

Summary of the CNMI 2013 Fisheries Workshop

February 5th, 6th and 7th
Fiesta Hotel, Saipan



Hosted by NOAA PIRO and
CNMI DFW



Report Created by Steve McKagan, NOAA Fisheries, PIRO, Habitat Conservation Division.

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II. Introduction

Over the course of three days (Feb. 5-7, 2013) resource managers, researchers, fishers, vendors and other members of the public gathered at the Fiesta Hotel on Saipan to take part in the 2013 CNMI Fisheries Workshop. This workshop was made possible thanks to funds provided by the Coral Reef Conservation Program through NOAA Fisheries Pacific Islands Regional Office and thanks to the efforts of an interagency steering committee including members from: CNMI Division of Lands and Natural Resources, CNMI Division of Fish and Wildlife, Western Pacific Regional Fisheries Management Council, NOAA Pacific Islands Regional Office, NOAA Pacific Islands Fisheries Science Center, NOAA WPacFIN and Micronesian Environmental Services.

The goals of the workshop were three fold:

1. Provide information about regional research and management initiatives to resource users and the public through a series of presentations.
2. Solicit public feedback about ongoing and emerging issues to help outline potential management and research needs using a combination of surveys, comment forms and Q & A sessions.
3. Host two non-public managers meetings to:
 - a. Evaluate emerging regional protected species issues and
 - b. Look at current gaps in our regional research efforts and make recommendations on how to better address those gaps and link our research to management.

One recommendation from the second managers meeting was to develop a summary of the workshop in order to capture the event and its outcomes. The initial recommendation suggested finding funds to develop more formal workshop proceedings, but follow-up meetings within the steering committee indicated that a smaller summary that could be developed without the need for outside funds would be more efficient and practical. This document aims to satisfy both the original recommendation while incorporating the steering committee guidance. Additional details regarding the presentations, public forums, managers meetings or workshop logistics can be obtained by either reaching out directly to the presenters, members of the workshop steering committee or the workshop coordinator.

This document contains the detailed workshop agenda, abstracts and key findings from the presenters, summaries and notes from the managers meetings, an analysis of the public comments and surveys, copies of the survey forms and questions and an appendix with the raw comments and survey submissions.

Eight different recommendations were generated as part of the second managers meeting (Section IX, page 21) providing a good foundation for regional fisheries priorities and next steps.

I would like to thank the funders, steering committee, presenters and public for all of their contributions and support in making the CNMI 2013 Fisheries Workshop a success.

Steven C. McKagan
NOAA Fisheries
PIRO, Habitat Conservation Division

III. Workshop Agenda

Workshop Dates: February 5th, 6th & 7th
Workshop Location: Fiesta Hotel Saipan – Hibiscus Hall
(670) 234-6412, www.fiestasaipan.com

Workshop Organizers: NOAA Pacific Islands Regional Office
CNMI Division of Fish and Wildlife

Workshop Goals: Providing community feedback about fishing research, regulations and developments in the CNMI, getting feedback from fishers on key issues, and drafting next steps for CNMI fisheries issues.

Workshop Sessions Information: (starting at 12:30 each day)

Tuesday

- **Session #1** - Opening Remarks and Historical Perspective
- **Session #2** - Local Agency Research
- **Session #3** - Federal Agency Research and the role of Data

Wednesday

- **Session #4** - Fisheries and Business
- **Session #5** - The Economics of Fishing in the CNMI
- **Session #6** - Local Agency Regulation History

Thursday

- **Session #7** - CNMI Spearfishing Trends
- **Session #8** - Enforcement Activities in the CNMI
- **Session #9** - Federal Management of Fisheries in the CNMI
- Prizes will be drawn during the break at the end of each session

Managers Forums: (starting at 8:30am):

- Wednesday - Discussing ESA petitioned reef fish
- Thursday - Discussing data, gaps and needs for CNMI fisheries management

Voice of The Fisher: (starting at 5pm each day)

- This is a catered social event with interactive surveys and discussions and table session with all of the workshop presenters and participants. Come here to ask questions, get answers and provide your feedback on fisheries issues.

Workshop Funding: Financial support for this workshop was made possible by NOAA's Pacific Islands Regional Office and the Coral Reef Conservation Program.

