action pursuant to the respective authorities under the Antiquities Act and the Magnuson-Stevens Fishery Conservation and Management Act, and such other authorities may be available to implement this proclamation to regulate fisheries, and to ensure proper care and management of the monument (Proclamation 8335, 2009).

Authority for regulation of fishing and management of fishery resources is further described in the proclamation:

[T]he Secretary of Commerce shall have the primary management responsibility, in consultation with the Secretary of the Interior, with respect to fishery-related activities regulated pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801 *et seq.*) and any other applicable authorities (Proclamation 8335, 2009).

The Monument consists of three units—the Trench, Volcanic, and Islands Units. The Trench and Volcanic Units include only the submerged lands within the geographic boundaries of those units; the waters are excluded. However, in the Islands Unit, the Monument includes the submerged lands and the water column in waters out to 50 nautical miles surrounding the three northernmost islands of the Mariana Island chain – Uracas, Maug, and Asuncion (Fig. 1).

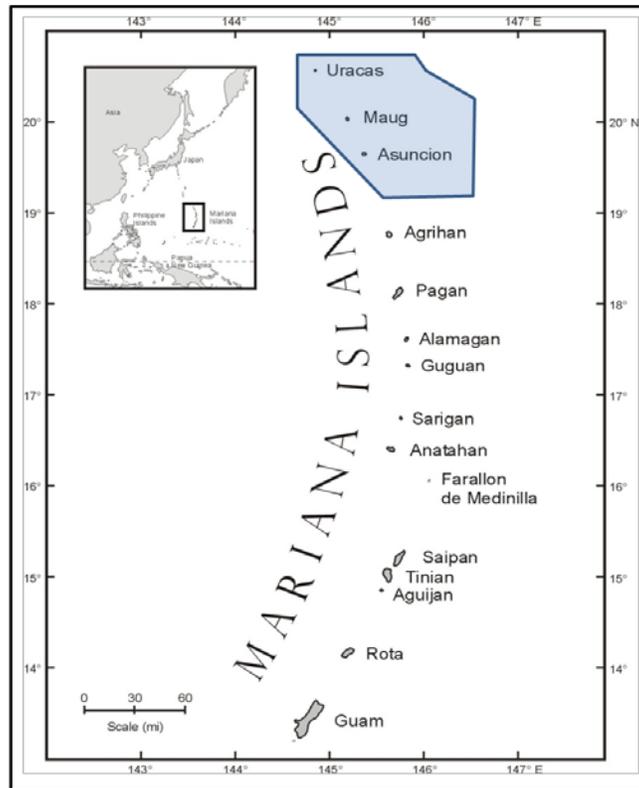


Figure 1.--Mariana Islands map with Islands Unit waters denoted² (Adapted from Allen and Amesbury 2011, credited to Barry Smith.).

The Islands Unit, therefore, is the only part of the Monument where fisheries are regulated. The proclamation provides guidelines for regulation of fishing and management of fishery resources:

Within the Islands Unit of the monument, the Secretary of Commerce shall prohibit commercial fishing. Subject to such terms and conditions as the Secretary of Commerce deems necessary for the care and management of the objects of the Islands Unit, the Secretary...shall ensure that sustenance, recreational, and traditional indigenous fishing shall be managed as a sustainable activity consistent with other applicable law and after due consideration with respect to traditional indigenous fishing of any determination by the Government of the Commonwealth of the Northern Mariana Islands (Proclamation 8335, 2009).

Since pre-history, indigenous groups of Chamorro and Carolinian descent have sailed throughout the Mariana Archipelago to fish in its waters and hunt on its islands. People living in the Commonwealth of the Northern Mariana Islands (CNMI) and Guam express feelings of ownership and connection to the entire island chain from Guam in the south through Uracas in

² Note that Islands Unit boundaries are approximate.

the north. Although the most recent settlement on Asuncion was disbanded in 1945 when the U.S. government brought all Carolinian and Chamorro residents to Saipan, there are some former residents who are still living and who remember living on Asuncion to be a very different way of life. Since then, fishermen, scientists and explorers have traveled to the northernmost islands—Uracas, Maug, and Asuncion—and returned with resources and descriptions of these distant, yet historically significant places. The tales and fish brought back from these more recent visits continue to provide residents living in Saipan, Tinian, Rota and Guam with a reminder that a part of the Marianas Archipelago still exists and that to visit “makes you feel like you are actually an islander” (Boat Owner 11/15/11)³. The current population of indigenous descent in the lower Mariana Islands ranges from 24.6 to 62.4% Chamorro and 1.3 to 7.5% Carolinian (Table 1).

Table 1.--Year 2000 estimates of indigenous population⁴.

Island	% Chamorro	% Carolinian
Saipan	24.6	7.5
Tinian	48.2	1.9
Rota	62.4	1.3
Guam	42.0	3.6

Only a small portion of the population has visited or seen in person the lands and waters of the Islands Unit; however, the results of our oral histories indicate that those trips that took place were important both to those participating in the trips and to the wider community that benefited from the resources and stories brought back by travelers to the northernmost portion of the Mariana Archipelago.

II. PURPOSE

Federal laws governing commercial, sustenance and recreational types of fishing have existed for some time, providing a well-developed legal framework for managing such fisheries and fishery resources; however, “traditional indigenous fishing” is a type of non-commercial fishing with no federal precedent in the U.S. Pacific Islands Region to guide regulation. As such, federal fishery managers must develop new management regimes for this type of fishing.

The objective of this research is to describe traditional fishing patterns in waters around Uracas, Maug, and Asuncion—the Islands Unit— from the living memory of residents and visitors, in

³ Throughout this report, in the interest of maintaining the anonymity of the study participants while providing context for their contributions, attribution for quotes and statements will be cited as the category of contributor followed by the date of the oral history (e.g., Fisherman/Captain 1/1/11).

⁴ Estimates from the 2000 U.S. Census for U.S. territories.

order to provide a scientific basis for managing traditional indigenous access and fishing as a type of non-commercial fishing in this portion of the Monument.

Goals

To achieve this objective, the goals of this research are to:

- 1. Document previous and contemporary trips to the waters and lands of the Islands Unit,**
- 2. Describe perspectives and experiences of the people participating in these trips, and**
- 3. Explore the historical and cultural connections of residents of CNMI and Guam with the northern islands of the Mariana Island chain, especially those of the Islands Unit and their surrounding waters.**

This report provides information about all types of trips to the Islands Unit undertaken by CNMI and Guam residents where fishing took place to provide a better understanding of the customs, mechanisms and traditions of fishing and fisheries resources within the waters of the Islands Unit of the Monument. Documenting previous and contemporary trips to the waters and lands of the Islands Unit provides an understanding of the purpose and frequency of visits by residents of the southern islands of the Mariana Archipelago.

The information may help the Western Pacific Regional Fishery Management Council (Council) gain a deeper understanding of the significance of traditional use and to recommend guidelines for regulating traditional indigenous fishing in the Islands Unit of the Monument. This information can also inform Monument managers as they consider other regulations and design a Monument management plan.

III. METHODS

Secondary Data Collection

Researchers first conducted a review of available information from secondary sources about traditional fishing in the Islands Unit waters.

The researchers reviewed float plans maintained by the CNMI Department of Fish and Wildlife (DFW) enforcement vessels. Records from 2006 to 2011 provided vessel names; number of passengers and crew; estimated dates of departure and arrival; island of departure; islands intended to be visited; and the purpose of trip. These plans are maintained by DFW in case of emergency so that the Emergency Management Office (EMO) can, for example, warn a boat of approaching inclement weather. For the purposes of this research, the plans provided information about the number of trips taken to the northern islands, boats that made those trips, captains of the boats and the islands they intended to visit. However, these plans are submitted prior to beginning the trip and are, therefore, not always fully detailed or accurate. The plans, therefore, were used to inform primary data collection and to estimate locations to be visited, but were not used to estimate the number of trips to the waters of the Islands Unit. The float plans provided an

estimate of how often and which boats traveled to the waters of the Islands Unit and a way to identify potential study participants to provide oral histories.

Another form of secondary data collected was information provided by people knowledgeable about fishing, fishing operations, and management of the waters of the northern islands of the Mariana Archipelago, especially the Islands Unit waters. Researchers spoke with fisheries managers based in CNMI and Guam; Council staff in CNMI, Guam and Hawai'i; and longtime fishermen and residents in CNMI and Guam to gain a better understanding of the types of information that could be collected during oral histories. These discussions aided the researchers in creating a list of people with experience traveling to, living, and fishing, in the Islands Unit lands and waters, resulting in a total of 64 potential participants in the this study.

Primary Data Collection

This research used unstructured interviews and oral histories with people knowledgeable about the waters of the Islands Unit and the islands of Uracas, Maug, and Asuncion. Initial discussions with people knowledgeable about the goals of this study assisted in identifying a list of potential participants including fishermen, former residents of Asuncion, research scientists and government officials who had been to the area. An additional group of people identified to potentially be included in the study were closely connected in some way to the waters and islands of the three northernmost islands. These people included family members of fishermen that fished in the Islands Unit waters and a former government official who spearheaded an effort to provide startup assistance for a fishing operation associated with the Office of Carolinian Affairs.

Discussion Topics

To identify discussion topics for oral histories, the researchers consulted with Monument managers, Council staff and others knowledgeable about fishing trips and other types of trips to the Islands Unit and local fishing practices in CNMI and Guam. Topics included: the primary reason for undertaking a trip; specific information about fishing if it took place on a trip; descriptions of catch dispensation and formal and informal fish distribution channels; and cultural and historical connections with Uracas, Maug, Asuncion and their surrounding waters.

Researchers asked study participants for detailed information regarding their trips, including dates of trips; frequency; length of time; barriers to running trips; planning for the trip (e.g., financing); crew size and structure; and vessel type and details. Oral histories also covered whether participants planned future trips to the waters of the Islands Unit given the current Monument regulations. Participants were also asked to recount trips by others who had traveled to the Islands Unit, any related traditional ecological knowledge, and knowledge of communities of people living on any islands north of Saipan, contemporary and historical.

Oral histories included detailed accounts of specific trips from study participants including their impressions of the islands and waters of the Islands Unit. The researchers asked study participants to describe the types of marine and terrestrial species they saw in the water and on

the islands. These oral histories focused on participants' memories of trips to the Islands Unit waters and, in some cases, living on the islands that are now part of the Islands Unit. The reason for this focus is to supplement already documented historical narratives and other secondary data. Researchers aimed to capture descriptions of personal experiences and to provide detailed information to inform regulations and management considerations for the Monument.

Exploring residents' cultural and historical connections with the Islands Unit lands and waters provides context for Monument managers and regulators as they develop and implement regulations for the Islands Unit.

Researchers categorized trips based on their primary purpose and described the role of fishing in each category of trip, if applicable. On trips where participants reported fishing, researchers discussed fishing-related details including trip costs, type of gear, target species, spatial and temporal preferences in fishing and patterns and catch levels. Researchers discussed how the catch was distributed (e.g., sold, gave away, consumed), also known as the dispensation of catch, from trips to the waters of the Islands Unit, whenever fishing took place on a trip. Oral histories focused on the way in which fish were eaten, distributed and/or sold. Monument managers and Council staff were especially interested in understanding the dispensation of the catch (e.g., whether it was sold, given away, consumed by fishermen and family) upon return from a trip to the waters of the Islands Unit. Therefore, oral histories covered the following: when the catch was consumed, how it was preserved during the trip, whether it was shared, traded or given away and to whom, and the significance of fish caught in the waters around the three northernmost Mariana Islands. Additionally, for all respondents, the researchers discussed individual and community cultural and historical connections to Uracas, Maug, and Asuncion and their surrounding waters.

For trips with purposes other than fishing, the researchers asked about the primary purpose and relevant information related to that purpose, such as the types of data collected for a specific scientific research expedition. Researchers also asked if fishing took place during the trip and if so, how much of the trip included fishing. For the study participants who had lived on the islands north of Saipan, including Asuncion in the Islands Unit, topics included information about daily life on the northern islands, reasons for moving there, how long they lived there, living conditions, and reliance on local seafood. Additionally, the oral histories emphasized participants' experience with the waters and lands of the Islands Unit.

While collecting oral histories, researchers provided study participants with maps of each of the islands of the Island Unit—Uracas, Maug, and Asuncion. These maps provided an additional resource during oral histories to help participants orient themselves and refer to specific places in the waters and on land. Maps were available during every oral history and participants used them as they saw fit, allowing researchers to collect spatial data as an additional source of information.

Description of Sample and Field-work Administration

Research was conducted during two visits to Guam and Saipan in 2011 and during a follow-up visit to Saipan in 2012. Two PIFSC Human Dimensions researchers focused on finalizing the list of potential participants and conducting oral histories in CNMI from November 7 to 16, 2011

and another Human Dimensions researcher and a subcontractor based in Guam conducted oral histories in Guam and CNMI from November 27 to December 3, 2011. For the purposes of clarity, all of people who conducted oral histories, including the subcontractor, are referred to as ‘researchers’ in this report. Additionally, in August 2012, the researchers had informal conversations to follow up with seven of the oral history contributors in Saipan. The data collected from these conversations are also included in this report. Researchers conducted 32 oral histories with a total of 40 key people who were knowledgeable about fishing in the waters of the Islands Unit of the Monument. The majority of the oral history interviews were conducted individually; however, five oral histories were conducted with more than one person where the groups’ experience with the Islands Unit was related. For example, one group, which included two fishermen, a boat captain and a boat owner, worked with the same fishing operation. Oral histories were conducted with 35 males and 5 females, with 38 study participants residing in Saipan and 2 residing in Guam at the time of the research (Table 2).

Table 2.--Description of oral histories.