IV. Workshop Timetable

Fiesta Hotel Saipan – Hibiscus Hall

| Approximate Starting Time | Tuesday February 5th | Wednesday February 6th | Thursday February 7th |
|---------------------------|--|--|--|
| 8:00am | | Managers Forum – ESA petitioned fish | Managers Forum – Data and Management |
| 12:30pm | Session #1 – Opening Remarks and Historical Perspective <u>Arnold Palacios</u> CNMI DLNR Secretary <u>David Hamm</u> Formerly NOAA WPacFIN | Session #4 – Fisheries and Business <u>Michael Sharpe</u> Secretariat Pac. Community <u>John Kaneko</u> Hawaii Seafood Council <u>Richard Seman</u> CNMI Congress | Session #7 – CNMI Spearfishing Trends <u>John Gourley</u> Micronesia Env. Services <u>Peter Houk</u> Pac. Marine Resource Inst. |
| 15min Break | | | |
| 2:00pm | Session #2 – Local Agency Research <u>Sean Macduff</u> DFW Fish Data Section <u>Michael Tenorio</u> DFW Fisheries Section <u>David Benavente</u> CRM Marine Monitoring | Session #5 – The Economics of Fishing <u>Michel Chan</u> NOAA PIFSC <u>Courtney Beaver</u> NOAA PIFSC <u>Clayward Tam</u> Pacific Isl. Fisheries Group | Session #8 – Enforcement Activities in the CNMI <u>Tony Marham</u> DFW Enforcement Section <u>Bryan Anderson</u> US Coast Guard |
| 15min Break | | | |
| 3:30pm | Session #3 – Federal Agency Research and the role of Data <u>Kaylyn McCoy</u> NOAA PIFSC CRED <u>David Nichols</u> NOAA PIRO PRD <u>John Gourley</u> Micronesia Env. Services | Session #6 – Local Agency Regulation History <u>Michael Tenorio</u> DFW Fisheries Section <u>Michael Trianni</u> NOAA PIFSC <u>Steve McKagan</u> NOAA PIRO HCD <u>Todd Miller</u> DFW Fisheries Section | Session #9 – Federal Management of Fisheries in the CNMI <u>David Itano</u> NOAA PIRO <u>Cindy Grace-McCaskey</u> NOAA PIFSC <u>Mark Mitsuyasu</u> WPRFMC <u>Marlowe Sabater</u> WPRFMC |
| 5:00pm | Voice of the Fisher (Social, Tables, Surveys) | Voice of the Fisher (Social, Tables, Surveys) | Voice of the Fisher (Social, Tables, Surveys) |
| 6:00pm | | | Lunar Calendar |

- For a more accurate estimate of talk times and content please see the full agenda

V. Workshop Abstracts Tuesday, February 5th

Day 1, Session #1

Opening Remarks and Historical Perspective

Facilitated by Todd Miller DFW Fisheries

12:45

Presenter: Arnold Palacios (DLNR Director)

Title: **Workshop Welcome and Introduction**

1:00

Presenter: David Hamm (Previously of NOAA WPacFIN)

Title: **History, Evolution, Methods, and Challenges of Fisheries-Dependent Monitoring in the CNMI and Associated Trends in Fisheries Landings**

Abstract: *This talk will define what fisheries dependent monitoring is, why it is important, the various methods used to monitor fisheries, and describe the history and evolution of application of these tools in the CNMI from 1981 to the present, including various stories of success and failure through the years. It will also present summary statistics and plots of the trends in the pelagics, bottomfish and reef fish fisheries in the CNMI and make some comparisons to the same fisheries in Guam.*

Day 1, Session #2

Local Agency Research Efforts

Facilitated by Todd Miller DFW Fisheries

2:00

Presenter: Sean Macduff (DFW Fisheries Data Section)

Title: **Fisheries dependent research in the CNMI**

Abstract: *Small-scale nearshore fisheries in the CNMI are of fundamental importance for subsistence, social and cultural purposes. In the CNMI, most coral reef fishing occurs in near-shore areas. Cast-netting, spear-fishing, hook and line, gleaning, trolling, and bottom fishing are just some of the common fishing techniques practiced in CNMI. The need for better fisheries data in the CNMI culminated in 1982, when the Division of Fish and Wildlife (DFW) was tasked with the collection and processing of fisheries data in the CNMI. With assistance from NOAA- Western Pacific Fisheries Information Network (WPacFIN), a series of data collection programs were designed and implemented. A majority of the information collected by the CNMI Division of Fish and Wildlife (DFW) are fishery dependent data which are dependent upon the voluntary participation of the fishermen and first-level purchasers. The boat- and shore-based creel survey, vendor*

invoice, biosampling and life history projects are examples of the fishery-dependent research being conducted at DFW.