Type	27 individual	5 group
Gender	35 males	5 females
Residence	38 Saipan	2 Guam

People providing oral histories described trips spanning 1939-2009 and represented a variety of different views regarding Uracas, Maug, and Asuncion and their surrounding waters. These narratives include perspectives from people of Carolinian, Chamorro and European-American descent on experiences and perceptions related to the islands and waters of the Islands Unit. The researchers grouped respondents by their background and/or relationship to the experiences with and connections to the discussion topics covered in their oral histories (Table 3). Although some people provided information from more than one of these perspectives, the researchers categorized each of the respondents based on the perspective most heavily represented in their oral historical accounts.

Table 3.--Categories of contributors.

Perspective	Number of People
Strong personal/familial connections	9
Fishermen/Captains	14
Boat Owners	5
Scientists	6
Government Officials	6
Total	40

Those with strong personal and/or familial connections included two people who lived on Asuncion when they were young; others who lived, or continue to live, on northern islands of the Mariana Archipelago, and their family members; and immediate family members of 13 fishermen from Saipan who were lost at sea while fishing on the M/V *Olwol* near the Islands Unit waters in 1986. Their oral histories described life on the northern islands, especially Asuncion, including descriptions of fishing for food in the waters of the Islands Unit and how the catch was shared among island residents.

People categorized as fishermen and captains included people living in Saipan and Guam who were crew, captains and engineers on commercial and non-commercial fishing trips to the Islands Unit. Some of these people traveled only a few times to the Islands Unit and others went many times and were very familiar with the waters around Uracas, Maug, and Asuncion. Study participants classified in this category sometimes grew up or spent time in the northern islands in their youth and, therefore, were sought after to fish and guide boat captains in the waters of the northern islands.

Boat owners who contributed oral histories provided a different perspective from the fishermen and captains since they were responsible for weighing profitability, financial risk and market feasibility for fish brought back from commercial, recreational and other non-commercial fishing trips. Their contributions also often described how catch was divided, how and to whom it was sold, and how trips were financed.

Government officials provided perspectives on issues related to fishing and visiting the Islands Unit; monitoring volcanic and weather activity; negotiations leading up to the declaration of the Monument; and emergency rescue operations. Oral histories contributed by government officials also provided information on Monument-related activities, policies and regulations with a focus on their actual and potential impacts on local residents.

Finally, scientists imparted information about their experiences conducting scientific research in the waters of the Islands Unit and on the islands of Uracas, Maug, and Asuncion. These trips covered scientific research in the waters and on the islands themselves. Often research trips included activities such as fishing and/or moving people and supplies between islands in the Mariana Archipelago.

On the first data-gathering trip, researchers collected oral histories from people on the list of potential contributors, speaking with as many people as possible and targeting people with a variety of perspectives on trips to the Islands Unit. Upon completion of the first trip, the researchers identified priority contacts for the second data collection trip. The people identified as priority contacts were generally those who had a particular perspective on trips to the Islands Unit that was not already represented by the oral history contributions collected during the first data collection trip—either a different primary purpose for trips or they played a different role in trips. At the conclusion of the second trip for data collection, the researchers felt they had collected oral histories from as many different perspectives as possible and practical based on the original list of possible contributors and those available to participate in the study during the data collection trips.

IV. RESULTS

Previous and Contemporary Trips to the Waters and Lands of the Islands Unit

One goal of this research is to describe to the extent possible the frequency and types of trips to the waters now called the Islands Unit of the Monument. This section provides a summary of the accounts of trips to the Islands Unit uncovered during oral history interviews including information about the primary purpose of trips, financing for trips, activities conducted, and the types of fishing that took place on trips.

Although efforts were made to gain the most comprehensive assessment of trips to the Islands Unit, the summary of trip accounts from our interviews should be considered a minimum estimate; the actual number of trips is likely higher than the number of trips reported, for two reasons. First, the oral histories included descriptions of boats or companies that traveled to the Islands Unit, but in some cases no one associated with those trips was interviewed, mainly because they had moved off island. Second, when individuals described the frequency of trips to the Islands Unit, researchers calculated the lowest possible number to describe their account. For example if a captain reported “multiple” trips a year to the Islands Unit, researchers recorded two trips per year since there was no way of determining if the actual number of trips was two or more.

Summary of Trip Accounts

This research uncovered accounts of 129 trips to the Islands Unit waters spanning the years 1939 to 2009 (Table 4). In the more recent past from 1979 to 2009, this encompasses an average of 3.8 trips per year. The accounts included descriptions of 16 different vessels that traveled to the Islands Unit. Despite the long distance, high cost and inconvenience of traveling to the three northernmost Mariana Islands, this research indicates that travel to the Islands Unit occurred regularly and that CNMI and Guam residents have maintained a connection to the Islands Unit waters over the past 70 years.

Trips to the Islands Unit often had multiple purposes, but we attempted to categorize trips based on what participants indicated was the primary purpose of the trip. The researchers identified six primary purposes for trips to the Islands Unit. *Fishing* trips were trips where the participant’s main goal was to capture fish and bring them back to CNMI or Guam with the intended purpose of selling some of the catch, although not always for a profit. Trips to *visit/explore* were trips undertaken by individuals from CNMI or Guam who took a vessel to the Islands Unit with the primary purpose of being able to see, visit, and explore those places. *Research* trips were undertaken to gather scientific information about the three northern islands and their surrounding waters, including marine focused trips, terrestrial focused trips, and geological trips to examine seismic and volcanic activity. On trips for *charter (tourist)*, tourists hired a boat and its crew to visit the Islands Unit, generally for recreational scuba diving and sport fishing purposes. *Charter*

(other) includes trips where the boat and crew were hired for activities not related to tourism, such as trips chartered by government officials to visit the northernmost islands and charters by private companies to assist in transporting vessels or goods from Asia. *Resupply* trips represent the regular trips taken to the Islands Unit to transport people and goods between Saipan and the community of people that lived on Asuncion between 1939 and 1945.

Table 4.--Summary of trip accounts to the waters surrounding the Islands Unit, based on primary purpose of the trip and including the names of the vessels associated with each purpose.

Primary Purpose	# of Accounts	Years	Fishing Took Place		Fish Brought Back for Sharing/ Consumption		Fish Sold to Offset Trip Costs		Fish Sold for Profit		Source(s) of Financing	Vessel Names
			#	%	#	%	#	%	#	%		
Fishing	73	1979-2009	73	100	72	97	16	22	56	77	Owner; nonprofit development funds; money from previous fish sales	<i>M/V Olwol, Blue Marlin, Ilsin Paul, Marlin 2, Santa Remedio, Punyan, Sun</i>
Research	30	1980-2009	28	93	23	77	6	20	0	0	NOAA; DFW; USFWS; USGS; US Military; University of Tokyo; other organizations	<i>Townsend Cromwell, Oscar Elton Sette, Blue Marlin, Super Emerald, Mom, M/V Micronesian, Hi`ialakai</i>
Resupply	12	1939-1945	12	100	12	100	0	0	0	0	Government	<i>Chome</i>
Visit/ Explore	6	1989-2009	6	100	6	100	4	67	0	0	Owner and participants with minimal financing for sale of fish	<i>Challenger, Blue Marlin, Super Emerald</i>
Charter (tourist)	4	1995-2005	4	100	4	100	0	0	0	0	Tourist fees	<i>Challenger, Super Emerald</i>
Charter (other)	4	1997-2009	4	100	3	75	0	0	3	75	Northern Islands Mayor's office; government; private sources	<i>Blue Marlin, Super Emerald, Cecilia</i>
Total	129	1939-2009	127	98	120	93	26	20	59	46		16 vessels

Fishing was by far the most often mentioned primary purpose for traveling to the Islands Unit. The prevalence of fishing trips is related to the fact that some operations or vessels would take multiple trips to the Islands Unit waters each year. These fishing trips are described in accounts from four fishing operations or businesses; details of these operations are included below. The second highest number of accounts was for research trips. Respondents indicated that research trips were required to include at least one CNMI resident (Scientist 11/10/11). This number of research trips indicates that research activities played an important role in keeping CNMI residents connected to the Islands Unit waters. Accounts from individuals who had lived on Asuncion during their childhood indicated that the boat to resupply northern islands and transport people and materials traveled to Asuncion twice a year between 1939 and 1949.

Accounts of six trips to visit and explore the waters and lands in the Islands Unit indicate that despite high costs, long travel times, and logistical challenges, people from CNMI organized trips to the Islands Unit to see and be connected to those islands. In one example, a CNMI resident organized a trip to Maug so that he could celebrate his 50th birthday there (Boat Owner 11/15/11). Respondents also relayed accounts of eight trips to the Islands Unit waters in which vessels were chartered for various purposes. In three accounts, tourist charters supported trips to bring tourists to the Islands Unit for sport fishing—often tourists from Japan. One sport charter operator said that if “a customer comes over here for five days straight...that means we go all the way up to these [Islands Unit] islands” (Fisherman/Captain 11/14/11). There was also an account of a charter trip to support scuba diving tourism in the Islands Unit (Boat Owner 11/15/11). Vessels were chartered to go to the Islands Unit for other purposes including bringing government officials to the island and in one instance, to refuel a boat traveling from Asia.

Trips to the Islands Unit require long travel times through sometimes treacherous seas; not all vessels are capable of making the trip. Several respondents reported that travelers needed a vessel over 50 feet in length to reach the Islands Unit waters. Accounts of trips included references to 16 vessels. Three of the research vessels were large (60-70 ft) vessels based out of Honolulu, Hawai`i. Two of the reported vessels were based out of Guam. Many of the reported 11 CNMI vessels have since sunk, fallen into disrepair or moved to different locations. Respondents reported accounts of only two CNMI vessels that can and do make trips to the Islands Unit as of 2011: *Blue Marlin 1* and *Super Emerald*. In addition to those two vessels, study participants relayed accounts of three additional vessels that were not currently seaworthy at the time of the research, but if repaired would be able to travel to the Islands Unit. Given the current high cost of fuel, owners of these vessels stated that it was not a good financial decision to make those repairs (Fisherman/Captain 11/14/11; Boat Owner 11/14/11). Several other vessels based in the region are adequate to make the trip to the Islands Unit, but at this point do not travel there; these include longline fishing vessels, military vessels, and sailboats.

Trip Characteristics

The accounts of trips from these oral histories include detailed descriptions of several characteristics of trips to the waters of the Islands Unit such as costs and length of trips, and fishing practices. The logistical and financial difficulties associated with trips to the Islands Unit resulted in a situation in which those trips served multiple purposes and trip participants opportunistically combining multiple activities into each trip. Therefore, many trip

characteristics were the same or similar regardless of the purpose of the trip and covered in summary in this section. For example, several vessel operators stated that before heading to the northern islands they would “coordinate with the [Northern Islands] Mayor’s Office” or with families of individuals living up there to see if they should bring anything up (Boat Owner 11/15/11; Boat Owner 11/11/11).

Fishing practices.—During interviews, an effort was made to determine the kinds of fishing that took place on each trip to the Islands Unit. Table 4 presents information about the role that fishing played on trips of all primary purposes. The analysis reveals that fishing was an important part of all types of trips to the Islands Unit waters—fishing of some kind took place on 98% of the trips. One fisherman put it this way: “If you go up there and don’t fish, you don’t go up there at all” (Fisherman/Captain 11/10/11). The only two trips that did not include fishing were two research trips where individuals reported that the research agency specifically prohibited fishing as a part of the trip. In all accounts where fishing took place, respondents reported that fish was consumed during the trip, indicating that sustenance fishing was a part of the majority of trips. In addition to sustenance fishing on 93% of trips, fish caught in the Islands Unit waters was brought home for consumption or sharing with family, friends and neighbors. Although the details of fishing trips differed among operations they followed similar patterns. During most fishing trips, fishermen would engage in trolling, bottomfishing and sometimes spearfishing. Trips where fishing was not the primary purpose often included trolling and bottomfishing during free time on the trip while accomplishing the trip’s primary purpose.

Some boats began trolling for pelagic fish while transiting north prior to arriving at the Islands Unit. Once the boat reached the three northernmost islands, operators would sometimes troll around Uracas, Maug, and, Asuncion. One boat owner explained that on a typical trip to the Islands Unit waters, he would travel straight to the top three islands with seven fishermen and anchor around one of the islands in a calm location. Beginning at 6 am, and later at 3 pm, the captain would steer the boat slowly around the island while trolling with two lines running behind the boat. During the morning fishing, they would troll around the entire island until they reached the location where they started and then they would store their catch and rest until the afternoon. After the second trolling pass around the island, the fishermen would rest again until the evening when they would switch to bottomfishing from approximately 7 pm until 12 or 1 am. Once they finished bottomfishing, the fishermen would move the day’s catch from a small fish hold on the deck to the larger hold in the hull (Boat Captain 8/8/12). Then they would travel to the next island, rest for the night and begin fishing again the following morning.

One boat captain explained that he would throw out two lines with one hook on each and three men watched each line while he drove around the islands of the Islands Unit and “every 30 minutes that we move, or 20 minutes, [a fish is] caught; we have something on the line” (Boat Captain 8/8/12). Additionally, at least one fishing operation reported trolling inside the crater at the island of Maug (Fisherman/Captain 8/7/12). Trolling in this region targeted pelagic species generally, but fishermen most often mentioned catching wahoo, yellowfin tuna and dogtooth tuna (locally called white tuna)⁵.

⁵ White tuna is a local name for dogtooth tuna.

Several fishermen and captains reported that while at the desired fishing grounds, fishermen would separate into two groups; one group to go bottomfishing and the other to go spearfishing. The first group stayed on the boat and set lines at both deep and shallow locations for bottomfish species. One fisherman explained that for the deep-set lines, a sinker is placed at the end of the line and 12 hooks spaced 5 feet apart, beginning from the sinker “divide the hooks; 6 for the big fish like onaga and gindai, silvermouth and then the rest [of the hooks] [are] for the gindai and ehu, the smaller ones” (Fisherman/Captain 8/7/12). Some operations set handlines but one boat captain explained that on his boat they dropped six lines using hydraulic reels with five hooks on each line (Boat Owner 8/8/12). The most often-mentioned species caught while bottomfishing in the waters of the Islands Unit are gindai, onaga and ehu.

Many fishing trips also brought spear fishermen; however, not all fishing operations included spearfishing. One captain remarked that he didn’t bring spear fishermen because of the danger of sharks, reportedly numerous in the waters of the Islands Unit (Boat Owner 11/14/11). Typically on fishing trips with spear fishermen, they would leave the main fishing boat early in the morning on a skiff. A fishing master would drive the skiff and would remain onboard while the others got in the water so he could assist with getting the fish into the boat quickly after they were speared. The others would all enter the water in a group and each take their turn descending to the reef at about 30–40 ft below the surface to spear a fish while the others hovered at the surface watching for sharks. When the diver speared a fish, he would surface and get the fish into the skiff as quickly as possible to avoid attracting sharks. On the occasion when a shark would near a fisherman, the others would push the shark in the nose or on the side of the gill with the handle of the spear gun to dissuade it from getting any closer. The spear fishermen would fish for between 4 and 6 hours before returning to the fishing boat (Fisherman/Captain 8/7/12). Spear fishermen targeted reef fish, but the most often mentioned species of catch were jacks, parrotfish and white tuna.

Several fishermen noted that they went along on trips for other primary purposes. They served as crew when needed and fished when possible, during free time. Fishing was reported to be an important component of scientific research trips, with 76% of these types of trips bringing back fish for sharing and consumption. There were six accounts of research trips on which fish was sold upon return, though not strictly for profit. Often, while transiting from one place to another, fishermen and boat owners would set lines for trolling (Boat Owner 11/15/11). Additionally, during stops on trips of all purposes, fishermen would drop lines off the side of the boat for bottomfishing (Scientist 11/30/11). In several accounts, the vessel owner dropped a research crew off at one of the islands to do their work and took the boat to a nearby fishing spot to fish for the day (Personal/Familial Connections 11/9/11; Scientist 12/1/11). The fish caught in this way would often be eaten during the trip and anything left over when the boat returned to port would be divided among the fishermen and trip participants. Some research charters would not pay enough to cover all the expenses of the trips, so vessel operators made up for it by selling fish they caught (Personal/Familial Connections 11/9/11).

Length of trips.—Most fishing trips from Saipan to the waters of the Islands Unit were reported to range from 5 to 7 days depending on the desired fishing spot and weather conditions; however, some reported trips were as brief as 2 days, and others lasted as long as 12 days.

Smaller boats often took shorter trips because there was less room to store the catch and ice used to chill the fish would melt quickly. Larger boats that brought ice made of seawater (which stays frozen longer than freshwater); and those freezing, salting or drying fish reported longer trips. Fishermen based in Guam reported longer trips, 10-14 days, since they had farther to travel to reach the waters of the Islands Unit. Several fishermen and captains reported 2 days in transit to the fishing grounds (Two Fishermen/Captains 11/10/11). They would travel to Pagan in 1 day and stay overnight in the harbor, then continue north on the following morning, reaching the waters of the Islands Unit on the evening of the second day. One boat owner noted that on his 65-ft boat, the trip to Pagan (two islands south of the southern boundary of the Islands Unit) takes approximately 18 hours while trolling, which requires a slower speed than if transiting without towing a line (Boat Owner 11/15/11).

Charter trips for recreational fishing or exploring the islands were reported to be slightly longer, 7 to 11 days. One charter boat captain stated that it would take 16-17 hours to get to Asuncion on his 78-foot boat (Fisherman/Captain 11/14/11). Trips for scientific research were reported to be the longest, ranging from 1 week to 35 days. The length of the scientific trips and the locations visited were dependent upon the needs of the study. Reports of scientific trip locations visited varied widely from traveling directly to Asuncion and staying on the island to stopping off briefly on each island.

Trip costs.—Fuel, oil, food, drinking water and ice for preserving fish are the primary expenses for a trip. Reported costs of a trip to the waters of Uracas, Maug, and Asuncion varied depending on the boat size and type. Oral history contributors reported trips to those waters on fishing and charter boats ranging from 53 to 105 feet. The owners of charter boats stated they were designed for tourism and/or research, e.g., with a platform for diving and air conditioned enclosed areas containing restrooms and bunks, making their fuel needs different from fishing boats (Boat Owner 11/14/11; Boat Owner 11/15/11).

A former charter boat captain reported the 78-ft boat that he ran would use almost 3,000 gallons of fuel for its twin turbo charger engines, each 1,000 horse power, to travel to Asuncion and back (Fisherman/Captain 11/14/11). An owner of another charter boat noted that he would use approximately 2,000 gallons of fuel for the trip to the waters of the Islands Unit and back (Boat Owner 11/15/11). A boat owner of a fishing boat mentioned that his 74.5-foot boat used approximately 800 gallons of fuel on a typical trip to the Islands Unit waters (Boat Owner 11/11/11). Another fishing boat owner stated that his 69-foot boat holds 3,500 gallons of fuel and he could make the trip and have a considerable amount left over but did not clarify how many gallons were used (Boat Owner 11/14/11).

Fishermen from Guam stated that recent fuel prices were prohibitively high for them to travel to the three northernmost islands to fish. Several of the boat owners reported that before the Monument was designated (in 2009), they were paying about \$3 per gallon of fuel but at the time of the research (November/December 2011) the price was closer to \$5 per gallon for fuel (Boat Owner 11/11/11). Based on reported use of fuel and current prices as of late 2011, fuel for one trip could cost \$4,000–\$15,000, depending on the type and size of boat. Additionally, government officials who have chartered boats in the past reported costs of \$3,500 per day to rent a charter boat which included crew, fuel and food (Government Official 11/09/11).

However, one researcher based in Guam stated the cost of a fishing trip to Pagan, approximately half of the distance to Uracas, to be approximately \$30,000 (Scientist 12/1/11).

Financing for trips.—Trips to the waters of the Islands Unit were financed in a variety of ways. Boat owners themselves often provided the funds for fishing trips to fish around Uracas, Maug, and Asuncion. The boat owner would front all the money for the trip and then sell a portion of the catch to recover costs and for profit; however, almost all boat owners shared some of their fish with the trip participants and their families and friends (Two Fishermen/Captains 11/10/11; Boat Owner 11/14/11). In some cases, this was linked to the lack of an appropriate market for catches and inability to sell enough fish to cover expenses (Fisherman/Captain 11/9/11; Government Official 11/14/11; Personal/Familial Connections 11/9/11). Eighty-five trips or 66% of all trip accounts included some form of sale of fish upon return from the trip. Of those trips that involved sale of fish, 59 (70%) included the sale of fish beyond the expenses of the trip; the remainder sold fish but not beyond trip expenses. On nearly a quarter (22%) of trips with the primary purpose of fishing, fish were sold but not beyond recovering the expenses of the trip. One challenge in selling fish was finding sufficient buyers for the catch; one boat owner mentioned that he most often sold to hotels and shipped some off island (Boat Owner 11/11/11). However, in other cases, the lack of profit stemmed from the fact that fishermen gave away a good deal of their fish to family and community members (Fisherman/Captain 11/9/11).

Some fishing trips were financed by sources other than the boat owner. A nonprofit development fund associated with the Office of Carolinian Affairs “helped [Carolinian fishermen] buy their fuel and ice” and identified buyers so the catch would be pre-sold when the fishermen returned to Saipan. The goal was for the endeavor to become financially independent over time, benefiting the Carolinian community, but it mostly broke even (Government Official 11/14/11). Unfortunately, the boat used for this venture was a Japanese-built vessel donated to CNMI. The boat was confiscated by the U.S. Coast Guard because the hull was not constructed in the United States and it was therefore not legally permitted to fish in U.S. waters. The vessel was held pending a court case and when the boat was released, little interest remained to continue the project (Government Official 11/14/11). Sometimes boat owners and groups of fishermen used profits from one fishing trip to pay the upfront costs of the next trip, thereby receiving only the benefit of the catch and a source of financing for a future trip without profit (Boat Owner 11/15/11; Fisherman/Captain 11/10/11).

Several boat owners traveled to the waters of the Island Unit to explore the area and assess its potential for fishing or other business endeavors. Four of the six trips made for the primary purpose of visiting/exploring the Islands Unit included sale of fish upon return (although not beyond the expenses of the trip). On these trips, passengers pitched in money for fuel or brought food, ice and/or other supplies and the boat owner paid a portion of the costs of the trip. Even so, several respondents indicated that selling fish was essential to help offset the high costs of trips to visit/explore the Islands Unit waters (Boat owner 11/11/11; Boat Owner 11/15/11). In one description of a trip to visit the Islands Unit, a captain recounted how many of the passengers would work together to help offset the costs of the trip, sometimes by selling a bit of their catch:

PIFSC Researcher⁶: *The trips you've done on your own, have you ever sold any fish to help pay for costs?*

Boat Owner: *Yeah, we like to at least pay some of the expenses... Yeah, yeah we do. There's not too many people out there who can really afford to go out there because it is very costly and uh, you know, to pay for the fuel. If you're a diver or if you spearfish, part of that cash will go to the boat to pay for fuel. Like I said, basically we all share on the catch and share, not necessarily 100% but help pay some of the cost of the fuel (11/15/11).*

Many different organizations have financed research trips to Uracas, Maug, and Asuncion to study and monitor different aspects of the natural environment of the islands and their surrounding waters. Government entities representing local, regional, federal and military interests have chartered several trips to the northernmost Mariana Islands (Government Official 11/14/11). Additionally, academic institutions have chartered trips for scientific research on a wide variety of topics. One local government office sent local officials to accompany scientists from the University of Tokyo and U.S. Geological Survey to place instruments on each of the islands of the archipelago for monitoring volcanic activity (Government Official 11/09/11).

Charter trips for tourists are financed by charging the tourists, most often for fishing and scuba diving. One boat owner stated that he collects the money prior to the trip to pay for upfront costs but that “basically we just provide the transportation and whatever they want to do out there [fishing or scuba diving]...we don't really want to get involved with their living condition...We don't provide food or anything like that. Of course we help out, cook and everything but I don't want to be responsible in ensuring that the food that we provide are, are to their taste.” (Boat Owner 11/15/11). Several fishermen noted that they would take a chartered trip to the Islands Unit waters if there was room and help out in exchange for being able to fish. Fishermen, captains and boat owners reported that they would fish during the trip both to bring back food and to make money in addition to the fees from the charter (Fisherman/Captain 11/10/11; Fisherman/Captain 11/27/11).

Commercial Fishing Operations

Oral history participants relayed accounts of four different commercial fishing ventures developed in the northern islands over the past 30 years, as well as references to a few additional ventures. In most accounts, these commercial fishing operations mainly targeted the lower northern islands; however, if conditions were right, vessels from all these operations would fish in the waters of the Islands Unit.

M/V *Olwol*.—The M/V *Olwol* is one of the first vessels reported to be involved in commercial fishing activities in the northern islands. The vessel took regular fishing trips to the northern

⁶‘PIFSC Researcher’ is the term used to categorize the people conducting the oral histories and to distinguish them from the oral history contributors categorized as ‘Scientists’ who are also researchers.

islands—by some accounts once every 2 weeks—from 1979 to 1986. The vessel would go out for a week and then come to port for 3-5 days between trips. Crew and families of those associated with the vessel said that while it was in operation, the captain undertook fishing ventures to the Islands Unit when conditions permitted which was at least 2-3 times per year.

Most of the captains and fishermen on the *M/V Olwol* were from CNMI and many had grown up in the northern islands. The operation also employed several crew members from the Philippines working under 1-yr renewable visas. The operation focused initially on gathering beetlenut from the northern islands but a “fishing master” on the vessel for a time encouraged them to focus more heavily on fishing (Fisherman/Captain 11/9/11). The operation used a variety of methods including troll, handlining for bottomfish, and spearfishing. With these methods, the crew looked to catch “just about anything because we try to bring in a variety of fish” (Fisherman/Captain 11/9/11). Three individuals who had worked on the vessel stated that the captain would pay for the cost of the trip up front. When they returned to port with the catch, “usually we get as much as we want for our families and then the owner of the boat start selling them to cover his expenses” (Fisherman/Captain 11/9/11). Several members of this operation indicated that these trips were not always profitable.

In 1986 the *M/V Olwol* went missing while it was fishing in the northern islands off of Agrigan. The U.S. Coast Guard and the community led extensive search efforts but no survivors were recovered. Part of the wreckage of the *M/V Olwol* was found on the island of Maug (Personal/Familial Connections 11/11/11). Thirteen fishermen lost their lives in the accident, and they are remembered through a prominent 13 Fishermen Memorial on Saipan. These individuals were connected to many families on Saipan—the entire community, particularly the Carolinian community, was deeply affected by the tragedy.

Marianas Pacific Fishing Corporation (Guam).—There were also reports of a brief commercial fishing venture based out of Guam called the Marianas Pacific Fishing Corporation. Two individuals who reside in Guam described commercial fishing efforts that took place in the northern islands between 1981 and 1985 (Fisherman/Captain 11/27/11; Fisherman/Captain 11/27/11). According to accounts, the majority of fishing took place on the lower northern islands of Anatahan, Alamagan, Pagan and Agrigan, although on rare occasions they traveled to the waters of the Islands Unit. The fishermen collected fish in a brine tank and were sure not to be out at sea for more than 14 days. They stated that the fish were so plentiful they would fill the hold quickly and then have to stop catching fish so they wouldn’t waste any.