2:30

Presenter: Michael Tenorio (DFW Fisheries Section)

Title: **An Overview of Research Projects in the CNMI**

Abstract: *Managing fisheries in the CNMI is dynamic. There are various methods of monitoring a fishery and a multitude of ways to assess the information being collected. The Division of Fish and wildlife utilizes these different data collection methods and analyses to better understand fisheries in the CNMI and provide management options.*

3:00

Presenter: David Benavente (CRM – Marine Monitoring Team)

Title: **The Ecological Role of CNMI Fish Stocks**

Abstract: *Traditionally the CNMI's fish stocks have been examined through a fisheries stock perspective. Currently the CNMI's MMT is looking at fish populations from an ecological stand point, examining characteristic trends throughout long-term MMT survey sites with the added fish component to provide better resolution to understanding and ecology of coral reefs.*

Day 1, Session #3

Federal Agency Research Efforts And the Role of Data

Facilitated by Steve McKagan, NOAA PIRO

3:30

Presenter: Kaylyn McCoy (NOAA PIFSC – Coral Reef Ecosystem Division)

Title: **NOAA CRED US Pacific Coral Reef Fish Monitoring Program – Example Results from the Mariana Archipelago**

Abstract: *The Pacific Islands Fisheries Science Center's Coral Reef Ecosystems Division (CRED) conducts ecological monitoring of coral reef communities at 45 primary islands and atolls in the Hawaiian Archipelago, the Mariana Archipelago, American Samoa, and the Pacific Remote Island Areas as part of the Pacific Reef Assessment and Monitoring Program (Pacific RAMP). Surveys are conducted every three years, and two methods are used to monitor coral reef fishes; the stationary point count method, and the towed-diver survey method. By using the same methods, design, and personnel across the Pacific, we are able to assess spatial and ultimately temporal trends within archipelagos and at a larger scale using highly comparable data. Example results demonstrating potential uses of the RAMP data include comparisons of reef fish biomass (in total and by size class) for islands in the Mariana Archipelago, and in comparison to other Pacific regions.*

CRED's data set show several trends in reef fish biomass in the Mariana archipelago, as well as across the Pacific. Fish biomass is greater in the northern, unpopulated islands than the southern populated islands, with the largest differences for piscivores, i.e. large roving predatory fishes such as sharks and jacks. In addition, there are significant differences between northern and southern islands dependent on fish body size: no clear differences in biomass of small coral reef fishes (<20 cm total length), but much greater biomass in northern islands of large coral reef fishes (> 50 cm). These patterns of difference between human-populated and unpopulated islands are consistent throughout the Pacific archipelagos that CRED surveys.

4:00

Presenter: David Nichols (NOAA PIRO Protected Resources Division)

Title: **NOAA ESA Listing Actions**

Abstract: *Protected Resources Division (PRD) is dedicated to protecting and recovering endangered and threatened species as mandated by the Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA). Through management, conservation and recovery efforts, and public outreach and education, the PRD strives to ensure the recovery and survival of the protected marine species of the Pacific Islands Region for future generations. The Endangered Species Act of 1973 (ESA) provides for the conservation of species that are endangered or threatened and the conservation of the ecosystems on which they depend. Under Section 4 of the ESA, in addition to NOAA Fisheries initiating status reviews of marine species, any U.S. citizen or organization may petition NOAA to list a species as "threatened" or "endangered", reclassify a species, or to revise critical habitat under the ESA. This presentation will provide an update on the current listing actions relevant to the Pacific Islands Regions. These actions include, among others, responses to the petitions to list bumphead parrotfish, 83 coral species, humphead wrasse, and 8 species of pomacentrid reef fish.*

4:30

Presenter: John Gourley (Micronesian Environmental Services)

Title: **A preliminary analysis of the potential effects of HB17- 299 to CNMI residents and businesses**

Abstract: *Abstract of your talk: In May 2012, a bill was filed in the CNMI House titled: "Miscellaneous Prohibitions and Protections to include a new section prohibiting the taking and selling of certain sizes of marine resources for commercial purposes; and for other purposes." This proposed legislation identifies six size categories that would restrict the commercial sale of many of the commonly eaten reef fish throughout the CNMI. According to the House Bill, fish size restrictions were based on "the best available estimates of reproductive maturity for reef fish that are commonly found in our*

markets.” Unfortunately, no analysis on the sizes at maturity for the numerous species was included in the HB.