These fishermen would bring fish back to Guam and attempt to sell them. Their first buyers were chefs for hotel restaurants, particularly a few high class German chefs who would pay well for some of the more exotic fish such as onaga. Fishermen remained adamant about selling (as opposed to giving away) their catch, but mentioned that it could be challenging because on Guam there is a strong culture of sharing fish. They also sold some of their fish to prisons. These Guam-based operations ceased around 1985 because fishermen and captains reported that the lifestyle was becoming too challenging. “[They] realized [they] had no life. You’re in 3 days, and you are out. Your kids call you uncle and your wife has gotten used to living without you. That choice—what are you going to do?” (Fisherman/Captain 11/27/11). Another Guam-based fisherman who operated the boat (called Mom) stated that he had to quit commercial fishing

because there was no reliable market to sell his fish. He said, “it wasn’t feasible—wasn’t a market, that’s why we quit fishing” (Fisherman/Captain 11/27/11). This fisherman recalled an instance during which they brought in a catch of 20,000 pounds of fish, but since they couldn’t find an outlet in which to sell it, much of the fish spoiled and was never eaten (Fisherman/Captain 11/27/11).

Kosa Fisheries International.—Another important northern islands fishing operation called Kosa Fisheries International was based out of Saipan and included four different vessels: *Ilsin Paul*, *Marlin 2*, *Santa Remedio*, and *Punyan*. The venture operated from 1998 to 2009 and during that time, vessels took fishing trips to the northern islands approximately twice a month. The vessels would also take trips to the Islands Unit fairly regularly when weather permitted. Of targeting his fishing efforts to the northern islands, the owner of the operation stated, “And this is what I did, going fishing up north because I’m leaving the closest islands for those people that have the small boats” (Boat Owner 11/14/11). This quote highlights the communal understanding of fishing and use of the northern islands. He made an effort to target his commercial fishing efforts in more distant islands to ease fishing pressure on the closer islands so that more fish would be available to the people from Saipan with smaller boats that couldn’t travel long distances. The owner also indicated that the three northernmost islands in the Islands Unit are the best for fishing, “because seldom people come out here” (Boat Owner 11/14/11).

The Kosa Fisheries operation had a blast freezer that enabled the fishermen to freeze seawater to bring on their trips, allowing their trips to last longer than with freshwater ice. These vessels also kept a tank to store live fish, many of which the owner would later sell in his restaurant. According to the owner of the operation, after each trip the crew (and the owner himself) would select the fish that they wanted to take home for themselves, family and friends. After those fish were accounted for, they would sell the remainder of the catch to a variety of sources including hotels and restaurants. The owner explained “[a]fter the expenses from the trip were taken out, they...divide [the profit in] half – 50 [percent] for the company and 50 [percent] for...all the fishermen” (Boat Owner 11/14/11). Although the owner allowed crew to take fish home and he gave a good deal of fish away to those who asked, he emphasized that these fishing trips were a commercial fishing venture, stating “for commercial, we’re going up there for real fishing, not playing around” (Boat Owner 11/14/11).

Kosa Fisheries International is no longer in operation; in 2009 the owner-operator ceased running his boats. He indicated that high fuel prices and increased regulations contributed to his shuttering the venture. With the price of fuel so high, fishing even in the lower part of the northern islands was no longer financially viable for his company but he mentioned, “as soon as the fuel is reduced, I can go up” (Boat Owner 11/14/11). The business owner also stated that in addition to the high cost of fuel, the designation of the Monument and earlier conservation designations for the islands of the Islands Unit also led to his decision to close his fishing business.

Blue Marlin Company.—Representatives (fishermen, captains, and owners) of the Blue Marlin commercial fishing venture based out of Saipan also contributed oral histories. The operation consisted of one current vessel, *Blue Marlin 1*, and a previous vessel that is no longer in operation. This is, as reported by the study participants, the only northern islands commercial

fishing venture that is still currently in operation. The *Blue Marlin I* takes trips to the northern islands about 2–3 times per month. In addition to commercial fishing, the owner of the boat uses the vessel for a variety of personal and contracting purposes including research trips, charters for the Northern Island Mayor’s Office, and other independent charters. The company began in 1994 and continues to operate commercial fishing in the northern islands as of 2011. The majority of fishing efforts were directed at the lower northern islands; however, “when the weather’s good and [they] have enough fuel, [they] go all the way up [to the Islands Unit]” (Boat Owner 11/11/11). The vessel owner and part-time captain mentioned that since the designation of the Monument in 2009, they no longer travel to the Islands Unit waters for commercial fishing.

The Blue Marlin Company began when the owner purchased the operation, a vessel and fishing gear from a Japanese company that came to Saipan to longline, but went bankrupt. Once the company founder owned the vessel, he disbanded the original crew and selected a new, reliable crew of experienced and skilled fishermen. He also redesigned the company away from longlining, to focus on fishing in the northern islands including spear fishing, bottomfishing, and trolling. He described selection of crew members for the Blue Marlin Company in the following way:

Boat Owner: Growing up and knowing that I want to have a business in fishing, you do what’s called process of elimination and that’s what I did. A lot of people can gather like today and say they’re a good fisherman, but I gave them the opportunity and the benefit of the doubt to get on the boat. And we do have some people from Tinian, some people from Rota and they can say that they can do the fishing but when you take them up north... When you describe Agrigan it’s what, a shark infected place?”

Fisherman/Captain: Well it is. I think you have to expect that when there’s a lot of fish, there’s a lot of sharks....

Boat Owner: When you ask your question how to do you select your fishermen? Courage: they must have a bravery diving among sharks because, it’s very, you know once you turn on your flashlight you start seeing them coming around.

PIFSC Researcher: So you always use the same fishermen?

Boat Owner: Right now I have a permanent fishermen after took me a good one year that I process them out. I used to start off with 14 but now I only have 6 good fishermen (11/11/11).

The company owner stated that he allows the crew to take some fish home for their family and friends, generally about “10 pounds assorted fish” (Boat Owner 11/11/11). Fishermen who worked for the Blue Marlin Company mentioned that they would often “bring our own small cooler for like family” (Personal/Familial Connections 11/9/11). Once the crew took their share, the owner of the vessel would sell the rest. He mentioned that the company primarily sold its fish to the hotels in Saipan, although there were reports that the Blue Marlin Company occasionally pursued venues to sell their catch in markets off island such as Honolulu (Boat Owner 11/11/11).

Other commercial fishing ventures.—While researchers talked to representatives from four commercial fishing ventures in the northern islands, there may be other fishing trips of which we

did not collect accounts. For example, in interviews we heard discussions of a Japanese operation that fished in the northern islands for several years and then went out of business. No representatives of that operation still reside in Saipan. There is also an additional vessel captain from Saipan that did not want to participate in the study but may have led commercial fishing trips to the Islands Unit. The participants who provided oral histories for this study represented a very robust sample of individuals connected to the northern islands living in CNMI and Guam, so these are likely the primary and most prominent fishing operations that operated in the region.

At the time of the field research, there was also a commercial longlining industry on Saipan. Four longline vessels targeted pelagic species such as tuna, mahi mahi, marlin and opah. The vessels also engaged in some bottomfishing and carried pots for shrimping. Owners of these vessels stated that they do not fish in the Islands Unit or near the northern islands. They tend to target the seamounts and ridges to the west and east of the Marianas chain (Boat Owner 11/11/11). Soon after the researchers collected these data, this operation moved its boats away from Saipan.

Key Findings about Commercial Fishing Operations

PIFSC Researcher: *Do they usually make up the cost [through fish sales]?*

Fisherman/Captain: *I don't really think so because most of the fishing – is not really a success.*

PIFSC Researcher: *So the reason to go is not really to make money; so what's the reason?*

Fisherman/Captain: *To make our families happy from the foods that we brought back that are from our own home sweet homes and they're very fresh (11/9/11).*

As the above quote indicates, there were motivations beyond profit for maintaining fishing operations in the northern islands. Despite the fact that fishing ventures were not often profitable, these vessels continued to operate, which provided an opportunity to bring important foods back to friends, family, and community that live in CNMI and Guam. The fishing operations also helped individuals as well as the communities in Guam and CNMI to maintain connections with the northern islands. All of the fishing operations mentioned that they had provided support to the communities (or in later years, individuals) living on the northern islands. Many of the crew, particularly the fishermen, grew up or lived part of their lives on Agrigan, Alamagan or Pagan. Several fishermen who grew up on the northern islands indicated that being part of these commercial fishing operations provided them with an important connection and opportunity to visit the places of their youth.

Several participants involved in various fishing ventures stated that it was difficult to make money and that commercial fishing in the northern islands was not often very profitable (Fisherman/Captain 11/9/11; Scientist 11/10/11; Government Official 11/14/11; Boat Owner 11/14/11). Over the course of this project, study participants reported at least four different attempts to develop a fish market or cooperative on Saipan, each of which failed due to lack of financial viability (Government Official 11/14/11; Boat Owner 11/14/11; Boat Owner 11/11/11).

Another challenge for fishermen is that once they brought one load of fish back from the northern islands, the market in Saipan would be completely flooded. There was a limit to how much fish they could sell and they often had to get creative about selling it—bringing the fish to other islands like Tinian and Rota or hiring individuals to sell additional fish in coolers on the side of the road (Boat Owner 11/11/11; Fisherman/Captain 11/10/11; Scientist 11/10/11). Several fishermen indicated that if they could develop better markets, likely international markets in Asia, there would be greater potential to make a profit from northern islands fishing (Boat Owner 11/11/11; Scientist 11/10/11). High fuel prices have severely impacted plans for commercial fishing in the northern islands. Currently, only one operation fishes in the northern islands (but not the Islands Unit); however, that operation supplements fishing activities by chartering their vessel and crew for other purposes (such as research). A former fisherman said, “Let me tell you something, beyond Pagan it’s just too expensive to go up there. You know it’s not feasible for fishing up there commercial because the fuel is so expensive nowadays” (Scientist 11/10/11).

Oral history accounts indicate that there has been some form of commercial fishing venture operating in the northern islands since the 1980s. These operations were usually small scale, particularly because of the limited market for high value fish in Saipan. Operations primarily targeted the islands south of the Islands Unit (Agrigan and south) as a result of logistic and financial challenges; however, fishermen and captains indicated that the waters in the Islands Unit had the best fish and if the conditions were right, they would fish in those areas on occasion.

Catch Dispensation Patterns

The information presented in this section was gathered from oral histories on catch dispensation for fish caught on trips to the waters of the northern islands of the Mariana Archipelago, as it was difficult to distinguish trips specifically to the Islands Unit waters from others; however, the researchers established that the practices of fish dispensation held constant for trips specifically to the waters of the Islands Unit. Oral history contributors note that fish caught in the Islands Unit waters serve several purposes, including: they are sold to pay for trip costs, pay the crew and sometimes to make a profit; bartered, either explicitly in exchange for a product or service or implicitly with an undefined expectation of repayment at an unspecified future time; shared with friends and family, sometimes for special occasions such as celebrations and holidays; and, finally, consumed as food. Fishermen, captains and boat owners reported that sharing fish was an important part of these trips, providing communal benefit, and not only for the individuals on a trip to the northern islands’ waters. Accounts of catch dispensation differ based on the boat owner and primary purpose of the trip but overall, there was a mix of commercial and non-commercial exchange, and subsistence and sustenance use of fish caught on trips to the Islands Unit.

Non-commercial exchange and sharing of fish was mentioned in almost all accounts of trips, regardless of the primary trip purpose, and all trip participants stated that fish were consumed during trips. Oral history contributors were asked to describe the nature of sharing fish caught during these trips. Upon discussing this practice further and with more people providing oral histories, there is evidence that this practice is so intrinsic to the culture that it is difficult for residents to put it into words. One fisherman stated that it was difficult for him to use the English language to further explain the nature of sharing and exchanging fish and another fisherman

described sharing fish from the northern islands' waters in this way, "...if you go up there and you get the fish and bring it back here, you're supposed to share it with family, that's the cultural values...It's always in our tradition and culture, it's inherent in our community, especially in this village here. This is a fishing village" (Fisherman/Captain 11/10/11). The findings presented here about fish dispensation align with descriptions of fishermen sharing significant portions of their catch in the Marianas and other parts of the Pacific Islands (Miller, 1996; Allen, 2013). One boat owner contributing an oral history echoed the importance of sharing fish in Mariana communities by stating, "Here on the island, it's always a tradition that if you come in and you catch a lot, you always give to your neighbor and I can also share with you what kinds of fish I've been catching" (Boat Owner 11/11/11).

One exception to the practice of sharing fish from the northern islands was recounted by a captain working for a boat owner who tried to circumvent non-market exchange of catch. This boat owner found this custom so entrenched in the local culture that it was difficult to find people willing to pay for his fish. The captain describes the way the boat owner told him to explain that the fish were for sale and not for sharing in the following exchange.

Fisherman/Captain: We sold them [the fish]...The reason why is because we were commercial fishing...and it was hard sometimes because sometimes we would go around with our fish, and you'd go around to people who you knew, and you'd want to sell them the fish but they didn't necessarily want to buy it.

PIFSC Researcher: Did they think you were going to give it to them?

Fisherman/Captain: So culturally, [the way] I always approach, and [the boat owner] always told me how to do it, I said, 'These aren't my fish. These don't belong to me. If you want 'em, you've got to pay for 'em 'cause it's not mine. If it was mine I'd give it to you.' If you have any questions, go see [the boat owner] about it (11/27/12).

Aside from the operation discussed above, all fishermen reported that they could take at least some of the fish from each trip for their personal use. Some boat owners sold a portion of the catch to recoup trip costs (fuel, food, ice, etc.) and allowed each fisherman to take home the remainder of their catch in lieu of payment for their services as fishermen and crew on the trips (Fisherman/Captain 8/7/12). This arrangement was most common in cases where the fishermen/crew were family and/or friends of the boat owner and the primary purpose of the trips was not commercial fishing. On these trips, the fishermen were highly experienced and earned their places on the trips because of their reputation as good fishermen and because of their familial or personal connection to the boat captain. They would participate in these trips with the understanding that the boat owner (who was often the captain on these trips) would sell enough of the catch to repay his costs and keep a share of the fish for his own consumption and to share with his family. As one fisherman clarified during the oral histories, "here we got a lot of family, not only 20 members...we're talking about 70 members" and he gives away fish to all of those family members if he catches enough (Fisherman/Captain 8/7/12).

A charter boat owner who used his boat for trips to the northern islands described sharing his catch with his extended family, similar to the fisherman above, noting that he does not usually sell his catch, "just kind of give[s] it to friends, friends and family...momma and daddy, cousins,

nephews and nieces. They are always looking forward to it. Well, if we're coming home, for them of course they're going to be feasting on it but for us, we need a lot of rest... just about anything that you want to give to them will be accepted gracefully" (Boat Owner 11/15/11). A fisherman and boat captain who worked on a charter boat said that he would bring back fish from charter trips for himself and to share with his family. He mentioned that sometimes clients would not want to take their fish after a trip so they would leave it for the crew who would consume it and/or donate it to the Commonwealth Health Center, the local health center in Saipan (Fisherman/Captain 11/14/11). Additionally, another charter boat owner who has used his boat for personal trips to the northern islands waters with friends and family stated that the passengers often fished during the trip to provide food to be consumed during the trip and to bring back to Saipan. On these types of trips, he noted that he sold fish, "to at least pay some of the expenses" adding, "There's not too many people out there who can really afford to go out there because it is very costly and uh, you know, to pay for the fuel. If you're a diver or if you spearfish, part of that cash will go to the boat to pay for fuel. Like I said, basically we all share on the catch and share, not necessarily 100% but help pay some of the cost of the fuel" (Boat Owner 11/15/11). One boat owner of a fishing boat described a trip in which he went to Maug and Asuncion to explore the area with about 10 friends and family members, each of whom contributed money or supplies to fund the trip. On this trip he was planning to fish in the waters near Maug and Asuncion but bad weather began moving into the area so they "didn't stop to get any fish", choosing instead to troll as they transited (Boat Owner 11/11/11). The boat owner described "If...time allowed me to stay and fish maybe I would go ahead and volunteer to sell to offset [the costs of the trip]. Sometimes you win, sometimes you lose but that was like a gamble on my part so we did not sell any. We just went ahead and split up among ourselves" (Boat Owner 11/11/11).

Many oral history contributors who went on trips to the waters of the northern islands for reasons other than fishing described eating the fish caught during the trip and sometimes being allowed to take some of the fish with them upon returning to port. One scientist noted that trip participants went spearfishing and handlining during their downtime, consuming the catch during the trip and splitting the remaining fish equally at the end of the trip (Scientist 12/1/12). Another scientist said that at times when the crew isn't needed onboard during scientific trips, "the boys (referring to the boat's crew) generally fish in their off hours and they always bring fish home to the family" (Scientist 11/30/11). A scientist who participated in several research trips to all of the Mariana Islands in the 1980s mentioned that participants on the trip could take as much fish as they'd like to bring home and share with family and friends in what he called, "home packs" and the rest of the catch would be donated to the local hospital or other groups that would cook and serve it in the local community (Scientist 11/10/11). A government official explained that on trips where the boat was chartered for some government or scientific reason, the trip participants "usually share the fish...so we split it equally and share and enjoy it" but don't sell any because the expenses of the trip have already been paid, while a researcher also recounted that on a trip to the northern islands' waters, the crew caught lots of lobster and consumed it during the trip (Government Official 11/09/11; Scientist 11/30/11).

Sharing Catches from Fishing Trips

Several boat owners who ran fishing operations mentioned that sharing fish with family members is so dominant in the Marianas that running fishing operations as for-profit businesses

was difficult; however, despite fishing ventures that were sometimes not profitable, many vessels continued to operate and boat owners reported that operations provided an opportunity to bring important foods back to family, friends and their local communities. When asked about how one boat owner shared his catch upon returning from a trip to the northern islands, he responded that he shares his catch with his sisters, brothers, some friends and “there are some people that come to the dock...so I just tell them to grab some sheet to wrap [a fish to take for themselves]” (Boat Owner 11/14/11). A fisherman also stated that fish is shared among other community members that meet boats at the dock upon their return from fishing in the northern islands remarking “sometimes once we dock there's people again they're asking what fish they [the fishermen] have [caught]” and to hopefully, share in the catch (Personal/Familial Connections 11/09/11).

The boat owners of fishing operations who contributed oral histories each described their own unique system of distributing and selling catch from a trip to the northern islands; however, every system allowed for fishermen to bring home some of the fish from each trip to consume and share as that fisherman wished. One boat owner explained that he allowed each fisherman and crew member to take 10 pounds of assorted fish for himself explaining that “if [he grew] up in the United States I'd probably say no, but since I grew up and I seen my dad always comes in and share...But at least among all my fishermen, the first thing I say is pick the...fish in the amount of 10 pounds and that's yours before I sell it or whatever” (Boat Owner 11/11/11). Other boat owners of fishing boats reported a less structured system for sharing fish with fishermen and crew who were allowed to take “one or two” or whatever they want “to take home for their family to eat” then they sell the remainder of the fish to recoup trip costs, pay fishermen on the trip and for profit (Personal/Familial Connections 11/09/11; Boat Owner 11/14/11). Many fishermen contributing oral histories also described how, upon returning from a fishing trip to the northern islands, boat owners would allow them to take some of the catch for their own personal use. These fishermen report that the fish was used for their own consumption; sharing with family and friends; for celebrations and special occasions; and providing a source of food for the community of people that share with these fishermen.

Specific arrangements for fishermen to take home fish from trips to the northern islands differed by operation but the descriptions suggested an informal understanding in which fishermen “just [brought their] own small cooler like for family” (Personal/Familial Connection 11/09/11). Fishermen described the practice of taking home fish as an intrinsic part of trips to the northern islands reporting “usually we get as much as we want for our families and then the owner of the boat start selling them to cover his expenses”, “yeah, sometimes we keep some [fish]” and “After we clean, the owner asks: you guys want to take some fish? That's up to you. If you want to get, you get” (Fisherman/Captain 11/09/11; Fisherman/Captain 11/10/11; Fisherman/Captain 11/10/11). These fishermen had difficulty describing details stating that they take some fish for the family and when asked how much, responded “no, we don't go by pounds. We just choose, what kind of fish you want to take” (Fisherman 11/15/11).

Fishermen who reported bringing home fish most often mentioned sharing it with family. They reported that sometimes they cook and share it with family when they return from a trip and other times they would give fish to family members for their own consumption. One fisherman explained, “I would give the whole family. I would give some to my uncles, some to my aunties, some to my friends, and some for me” (Fisherman/Captain 11/10/11). One fisherman further

explained that his mom gets first pick of the fish and then siblings, remarking that “even [his] neighbors will try to fill up one plate; they love it” (Fisherman/Captain 11/09/11). Two fishermen mentioned that if they get to bring home a lot of fish, they salt them to keep longer while another fisherman keeps only enough to fill the freezer after sharing with his family and then sells the rest of his personal share of the catch to supplement his income from the trips (Personal/Familial Connections 11/09/11; Fisherman/Captain 11/10/11). Another fisherman mentioned that he doesn’t ever sell any of his fish and if there is more than enough for his family, he will share with his friends so “they will say hey man, when are you going to the northern islands?” (Fisherman 11/09/11). One fisherman, however, said that on some trips he didn’t take any fish home if he had been fishing often because he was “tired of eating fish; on the way up and the way down” (Fisherman/Captain 11/10/11).

Sharing fish from the northern islands was reported to be especially significant for older generations. One fishermen reported that he brought back fish for his family, especially his father who gets excited when he brings home fish from the northern islands’ waters because he used to live up there but is now sick and cannot travel there himself (Personal/Familial Connections, 11/09/11). Another fisherman remarked that relatives get excited when he brings home fish from the northern islands “because the fish around the northern islands are, they’re not really the same as the fish down here” (Fisherman/Captain 11/09/11). A boat owner further described, “Older people are dying off now but what they ask for mostly is please get me this kind of fish. Actually any fish is good for them but I would think the onagas and the silvermouth, the deep-water fish because they’re harder to get and they don’t eat them very often. That’s their dying request” (Boat owner 11/15/11). In discussing the fish that fishermen and trip participants receive from trip to the northern islands, fishermen recognize that these marine resources are particularly important to share with others that can visit those waters themselves.

Although not explicitly stated, their oral histories indicate that the fishermen consider the portion of catch that they get to bring home as a form of payment for their work on the trip. Several fishermen reported that their pay depends on how much fish the boat owner sells. Several descriptions of taking fish from the trips suggest they are conscious of this tradeoff in payment for fish in deciding upon the fish they will take to eat and share (Scientist 11/10/11; Fisherman/Captain 11/15/11; Fisherman/Captain 12/1/11). One fisherman reports that after the fishermen each take their share of the catch and “after they weigh the fish and sell everything, then the owner...gives them money” (Fisherman/Captain 11/10/11).

Fish for Sharing vs. Selling

Oral history contributors described fish dispensation practices in a very informal way but they often mentioned certain types of fish that were shared versus sold, either because of preference or marketability. One fisherman described the practicality of deciding which fish to eat during the trip with the following statement, “When half of a fish comes up, means it was bitten by a shark and the rest becomes our dinner. That was exciting for us” (Fisherman/Captain 11/27/11). When a boat captain was asked what type of fish is his favorite, he responded, “anything that I caught, I eat” but the onaga, ehu and gindai are very popular sellers so he prefers to sell them and “eat fish that don’t sell as well” (Boat Owner 8/8/12). One captain noted that Japanese tourists who chartered his boat often gave their catch to him and the crew because they didn’t ordinarily

take fish back to Japan with them. The exception, he said, was the banded grouper which cost them thousands of dollars to ship and was used only to make fish prints, not for food (Fisherman/Captain 12/1/11). A boat owner that chartered his boat to fishermen remarked that the tourists give much of the fish away, explaining that the owner and crew eat what they can and give the rest to friends because, “there is no limit. We basically just fill up the deep freeze, the refrigeration, yeah, and then you can only catch so much to bring back” (Boat Owner 11/15/11).

Several fishermen mentioned that reef fish were often taken home to eat while boat owners would sell the pelagic fish and bottomfish. However, this was not always the case, as one fisherman mentioned that family and friends would get most excited about the reef fish that he would bring back from his trips while another mentioned that he would bring reef fish back for the Carolinian elders (Personal/Familial Connections 11/09/11; Personal/Familial Connections 11/09/11). A boat captain remarked that “bottomfish is pretty popular” with his friends and family and a scientist stated that opakapaka, gindai, wahoo, and yellowfin are “the good ones” that he always tries to get, along with shrimp (Boat Owner 11/15/11; Scientist 11/10/11). Interestingly, when oral history contributors discussed which species they favored, many mentioned species other than reef fish. One fisherman responded, “I just keep the lobster and yellowfin and that’s it” and another said that wahoo is his favorite (Fisherman/Captain 11/15/11; Fisherman/Captain 11/10/11).

Several contributors mentioned that the fish brought back from trips to the waters of the northern islands are highly sought after. Fishermen mentioned that some types of fish caught farther north are rarely caught in the more southern waters and many of the fish caught in the waters of the northern islands are bigger than those found around Saipan, Tinian, Rota and Guam. For special occasions such as holidays, weddings, death anniversaries and community fiestas it is traditional to serve fish and several oral history contributors recounted times when fish caught in the northern islands waters was specifically reserved for one of these types of special occasions. One fisherman stated “if I know that there will be a special occasion and we’re out there [fishing in the northern islands waters], I usually save a lot so that way we don’t also spend money to buy [the fish for the occasion]” (Fisherman/Captain 8/6/12). A scientist remembered that he and another government official got married in the same year in the 1980s and fishermen that participated in research trips to the waters of the northern islands prior to each of their weddings brought back fish and gave them to the grooms to serve at their wedding celebrations. He added that if a wedding was soon after fishermen returned from a trip, they would reserve some fish for that purpose but then jokingly notes, “All kinds of parties out here. Every time the wind blows in a different direction, there’s a party” so there is usually some special occasion soon after a trip returns with the fish (Scientist 11/10/11). Another fisherman noted that the trips “are very difficult to time, but in some cases when we dried fish you know it would take sometimes months before serving this fish and” they would save the fish for an occasion such as his mother’s last rosary (Fisherman/Captain 11/10/11). One government official explained that his cousin, a boat owner, coordinates his trips to bring back bottomfish like onaga and silvermouth for his community’s fiesta which is easier to anticipate because it occurs at the same time each year (Government Official 11/09/11).

Customary Exchange

Characterizing Customary Exchange

Customary exchange is a practice that has been used to describe non-commercial trade of fish for other goods and services between community members in the Pacific Islands (Severance, 2010). The Council proposed that customary exchange be defined as the following in the Draft Amendments to the American Samoa Archipelago, Mariana Archipelago, Pacific Remote Island Areas, and Pacific Pelagics Fishery Ecosystem Plans (WPRFMC, 2010):

“the non-market exchange of marine resources between fishers and community residents for goods, services and/or social support for cultural, social, or religious reasons, and may include cost recovery through monetary reimbursements and other means for actual trip expenses” (WPRFMC, 2010).