As with any proposed fishery legislation, it is imperative to properly vet the science behind the legislation, as well as consider unintended consequences. That is, the potential effects the legislation may have on fishing communities, local fish markets, fishermen, stakeholders, DFW regulatory responsibilities, and the food on our plate.

The focus of this talk is not on the scientific merits of the size restrictions, but on how current fishery dependent data- provided voluntarily by fishers and vendors - can be utilized to better understand how proposed legislation will affect the regulated public. Using 24 months of reef fish market data from Saipan, potential unintended consequences will be identified should HB 17-299 become law, as proposed.

VI. Workshop Abstracts for Wednesday, February 6thth

Day 2, Session #4

Fisheries and Business

Facilitated by Michael Trianni NOAA PIFSC

12:30

Presenter: Michael Sharpe (Secretariat of the Pacific Community)

Title: **Keynote on business management aspects of fisheries**

Abstract: *The economics of various fisheries in the Pacific Island Countries and Territories provide interesting case studies for management and development of fisheries in the Commonwealth of the Northern Mariana Islands (CNMI). This presentation provides an economic overview of three major fisheries in the Western and Central Pacific Ocean (WCPO) – small scale capture based fisheries, the industrial tuna fisheries, and aquaculture.*

General business management aspects of small-scale capture based fisheries and aquaculture are discussed and main challenges in achieving improved economic performance are highlighted. Sea cucumber (bêche de mer) trade, fish aggregating devices (FADs) and mariculture case studies are presented to demonstrate how variables, such as resource depletion, operating costs and market forces, can affect the financial performance of a business.

Finally, future challenges and opportunities are discussed, with emphasis on the projected impact of climate change in CNMI.

1:00

Presenter: John Kaneko (Hawaii Seafood Council)

Title: **Seafood Quality and Safety: Essential to Fishing and Seafood Business Success.**

Abstract: Responsible fisheries produce safe, wholesome and sustainable seafood. Successful seafood businesses pay strict attention to seafood quality and safety through sanitation and seafood safety control programs. The commercial seafood market chain consists of fishers, processors, wholesalers, retailers, restaurants and end users. Each plays a role in preserving seafood quality and safety. Local and federal agencies have jurisdiction over the different links in the market chain. Successful fishing and seafood businesses embrace the responsibility for maintaining seafood quality and safety as a matter of business survival and regulatory compliance. Requirements and commitments for seafood quality and safety controls need to be recognized and incorporated in plant design, operations and business plans.

1:30

Presenter: Richard Seman (CNMI Congress)

Title: ***The Northern Marianas Fishermen's Marketing Association,***

Providing the Community Top Quality Fish Products

Abstract:

Mission Statement

The Northern Marianas Fishermen's Marketing Associations (NMFMA) is a non-profit organization composed of locally-based fishermen members who have associated themselves for the sustainable management and development of the Commonwealth's marine resources, and along with its members are committed in providing the community quality fresh seafood.

NMFMA is dedicated in the sales and marketing of its members' locally landed seafood products and is also committed in representing its members in any and all issues pertaining to the management, development and enforcement of the Commonwealth's marine resources.

Membership

There are currently over 40 NMFMA members which includes free-dive spearfishing, shallow and deep-bottom fishing, pelagic trolling, talaya and rod and reel casting. Application for membership is open and encourages all fishermen to join.

Member Benefits

All NMFMA members will receive benefits which may include fuel-price discount, store-wide product discount, local and regional fishery representation, fishing enhancement trainings and/or workshops, fuel and ice charge account and year-end performance bonus.

Facility and Equipment

NMFMA facility is situated at the Marianas Insurance Company (MIC) Building-II, along Monsignor Guerrero Street in San Jose. It is occupying a total floor-area of 2,288 sq./ft and is composed of 5 primary spaces/rooms which include the Main Store area, the processing room, the storage room, the walk-in freezer/chiller and the office room.

The facility will contain 3 six-feet long refrigerated display cases, a 3 feet display case, an ice (flake ice) making machine, a stainless-steel refrigerator, chest freezer and stainless-steel processing tables and counter-tops. In addition, a 20' x 10 walk-in freezer/chiller will also be installed at the facility as well as a backup generator.