This proposed definition would prescribe the types of fish dispensation that fishermen could engage in with fish caught in the Islands Unit of the Monument. For this reason, oral history contributors were asked to describe how they shared fish (or how fish were shared with them). Many of their responses described evidence of customary exchange of fish and other marine resources caught in the waters of the northern islands and are summarized in this section. Specifically, boat owners, captains, fishermen and other trip participants discussed exchanging marine resources from their trips to the northern islands with other members of their communities for a variety of “goods, services and social support for cultural, social or religious reasons”. Additionally, the exchange of fish between fishermen, captains and boat owners detailed above is viewed by both fishermen and owners as part of the compensation for providing services for these trips and, therefore, also provides evidence of customary exchange. Finally, oral history contributors representing all perspectives discussed the importance of fish caught in the northern islands’ waters for personal, cultural and communal benefits.

Additionally, several descriptions of exchanging fish caught in the waters of the northern islands more directly address the practice of customary exchange than general patterns of sharing fish. Often, contributors described transactions that include bartering fish for other goods. One fisherman explains the practice of customary exchange as follows, “Cultural [also known as ‘customary’] exchange is a very important aspect of our community activities. Let me give you an example, if John’s⁷ daughter is getting married, John will say Bill, ‘I need some fish’. I do not expect Jack to pay me. But for us to get out there Jack doesn’t have to be told that he will supply us with gasoline. You know, he looks at our engine says, ‘15 horsepower, ah, five gallons’. Today five gallons is over 35 bucks” (Fisherman/Captain 11/10/11). Another fisherman explains the practice of customary exchange as an informal process of bartering in the following discussion:

PIFSC Researcher: *Does customary exchange include when sometimes people want to sell fish?*

⁷ Names have been changed to preserve anonymity.

Fisherman/Captain: *No, no we don't really think of it that way. Customary exchange for most of us islanders would say, 'You paid for the fuel, we'll give you back the fish for the fuel'. Or, we come back here and we try and barter the fish to pay for the fuel.*

PIFSC Researcher: *If you barter the fish for fuel, how does that work?*

Fisherman/Captain: *Say, 'here is the tons of fish, can I get two cow?' We'll go and sell the cow and hopefully get the fuel. There's so many ways to skin the cat. I don't think the Federal Government understands that at all; I don't think Federal Government really comes out here and say, 'How do you live out here? What do you eat out here?' And you notice in my freezer, they're fish (11/10/11).*

The above description points to the difficulty of strictly defining this series of transactions. Several other descriptions from oral history contributors discussed exchanging fish for money in transactions independent of formal commercial markets. One government official noted that he has bought onaga from his cousin who owns a boat that fishes in the northern islands' waters because he remarks, "how the heck am I gonna get the what you call the name of the fish: onaga? How the heck am I gonna catch it, I cannot swim up there and catch one" (Government Official 11/09/11). He explained that onaga is a favorite for his community's fiesta and therefore, "For our fiesta we always—we would like donate two and our family would buy two...\$150, that is like \$300 right there" (Government Official 11/09/11).

Since commercial fishing is prohibited in the Islands Unit of the Monument as described in the declaration, the researchers asked contributors to describe, from their perspective, the difference between commercial fishing and customary exchange of fish for monetary reimbursement. One research participant whose family used to live and fish in the northern islands was asked if anytime anyone sells fish, it should be considered commercial and she responded, "No, not because sometimes like if they for personal consumption, some of them because they need some cash, some families, they would call and say, I have one mahi here, give me \$10 for it, you know I need to buy this for my kid—that's not commercial. And that's, that happens quite a bit with some of our local fishermen that go up there [to the waters of the northern islands]. But when they do it for these regular fishing boats that go up there on behalf of the government or for their own fishing expedition, that's commercial" (Personal/Familial Connection 11/11/11). One researcher who is familiar with the commonly understood definition of commercial fishing from the Magnuson-Stevens Act that includes any sale of fish for monetary reimbursement stated, "It [defining a commercial fisherman as anyone that sells a single fish] doesn't seem to fully fit in with the culture out here. Even all our spearfishermen that I deal with—a lot—some of them simply sell some of their catch to recoup some money and then keep the fish or give the fish to their family; now, is he a commercial fisherman? I would say no, but Magnuson-Stevens says yes. It's not so cut and dry out here" (Researcher 11/30/11).

Customary Exchange in a Policy Context

Until now, customary exchange has not been used as a category to regulate the trading of marine resources in the Pacific Islands Region of the United States. However, Allen (2013) discusses an earlier use of customary trade in domestic fisheries policy in the Alaska National Interest Lands

Conservation Act of 1980 (ANILCA) which defines customary trade as “the exchange of cash for fish and wildlife resources...to support personal and family needs; and does not include trade which constitutes a significant commercial enterprise” (ANILCA, 16 U.S.C. 3111–3126). This definition of customary trade describes a difference between commercial and subsistence fishing, but also acknowledges monetary exchange can take place in this type of trade. The Proclamation declaring the Monument directs that “traditional indigenous fishing shall be managed as a sustainable activity consistent with other applicable law and after due consideration with respect to traditional indigenous fishing of any determination by the Government of the Commonwealth of the Northern Mariana Islands” (Proclamation 8335, 2009). The Council proposed that traditional indigenous fishing in the Islands Unit be defined as fishing that involves customary exchange to share marine resources and recover monetary costs of trips.

Several people providing oral histories noted that this proposed definition of “traditional indigenous fishing” is essential in providing a practical way for local residents to access the nutritious and culturally valuable marine resources of the Islands Unit. Several contributors noted that if local fishermen could not sell their fish to help to offset the costs of trips to the waters of the Islands Unit, only rich people or those with other sources of funds to pay for the trip could travel to the Islands Unit, precluding many CNMI and Guam residents. In a discussion with one boat owner, an interviewer explained that for regulating traditional indigenous fishing, the “Council proposed sale of fish to cover the cost of expenses” and asked, “Do you think without selling fish [to cover costs], people would be able to go up there and fish?” The boat owner responded, “They need to pay for the expense and...you know, fuel is a major expense, so obviously. Many of the local people who want to venture out there to do fishing, they should be able to catch enough fish to be able to pay their expenses and whatever the balance of that catch would go towards their income. There’s a lot of people on the island that would never venture out there and because it’s costly, it’s not cheap” (Boat Owner 11/15/11). Another fisherman stated that without being able to sell catch to recoup costs for trips to the waters of the Islands Unit, it would be difficult for many boat owners to provide trips there to catch fish as illustrated in the following exchange with an interviewer:

PIFSC Researcher: *What if you went up to the northern islands to fish and then came down but you couldn’t sell the fish? Would there be another way to finance your trip, to pay for it?*

Fisherman/Captain: *I don’t think so; only if we catch animals. Aside from the fish we do sell live animals – goats, cows, pigs, there’s a lot.*

PIFSC Researcher: *If you couldn’t sell fish, would you still go?*

Fisherman/Captain: *Yeah I would always still go. [He explains that he wants to get a sailboat to go up there so he won’t have to pay for fuel.]*

PIFSC Researcher: *What if the owner of the boat couldn’t make his money back from his trip?*

Fisherman/Captain: *Not really sure, but my thinking and my understanding to that is he has to try his best to sell all the fish, that way he’ll have another trip if he sells all his fish. But if he cannot sell his fish and he’s just gonna sit back not trying to sell them, he will never make it (11/9/11).*

One government official described the nature of exchanging fish for cash that he considered part of customary exchange when asked, “Do you think under traditional [indigenous] fishing, they should be able to sell the fish?” His response was, “Yes, yes because right now. It is not our fault. You introduce – when I say you, the westerners, the United States government – introduce the western you know, lifestyle. So, western lifestyle you use M-O-N-E-Y to live on, right? And uh, you go to the hospital, you need money to pay you know, so it’s not just you catch the fish and eat it. When you sell you eat because the money that you receive from selling your products – your fish – you know, can buy you food and maybe other food that has the nutrients that your body needs” (Government Official 11/14/11).

In summary, oral history contributors recounted a range of formal and informal types of trading marine resources among residents of the CNMI and Guam as a part of local culture and custom. Evidence of formal trading of marine resources included exchange for monetary reimbursement and barter for other goods and/or services, such as providing fuel or working as a fisherman on a trip. These transactions of fish and systems of fish dispensation took place locally, and independent of commercial markets such as fish dealers and retail outlets. Less formal catch dispensation included implicit exchange such as sharing fish with friends without expectation of any specific form of repayment and contributing fish for cultural holidays or special occasions. The information covered in this section describes the types of fish dispensation as recounted in these oral histories and aligns with similar studies in the Marianas.

Cultural Connections to the Islands Unit

Many oral histories suggested strong connections between residents of Guam and Saipan and the Northern Mariana Islands extending up into Asuncion, Maug and Uracas. These range from the very tangible visiting and fishing in the waters surrounding the northernmost islands to valuing the existence of the area as an important place to residents of the Mariana Islands, whether or not they are able to visit in person.

Impressions and Historical Significance of the Islands and Waters of the Islands Unit

As mentioned above, although only small proportions of the population have actually visited the waters and islands of Uracas, Maug, and Asuncion, these islands and their adjacent waters nonetheless are well known to residents of CNMI and Guam. Additionally, many non-residents have never heard of the islands that make up the Islands Unit; however, all of the oral history contributors knew of these islands by name. Further, several CNMI residents with whom the researchers spoke prefer to use the names of the islands rather than call the area the ‘Islands Unit’ because fewer residents are familiar with this term for the area.

In discussions about these waters and lands, residents of Guam and CNMI note the historical significance of the entire island chain to the indigenous Chamorro and Carolinian peoples. Archeological finds indicate that humans have been living in the Mariana Islands since as early as 1500 B.C. (Allen and Amesbury, 2012). Evidence from the Prehistoric Period suggests that Chamorro people lived on many of the islands in the Mariana Island chain sharing a common

culture and language and that Refaluwasch (also known as Carolinian) people traveled to and among the islands as well (Allen and Amesbury, 2012).

When oral history contributors described the area, they conveyed a sense of awe and pride associated with all of the islands in the Mariana Island chain, including the waters of the Islands Unit and the three northernmost Mariana Islands. The historical importance of the Marianas may contribute to the pride associated with two respondents' comments about visiting all of the islands in the Mariana Island chain within their lifetime. The idea of visiting all of the islands is linked with the many generations that came before them and lived and fished throughout the Mariana Islands. Even younger people participating in the research explained they felt that all of the islands and waters are part of their history. One government official remarked with a sense of pride, "I stepped on all the [Mariana] islands – all of them. That was my goal at least to say that I've stepped on all the islands" and then she added "it's paradise" (Government Official 11/09/11). She stated that she had traveled to the United States [mainland] and "stepped on most of the states," so when she returned to Saipan in 1982 that it was one of her goals (Government Official 11/09/11). A fisherman said that traveling up past Agrigan is "very exciting and it scared me too, because I don't really know those three islands up after Agrigan. I was thinking there might be some monkeys in there or snakes"; however, he added "I really enjoyed myself...I enjoyed going around the island but one thing that's missing; I did not step on them and I always wanted to do that, you know, step on every island in the Marianas" (Fisherman/Captain 11/09/11).

The sense of adventure and connection to a way of life from the past is also conveyed in one boat owner's explanation of his feelings about visiting the northern islands for the first time as "something really new. It's like you're discovering, exploring something very different from out here [Saipan]. It makes you feel like you are actually an islander. Once you're out there, where there are no people, nothing but wildlife so you feel like you. You're an islander. You come from an island. You know, when you're out there you've got to be self-contained...It's almost a new, different world, I guess" (Boat Owner 11/15/11).

Several people providing oral histories discussed the feelings of awe and wonder associated with exploring these places and the wildness they observed. One government official told us that he didn't believe the northernmost islands were any different than others until he visited and then he understood why others held the area in such high regard. A boat owner described visiting as, "God, Jurassic Park. I just haven't seen anything like that. I've been all over Micronesia but I haven't seen any islands like those. Well, the volcanoes made it interesting...made you feel like only adventurers go up there" (Boat Owner 11/15/11). A second boat owner agreed that the excitement of visiting the northern islands is about "the adventures of seeing the islands you know, going around the island, seeing wildlife—wild everything..." (Boat Owner 11/14/11).

Another common theme mentioned by oral history contributors is the appreciation for the beauty of the natural environment—both terrestrial and marine—of the northern islands. One fisherman had trouble finding the words to describe his impressions of the waters and islands explaining, "I enjoy it more because it's like I don't know. I cannot explain that, it's very nice and the fish, everything. So I do everything to dive, free dive, shallow bottom, to swim, and fish" (Fisherman/Captain 11/09/11). A scientist almost teared up when he stated that it would "blow

your mind” to visit the northern islands and continued, “I tell you, you are never going to see anything like these islands up north. The fish will just come up to you and [you can] just touch the fish. They don’t know humans; hardly anybody goes up there...So beautiful. You get there. It’s so peaceful. Like your mind is completely free” (Scientist 11/10/11).

As described by oral history contributors, one unique aspect of fishing in the waters of the Islands Unit is the catch itself: larger and more frequent, particularly of species more difficult to find in other areas of the Mariana Islands waters. One boat captain described his first fishing experience in the waters of the Islands Unit in this statement: “For me it was, it was, I cannot really you know, like can’t find the right proper word to describe it, but it will never be forgotten. It was just the excitement that I seen out there catching a lot of fish. It was so wow, overwhelming” (Boat Owner 11/11/11). Another fisherman and captain remarks that he was “really excited” the first time he went to fish in the waters of the Islands Unit, further describing that it is his favorite place to fish (Fisherman/Captain 11/10/11). When asked which island had the best fishing, he responded, “All of them. All of the islands; there’s a lot of fish there” (Fisherman/Captain 11/10/11). Another fisherman compared fishing in the Islands Unit waters with those around Saipan: “it’s not like Saipan and you cast the line and wait—no—there you catch fish and then you catch fish, that’s how abundant the fish are” (Fisherman 11/9/11). Several fishermen remarked how near to the shore the fish run in the waters of the northern islands beginning south of the Islands Unit. As explained by one fisherman and captain, “from Anatahan [north]...the schools [of fish] are just right beside the island.” He thinks this is so because of the way the currents run, and continues that he keeps “dreaming to be up there again” (Fisherman/Captain 11/14/11).

Each of the three northernmost of the Mariana Islands—Uracas, Maug, and Asuncion—is significant in its own right; another reason that residents cite for using their names instead of calling them all the ‘Islands Unit’ of the Monument. Oral history participants described the historical, cultural and ecological importance of each of these islands and their waters as further described below. Each section begins with a quote that describes one aspect of the island’s unique character as gleaned from the oral histories.

Fishing around Uracas

Boat Owner: *There's a difference, because, you know these islands, you have to go a bit further out like uh, 60-45 meters to catch fish, but up north [on] Asuncion, Maug and especially up here in, what is this, Uracas. Over here [when you are at the fishing grounds], the island is only about from here to that awning off of the restaurant [about 10-20 meters distance].*

PIFSC Researcher: *And why is that? Is that because the reef is different?*

Boat Owner: *No, but nobody going fishing over there.*

PIFSC Researcher: *Oh, so you don't have to go as far?*

Boat Owner: *You don't have to go farther out. You can go closer to the island.*

...

PIFSC Researcher: *When you went up there, where was your favorite Island to fish? Did you have one?*

Boat Owner: *Of course, the very far one. Farallon [de Pajaros]...because Uracas doesn't have any trees, only small grass and piece of rocks, but the island is all dirt.*

PIFSC Researcher: *So no one could live up there?*

Boat Owner: *No, I don't think so (11/14/11).*

Uracas (Farallon de Pajaros).—Uracas (Farallon de Pajaros) is the farthest north of all of the islands of the Mariana Archipelago and, therefore, oral history contributors described fewer trips to the waters adjacent to this island. One contributor who had visited remarked on its distance by noting that there is, “deep blue ocean all around and you can't really see the next island” (Scientist 8/11/12). A fisherman noted one of the most significant features of the island, describing the active volcano as “glowing like a lamppost” as the boat approached it (Fisherman/Captain 11/27/11). Several oral history contributors remarked on the lack of significant reef surrounding the geologically youngest island of Mariana Islands. One contributor described, “there are some vents on the land where gases are bubbling up [sulfur] and the smell...” (Scientist 8/11/12).

A scientist who is also a photographer described a trip in which he was hired to take pictures of the northern islands. He traveled over and circled each of them in a helicopter, sometimes with the side doors off to allow better views of the islands. While recounting his visit to Uracas, the researcher recalled that the helicopter landed on the flat area on one side of the island (Fig. 6). When he stepped out onto the island he said, “the feeling was like you were back in prehistoric times because the volcano was still smoking and it's like a little baby island. There are no animals and when we got down, we actually went around and counted the different species of plants that we could find. We found three species of plants on the island” (Scientist 8/11/12). The site of the smoking volcano was threatening and “kinda scary. You didn't know if the volcano was gonna blow...It's really small, so there's not much area where you can go and explore” (Scientist 8/11/12).



Figure 6.--Scientist indicating landing site on Uracas. *Photo credit:* Gionfriddo 2012.

Fishing and visiting the islands and waters of the Islands Unit was the most direct cultural connection that oral history contributors discussed. The act of fishing in the waters of the Islands Unit was often mentioned during oral histories as providing a cultural connection and an indescribable experience. Fishing in the northernmost waters of the Mariana Islands is a special event for fishermen who have heard about fishing there for many years. Fishermen and captains discussed fishing in the northernmost waters of the Marianas as a rite of passage for very experienced fishermen. One fisherman stated that fishermen on Saipan are always eager to go on a fishing trip to the waters of the Islands Unit explaining, “Whenever [there is] a free slot grab whoever wants to go—always people that want to go” (Fisherman/Captain 11/09/11). One fisherman who had been crew for the Blue Marlin Company said, “[y]eah, I want to go back already” (Fisherman/Captain 11/10/11). Another fisherman mentioned that he was hoping to get on another trip to the Islands Unit soon and “any chance I get I’ll go up there” (Personal/Familial Connections 11/9/11).

PIFSC Researcher: *How was it up there?*

Fisherman: *It’s like paradise you know, because there’s no people there. And you go in because there’s three islands [that make up Maug], right? That’s why in our language we call it ‘longero’, means like when you cook food, no? Three stones, right? You put three stones and you put the pot on top of it (11/10/11).*

Maug.—Maug is a caldera with three islets, the only remaining parts of a fallen volcano. The natural harbor inside the islets was often discussed during the oral histories as providing shelter, fishing grounds and fuel transfer locations in an otherwise very exposed open ocean area. One historical use of Maug was discovered while reviewing secondary data where a report on the natural history of Maug included a picture of ruins of fish processing on the East Island of Maug (Eldredge et al., 1977). During oral histories, a former resident of Asuncion recounted a story

about Okinawans that moved to Asuncion from Maug as described in the previous section. He explained, “there are some Okinawan guys that were on Maug island. Their job is to dry tuna. You know, they split up the tuna and salt it and dry it. That’s their work on the island of Maug” (Personal/Familial Connections 8/10/12).

Another aspect of Maug’s historical importance mentioned by many people in oral histories was the loss of the 13 fishermen at sea which has become part of local lore. Six interviewees were related to one of the lost fishermen and/or planned to be on the trip when the *M/V Olwol* was lost. The fishermen were fishing in the Northern Islands and placed a distress call as a storm moved into the area. Although there was an extensive rescue effort, no one was found; however, part of the vessel was found on Maug. Many people believe that the fishermen headed toward or went into the inner part of Maug to take cover from the storm as one fisherman relayed, “cause in our minds if there is a typhoon come you can always be safe inside the Maug, that’s what we learned from our parents and great grandparents” (Fisherman/Captain 11/9/11). People associate Maug with the place that houses the souls of the lost fishermen. This event touched many people in Saipan and is remembered every year with memorial events. There is a monument built for the 13 Fishermen on the main road along the water in Saipan (Fig. 4).



Figure 4.--The 13 Fishermen Memorial Monument.

Perhaps because of Maug’s natural harbor, several oral history contributors mentioned that they spent considerable time there, both fishing and diving. One boat owner described her reaction to the fish caught in the waters of Maug, “I don’t know the names of the fish [they were catching in Maug]...For me it was the first time, it’s just the colors in the sun were so pretty – oranges and yellow and...you put your line down, you pull it up, they’re all there; because we had multiple hooks on. These were just little guys but they were deep-water fish” (Boat Owner 11/15/11). One researcher focused on marine resources he observed while diving during his first time to visit Maug: “I was freaking out; so beautiful. I was one of the first to ever dive in Maug, one of the first individuals...Go to Maug, that’s the best. I’ve never seen anything like that in my whole life; dove all over the Pacific” (Researcher 11/10/11). This researcher extensively described several features he observed while scuba diving at Maug including cathedral corals on the west

side of the island with many large groupers (Fig. 5). Figure 5 also illustrates spatial information provided by several fishermen during oral histories, which illustrates significant locations such as where boats can travel in and out of the natural harbor area, and spearfishing within the interior is challenging because of all of the sharks.



Figure 5.--Spatial data collected on map of Maug.

Fishing from shore on Asuncion

Former Resident: *Fishing with line, uh, first we catch crab that we call 'apara'. Chamorro call it 'agaf'.*

Fisherman: *I don't know what you call that, it's edible crab that's stays on top of the rock...*

Former Resident: *I don't know what it is called in English.*

Fisherman: *and can go submerged. It's very delicious and very edible and it make a very good plate.*

Former Resident: *You know, before we go to the spot where we fish with line, we have to catch those crabs for bait. We took the, the part where the stomach and we use it for bait but the rest of the body we pound it and drop it into the water to bring them to eat.*

Fisherman: *Chum*

PIFSC Researcher: *And then you would just drop a line?*

Former Resident: *Line, yeah, drop line. It takes only half an hour to fill up a basket.*

PIFSC Researcher: *What kind of fish...all different kinds?*

Former Resident: *We call it uh, 'ridi' in Chamorro, 'arud' in our Carolinian language (11/9/11).*

Asuncion.—Asuncion is the southernmost of the islands within the Islands Unit of the Monument. It is significant for its vegetated slopes, which may have been a draw for the Japanese Administration to begin farming copra on this island prior to World War II. During this era, approximately 10–20 families, primarily of Carolinian descent, moved up to Asuncion Island to work for the Japanese Administration. Two of the oral history contributors lived on this island as children beginning in approximately 1939. One of the former residents explained, “I miss that island” and continued to explain that when on Asuncion, “...you're free. Free to go where you want. If people like to go back there I volunteer” (Personal/Familial Connections 8/10/12).

One of the former residents stated that his family moved to Asuncion to grow copra for a Japanese company called “NBK” (Nanyo Boeki Kaisha, Ltd.)⁸. He mentioned that it has “very rich soil” and is a “very good island for farming” other types of crops as well, and rich in natural resources (Personal/Familial Connections 8/10/12). Another former resident summarized this notion with, “You won't need any money to live your life on the island. You don't need any money because the money's all over the island; in the ocean, on the island” (Personal/Familial Connections 8/8/12).

⁸ Nanyo Boeki Kaisha, Ltd. is a Japan-based corporation that lists sugar production as their primary concern in the Mariana Islands in the years prior to the end of World War II (NBK Corporation, 2000).

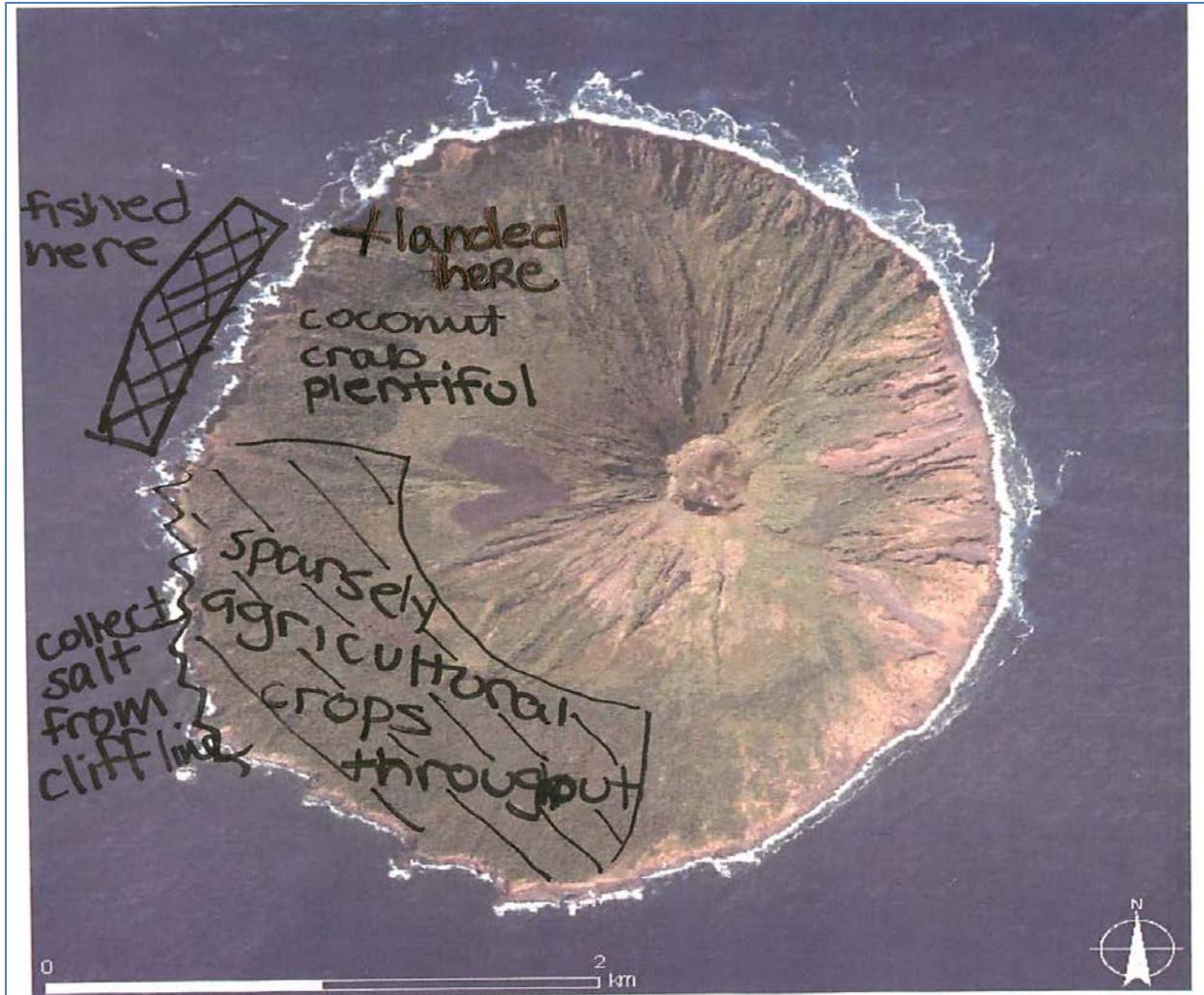


Figure 3.--Asuncion Island with participant spatial data.