Operation

The NMFMA will be opened for business from 10:00am to 7:00pm daily, Monday through Sunday. However, the personnel operation will occur from 9:00am through 8:00pm to allow for 1 hour preparation and display of products before the opening of business and cleaning and sanitizing of the facility after closure of the business hours.

From 9:00am to 10:00am, staff will be preparing fish products for display and sales utilizing the highest food-handling standard. Staff will be removing all unsold fish products after the close of business at 7:99pm and storing them appropriately before display cases and trays are properly washed and sanitized.

Personnel

All NMFMA personnel are required to undergo proper training in the handling and processing of all seafood products by a certified professional(s) before he or she is allowed to handle any of the co-op products. All personnel are also required to wear uniforms while on duty and must wear proper head and foot wears at all times.

Day 2, Session #5

The economics of fishing in the CNMI

Facilitated by Michael Trianni NOAA PIFSC

2:00

Presenter: Courtney Beavers (NOAA PIFSC)

Title: **Social and economic characteristics of boat-based fishing in the CNMI**

Abstract: *In 2011, a cost-earnings survey of boat-based fishermen in the Mariana Archipelago was conducted to better understand the social, economic, and behavioral characteristics of fishermen in the CNMI and Guam. In the CNMI, 114 fishermen participated in this study. This talk will present the results of this study for the CNMI and will include a look at the composition of the fleet; fishing effort and catch; how catch is distributed and where it is sold; investment levels in vessels, gear, and electronics; fishermen's revenues from the sale of fish; the importance of fishing to food security; and perceptions of fishery conditions. Findings of this study reveal an important emphasis on sociocultural role of fishing in the CNMI.*

2:30

Presenter: HingLing 'Michel' Chan (NOAA PIFSC)

Title: **Fishing Cost of Small Boat Fisheries in CNMI**

Abstract: *The Pacific Islands Fisheries Science Center (PIFSC) Economics Program has implemented continuous economic data collection in the CNMI small boat-based fisheries in April 2009. The economic data collection intends to gather fishing expenditure data for boat-based reef fish, bottom fish, and pelagic fishing trips on a continuous basis. This presentation will present the summary economic data in CNMI. Similar programs are also implemented in Guam and American Samoa. This presentation will also present the summary the economic data in Guam and American Samoa for comparison.*

Key findings for my presentation (Fishing cost of small boat fisheries in CNMI): Fishing trip cost in CNMI (fuel use, ice use, bait and chum, and gear lost) has been increasing

since 2009 due to increasing fuel cost. Fishing cost varies by fishing gear. Trolling trips cost the most when compared with bottomfish and spear/snorkel trips. Compared with CNMI, Guam and American Samoa experienced higher fishing cost due to higher gear lost and bait cost.

3:00

Presenter: Clayward Tam (Pacific Islands Fisheries Group)

Title: "Catch More Fish Using Less Fuel"

Abstract: *Proven effective low cost fishing methods that catch tuna and other pelagic species around Fish Aggregation Devices (FAD's). These methods have been used around FAD's in Hawaii and have also proven to be effective on open schools of fish. With today's high fuel prices and raising equipment cost fishermen are looking for alternative methods to reduce operational cost while catching more fish. This manual will describe some of the fishing methods developed and used by Hawaii fishermen to reduce operating cost and help catch more fish. Hopefully these methods will also be used by CNMI fishermen to efficiently produce more fish per trip.*

Day 2, Session #6

Local Agency Regulation History

Facilitated by Trey Dunn DFW

3:30

Presenter: Trey Dunn (DFW Fisheries Section)

Title: **CNMI Fisheries Management and Regulations history and importance of the Ban on Scuba Spear**

Abstract: *SCUBA spearfishing has become an increasing issue in fisheries management in the Pacific region. The CNMI has taken a proactive approach towards the management of scuba spearfishing in the CNMI by phasing this fishing method out. In August of 2000, the CNMI passed a law to prohibit the use of non-traditional fishing methods. This talk looks at the issues raised with scuba spearfishing in the CNMI and what led to the development of its restriction.*

4:00

Presenter: Michael Trianni (NOAA PIFSC), Steve McKagan (NOAA PIRO HCD)

Title: **The evaluation of net-use restrictions in Saipan Lagoon.**

Abstract: *Regulatory restrictions on the use of gill, drag, and surround nets were implemented in the CNMI late December 2003. Fisheries resources surveys headed by the CNMI Division of Fish and Wildlife were undertaken in 2004, 2007, and 2011. Between 2004 and 2007 significant differences were observed in the abundance and biomass of some reef fish*

families. The 2011 sampling strategy was updated following power analysis from prior surveys. Tentative survey results from 2011 are compared to 2004 and 2007 survey results, and discussions of the benefits of the net-use restrictions to particular reef fish families are highlighted.

4:30

Presenter: Todd Miller (DFW Fisheries Section)

Title: **Overview of the CNMI MPA Workshop – Current Issues and Future Directions**

Abstract: *In January 2013 the Commonwealth of the Northern Marianas Islands (CNMI) Department of Lands and Natural Resources (DLNR) held a one-day workshop on Marine Protected Areas (MPAs). The workshop was funded by the NOAA Office of National Marine Sanctuaries, Pacific Islands Region, with a focus on the CNMI's experience with its MPAs, and a discussion on how Federal programs can assist in their management. The workshop featured on and off-island marine resource experts in the establishment, management, enforcement and the science behind MPAs. In this talk, I will provide an overview of the MPA workshop and go over major points that were discussed in the context of benefits, tradeoffs and the future role of MPAs in the CNMI.*

5:00

Presenter: Mike Trianni and Mike Tenorio (NOAA PIFSC, DFW Fisheries Section)

Title: **Population Assessment and Evaluation of the Recovery of the Sea Cucumber *Actinopyga mauritiana* in the Commonwealth of the Northern Mariana Islands.**

Abstract: *In 2006 a survey on Saipan was undertaken in to determine the recovery of surf redfish (*Actinopyga mauritiana*) in the areas harvested in 1996 and 1997. The results from this assessment of the sampled area suggest a fully recovered population. Understanding population growth rates of sea cucumber stocks is essential to the development of sustainable management regimes, and subsequently, there is a need to resurvey harvested sea cucumber populations at regular intervals.*

VII. Workshop Abstracts for Thursday, February 7th

Day 3, Session #7

CNMI Commercial Spearfishing Trends

Facilitated by Robert Schroeder NOAA PIRO HCD

12:30

Presenter: John Gourley (Micronesian Environmental Services)

Title: **Characterization of the commercial Saipan spearfishing industry**

Abstract: *The Saipan Bio-sampling Program was initially established during late 2010 with funding from the NOAA National Marine Fisheries Service to Micronesian Environmental Services. Supplemental funding was provided by the Western Pacific Regional Fishery Management Council in 2011 and 2012 and logistical professional support was provided by biologists from the Division of Fish and Wildlife. Presently, this program is in its third year of funding (September 2012 – Oct 2013) .*

The goal of the Bio-sampling Program is to collect commercial fish data from Saipan based fish vendors. Due to the interest the fish vendors have with our near shore reef fish populations, they worked with MES in developing a voluntary data collection system. Field work involved sampling spearfish catches prior to the fish entering the retail market. Entire catches are sampled and the following information collected; species, individual fish weights, fishing location, gear type, boat or shore based, and hours fished.

As of 31 December 2012, the bio-sampling team has sampled over 1,000 commercial spear fish catches and measured over 65,000 fish comprising 141 species. In addition, over 7,500 daily vendor logs have been submitted in an effort to track Saipan commercial reef fish landings and supplement DFW data collection efforts.

This talk will provide preliminary findings that have been collected to date. This includes reported spear fish landings, identification of the dominant species found in the markets (numerically and by biomass), fish sizes, and where the reef fish are caught.

Bio-sampling team members include; Tony Flores (MES), Manny Ramon (MES), Patrick Ito (MES), John S. Castro, Jr. (MES), Mike Tenorio (DFW), Ray Roberto (DFW), Trey Dunn (DFW). The success of this program would not have been possible without the cooperation and assistance of our fish vendor partners.

1:00

Presenter: Peter Houk (Pacific Marine Research Institute)

Title: Status and function of CNMI's coral-reef fishery

Abstract: Limited information is currently available to the scientific community and public regarding to the status and function of CNMI's coral-reef fishery. Yet, the fishery has long history of use for society, culture, and economic prosperity. This situation forms the basis for the present talk that aims to: (1) offer generalized insight to the public regarding the ecological role that coral-reef fisheries play, (2) present findings from recent and current scientific studies that assessed CNMI's fisheries and their ecological function, and (3) use the collective information to highlight draft legislation that was recently developed to begin addressing some of the concerns surrounding CNMI's coral-reef fish stocks.