Fishing, as described in the quote at the beginning of this section, was a significant contribution to the food and way of life on this island. Figure 3 depicts several of the areas that contributors discussed in their oral histories. One contributor stated that his father had a large farm on which he grew pineapple, pumpkin, sweet potato, cotton and other crops. His family also raised pigs for the Japanese Administration, using some of their crops to feed the pigs. Another resource that residents harvested from the island was salt as one contributor explained: “Especially on a hot day...there is a pond, a very shallow pond. In the afternoon, maybe after 2 o’clock, they just go over to those ponds and it becomes salt. It hardens up and you have to break it” (Personal/Familial Connections 8/8/12).

Both oral history contributors who were former residents of Asuncion described a way of cooking bird eggs in the black sand on the slopes of the volcano. They described a flat area leading to the cliff line where several types of birds laid eggs in sword grass, but the bird known as ‘kalikilak’ because of its call, “outnumbered all the [other] birds...when the season come for

them to come lay eggs. You can look up and you see a cloud, dark cloud of birds and the sound of – kalikilak, kalikilak” (Personal/Familial Connections 8/10/12). The residents would tie leaves to the bottom of their feet to protect them from the hot, black sand. They would place the eggs they collected under the sand and then go back in “thirty minutes; already cooked” (Personal/Familial Connections 8/10/12).

The oral history contributors described a community of families that celebrated Christmas together and interacted frequently. During World War II, they heard planes overhead and soon after, saw a boat of men paddling toward Asuncion. A former resident described, “we thought we were, what they call ‘koturario’ it means enemy” (Personal/Familial Connections 8/10/12). People were yelling, “Enemy are coming, enemy are coming’ and we run to the jungle” (Personal/Familial Connections 8/10/12). Only later did they realize that the men paddling to Asuncion were Okinawan men who had been living on Maug, processing tuna for the Japanese Administration. The planes that the residents of Asuncion heard had dropped bombs on or near Maug, scaring these men away from the island. These Okinawans stayed on Asuncion, building a house and making friends with the families there.

In the summer of 1945, Americans took two trips to Asuncion with a ship known as ‘448’, first to take the Okinawans and Japanese families, and then to bring the Carolinian and Chamorro families back to Saipan. Both former residents providing oral histories for this research remarked on how much they missed living there and each had traveled north on other trips later in their lives, but neither was able to see Asuncion again.

Other Cultural Connections

Trips to the northern part of the Mariana Islands—for fishing, resupplying, exploring and scientific research—helped individuals and communities on Guam and Saipan to maintain connections with the northern islands. All of the fishing operations mentioned that they had provided support to the communities (or, in later years, individuals) who were living in the northern islands of the Marianas Archipelago. Many of the crew, particularly the fishermen, grew up on the northern islands of Agrigan, Alamagan or Pagan. One vessel owner said that men from Agrigan made the best fishermen because, “they’re really brave guys, they don’t care with the sharks around as long as they get the right fish, lobster and all that” (Boat Owner 11/11/11). Several fishermen who grew up on the northern islands indicated that being part of commercial fishing operations in the northern islands provided them with an important connection and opportunity to visit these familiar places.

Although a less direct connection than visiting the islands themselves, several people contributing oral histories stated that consuming fish caught in the waters of the Islands Unit provided a way for those living in Saipan to connect with these culturally important, yet distant, waters. A boat owner told us that people of older generations ask for fish from the waters of the Islands Unit because they, “want to eat the fish that they ate when they were younger, which...you just can’t find it around here” (Boat Owner 11/15/11). A community elder with relatives that lived on the northern islands explained his preference for fish caught in those waters; “I love it. I’m Carolinian and...you know this Carolinian food, I enjoy it whenever I can get it” (Personal/Familial Connections 11/11/11). Possibly more significant than fish caught by

fishermen on trips to the northern islands waters, several oral history contributors mentioned products they enjoyed because northern islanders bartered and traded with visitors to those islands. One fisherman reported that northern islanders would sometimes give the fishermen dried fish and meat to take back to their families on Saipan, Tinian and/or Rota and several contributors mentioned that they would bring back dried meat, coconut and other goods from the northern islands (Fisherman/Captain 11/10/11; Personal/Familial Connections 11/11/11).

Transferring goods and supplies from Saipan up the island chain to people living on the islands in the northern part of the Mariana Archipelago is another way that people maintained a connection to the northern islands if they were not able to visit them directly. A relative of the residents who lived on the northern islands stated that, “Even up to now if there is just two or four people up on Agrigan. Every time there is a trip going up there, I would buy a case of soba, some canned goods and water...I really feel that a trip would be wasted, going up there without my giving something” (Personal/Familial Connections 11/11/11). This tradition of trade began when resupply boats traveled along the island chain (prior to World War II) bringing supplies funded by the Japanese government to the northern islanders in exchange for copra and other products produced in the northern islands. Over time, however, the tradition of bartering was perpetuated with fishing vessels that traveled to the waters of the northern islands to fish. One oral history contributor described, “they get what they can get off visiting ships; canned goods and rice, but they started off with their copra business, and the dried fish, making salt. That is how they were able to get some money and start buying some food merchandise. Sometimes they would send coconut crabs here and would sell it and then use the money to buy what they need, salt, sugar, coffee” (Personal/Familial Connections 11/11/11).

During the oral histories, many people expressed support for managing the waters and lands of the Islands Unit for preservation. Least tangible of the cultural connections mentioned during oral histories were non-use values. A non-use value is the benefit derived from something without accessing or gaining anything from it (Weisbrod, 1964; Beaumont et al., 2007). In discussions of non-use values, uniqueness and irreversibility are cited as necessary conditions (Krutilla, 1967; Cicchetti and Wild, 1992). Although it is difficult to assign a dollar value to these sentiments, they can be a powerful motivation for action. Oral history participants discussed various types of non-use values including: existence (the benefit assigned to simply knowing that something is present (Cicchetta and Wilde, 1992)), preservation (the importance placed upon knowledge that something exists and will be maintained in its current form (Krutilla, 1967)), bequest (the worth that someone places on ensuring the availability of access to a good or service for future generations (Krutilla, 1967)) and option (the importance someone assigns to the idea that they could chose to experience something (Weisbrod, 1964)) values. Although the definitions of these values are distinct, many of the comments from oral history contributors could be classified under more than one of these types of non-use values.

One fisherman expressed existence and preservation values in his statement, “I believe in preserving...and that we need to have a protected area where the fish can thrive and get bigger” (Fisherman/Captain 11/11/11). Preservation values are also evident in a government official’s comments that the area is, “something that we have to conserve for the future. I mean it is like paradise, you know, we don’t want it to look like the Caribbean, you know when they start buying islands and then there’s nothing for the future generations” (Government Official

11/09/11). Several comments from participants illustrated their concern that future generations be able to experience the area just as it is now. A government official noted the bequest value that he placed upon maintaining traditional access to the area and “preservation for the fish and the islands will give us, well not me, but my great-*great-great-great-great*-grandchildren the ability to say yeah – that’s the fish that my dad fishes” (Government Official 11/09/11). One fisherman remarked that he only supports the Monument “...if it is going to be for the benefit of our great-*great*-grandkids” and another said that he, “wants his children to be able to see the things he’s seen in the northern islands” (Fisherman/Captain 11/9/11). Another government official remarked that he, “want[s] to make sure that the indigenous people of the CNMI continue to have access to this area whether it’s gonna be just to go in there and put down a pole and line” and that he “want[s] to see if [his] son or [his] grandkids or next generation want to go up there to fish and experience fishing up there” (Government Official 11/14/11).

This section summarized the ways that oral histories uncovered historical and cultural connections between residents of CNMI and Guam and the three northernmost Mariana Islands and their adjacent waters. These connections ranged from personal connections in the form of visits to the waters (and in the case of scientists, lands) to non-use values assigned to the area now known as the Islands Unit for its worth independent of being able to access or experience it. The exchange of goods from the Islands Unit to the residents of CNMI and Guam is one of the most often mentioned in the oral histories of the this research, that people living on the southern Mariana Islands maintain a connection to the northern islands.

IV. CONCLUSIONS

Accounts of fishing in the northern islands indicate that these trips were rarely commercial in the strictest sense, which presents challenges for regulators. The Magnuson-Stevens Fishery Conservation and Management Act (MSA) defines fishing as commercial if “the fish harvested, either in whole or in part, are intended to enter commerce or enter commerce through sale, barter or trade” (MSA Section 2, 16 U.S.C 1802, 104-297). While many operations we described in the northern islands intended to make a profit and sell a large portion of their fish, nearly all operations had a policy of giving a good deal of the catch away to family, friends, and the local community. These actions do not align with profit-seeking motives associated with the MSA-specified definition of commercial fishing. Despite the fact that many fishing trips did not realize a profit, individuals and companies continued to fund fishing trips to the waters of the Islands Unit. The oral histories collected for this research indicate that fishing trips to the Islands Unit waters were conducted as much for the experience of traveling to the islands themselves and fishing in the surrounding waters, as for a chance of gaining profit.

This hybrid nature of fishing trips is not uncommon in fishing patterns throughout the western Pacific. In a recent review article, Allen (2013) describes how boat fishing in Hawai`i, Saipan, and Guam includes both commercial and subsistence fishing components. While some fish is sold, a good deal is also given away. He suggests that it might be more productive for regulators to think about commercial and subsistence fish rather than commercial or subsistence trips since the types of fishing activities can so often overlap on a single trip.

The discussion of catch dispensation patterns in trips to the waters of the Islands Unit of the Monument is directly relevant to policymakers as they consider how to carry out the directive of Proclamation 8335 to manage traditional indigenous fishing “as a sustainable activity consistent with other applicable law and after due consideration with respect to traditional indigenous fishing of any determination by the Government of the Commonwealth of the Northern Mariana Islands” (Proclamation 8335). These oral histories provide evidence of formal and informal exchange of marine resources from the northern islands’ waters which provide a food source, maintain a culturally important connection and monetary transactions independent of commercial markets to the communities where these fishermen reside in both the CNMI and Guam. The task of providing regulations to manage these types of non-commercial trading of marine resources is beyond the scope of this report.

The proclamation declaring the Monument directs monument management plans to provide for “traditional access by indigenous persons, as identified by the Secretaries in consultation with the Government of the Commonwealth of the Northern Mariana Islands, for culturally significant subsistence, cultural and religious uses within the monument” (Proclamation 8335, 2009). As discussed in the previous section, residents of the Marianas assign non-use values to this area which can be at least partially attributed to the continued visits to this area and exchange of marine resources between the southern and northern Mariana Islands. Additionally, access and exchange of goods between Marianas residents and the Islands Unit have served as a significant link to this historically and culturally important place. The importance of this area should be considered when regulating access and traditional indigenous fishing in the Islands Unit of the monument and the aim of management plans should be to facilitate continued connection to the waters surrounding Uracas, Maug, and Asuncion.

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VI. REFERENCES

- Allen, S. D.
2013. Carving a Niche or Cutting a Broad Swath: Subsistence Fishing in the Western Pacific. *Pacific Science* 67(3):477-488.
- Allen, S. D., and J. R. Amesbury.
2012. Commonwealth of the Northern Mariana Islands as a fishing community. U.S. Department of Commerce, NOAA Technical Memorandum, NOAA-TM-NMFS-PIFSC-36, 89 p.
- Beaumont, N.J., M.C. Austen, J.P. Atkins, D. Burdon, S. Degraer, T.P. Dentinho, S. Derous, P. Holm, T. Horton, E. van Ierland, A.H. Marboe, D.J. Starkey, M. Townsend and T. Zarzycki.
2007. Identification, definition and quantification of goods and services provided by marine biodiversity: Implications for the ecosystem approach. *Mar. Pollut. Bull.* 54(3): 253-265.
- Cicchetti, C.J. and L.L. Wilde.
1992. Uniqueness, Irreversibility and the Theory of Nonuse Values. *Am. J. Agr. Econ.* 74 (5): 1121-1125.
- Eldredge, L.G., R.T. Tsuda, P. Moore, M. Chernin and S. Neudecker.
1977. A Natural History of Maug, Northern Mariana Islands. University of Guam Marine Laboratory, Technical Report No. 43, December 1977.
- Krutilla, J.V.
1967. Conservation Reconsidered. *Amer. Econ. Rev.* 57 (4): 777-786.
- Miller, M. L.
1996. Social Aspects of Pacific Pelagic Fisheries Phase I: The Hawai`i Troll and Handline Fishery. SOEST 96-04 JIMAR Contribution 96-302, University of Hawai`i. 130 p.
- NBK Corporation.
2000. *NBK Corporation – History*. <http://www.nbk.co.jp/english/enkaku/enkaku.htm>
(Accessed 4/16/2013).

Severance, C. J.

2010. Customary Exchange Maintains Cultural Continuity. Pacific Islands Fishery News, Summer 2010 Newsletter of the Western Pacific Regional Fishery Management Council.

U.S. Presidential Proclamation (Proclamation).

2009. Establishment of the Marianas Trench Marine National Monument, Proclamation 8335. Federal Register 74, no. 7 (12 January): 1557.

Western Pacific Regional Fishery Management Council (WPRFMC).

2010. Draft Amendment to the American Samoa Archipelago, Mariana Archipelago, Pacific Remote Island Areas, and Pacific Pelagics Fishery Ecosystem Plans, Fishery Management Measures for the Rose Atoll, Marianas Trench and Pacific Remote Island Area Marine National Monuments. August 13, 2010 Western Pacific Regional Fishery Management Council. Honolulu, Hawaii.

Weisbrod, B. A.

1964. Collective-Consumption services of Individual-Consumption Goods. Q. J. Econ. 78 (3): 471-477.