Day 2, Session #8

Enforcement

Facilitated by Todd Miller DFW

1:30

Presenter: Tony Marham (DFW Enforcement Section)

Title: Local Enforcement and Fisheries

Abstract: This topic will address law enforcement activities and responsibilities in enforcing both local and federal laws and regulations governing Marine Protected Areas in the Commonwealth of the Northern Mariana Islands. The topic will highlight the types of incidents or violations being committed within MPAs, the frequency of violations, penalties and fines, as well as some challenges in dealing with and addressing these and other violations.

2:00

Presenter: Bryan Anderson (US Coast Guard)

Title: Commercial Fishing Vessel Industry Regulations Enforced by the USCG.

Abstract: New regulations recently enacted in October 2012.

Day 3, Session #9

Federal Management

Facilitated by Steve McKagan, NOAA PIRO HCD

2:30

Presenter: David Itano (NOAA PIRO Sustainable Fisheries)

Title: Recreational (Non-commercial) Fisheries of the Pacific Islands Region: Issues and update

Abstract: *The Recreational Fisheries Engagement Initiative was implemented by NOAA in 2009 to focus attention on recreational fishing issues and to reach out to their recreational fishing constituency. The first milestone in the Engagement Initiative was a National Saltwater Recreational Fishing Summit held in 2010 where over 170 participants from all sectors of recreational fishing from all regions (including American Samoa, the CNMI, Guam and Hawaii) met in Alexandria, Virginia to discuss recreational fishing issues. Summit delegates identified four broad visions for fostering recreational fisheries: 1) improved open communication; 2) improved robust, timely and accurate data; 3) grounding fishery management decisions on a more complete understanding of the social and economic contributions of fishing communities, and; 4) ensure broad access to recreational fishing opportunities. Summit outputs also contributed to the development of five National Priority Goals for recreational fisheries to improve: fishing opportunities; catch-and-effort data; social/economic data; communications/outreach; and integration of recreational fishing issues into NOAA and the core mission of NOAA Fisheries. To this end, the National Marine Fisheries Service, Pacific Islands Region office recruited a full-time Recreational Fisheries Coordinator in late 2012 to address these visions and goals. The task becomes highly complex with the recognition that “recreational fishing” issues in the Pacific region encompass a broad range of subsistence, cultural, part-time commercial and purely recreational motivations. Recreational and commercial fisheries are meant to be addressed on an even level within NOAA, which has never been the case, but recreational/non-commercial priorities are beginning to rise to the top of the NOAA agenda. An update on the Recreational Fisheries Engagement Initiative and a look at upcoming recreational fishery events will be presented and discussed.*

3:00

Presenter: Cindy Grace-McCaskey (NOAA PIFSC)

Title: **Survey of CNMI Residents Regarding Marianas Trench Marine National Monument**

Abstract: *This talk will provide an overview of results a phone survey conducted by telephone from January 9 through February 12, 2012 with 500 randomly selected CNMI residents and 500 randomly selected Guam residents, for a total of 1,000 responses. Since management planning is beginning for the Marianas Trench Marine National Monument, there is a need to define CNMI and Guam residents’ management preferences and perceptions of the effects of the Monument so this information is available to managers as they develop and begin to implement the plan. The survey contained questions on awareness, knowledge, and attitudes regarding the Monument, preferences for management and scientific research, and level of interest in becoming involved in Monument management and outreach activities. Additional questions included experiences with and attitudes toward existing uses of coastal and marine resources, to provide a context for interpreting responses regarding the Monument. This*

talk will also discuss some of the implications of these results in the context of proposed Monument regulations.

3:30

Presenter: Mark Mitsuyasu (Western Pacific Regional Fisheries Management Council)

Title: **Federal Fisheries Management in the Western Pacific Region**

Abstract: *The Western Pacific Regional Fishery Management Council is one of the eight regional councils established under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) in 1976 to manage fisheries of the United States from 3-200nm. The MSA is the main law governing management of living marine resources in the United States and guides all Council actions. By establishing the Council, this encourages local participation, responsibility and authority to the management of the marine resources. This bottom up approach allows the community to participate in the fishery management decision making through the Council's different advisory bodies. The recommendations from the Council are then acted upon by the National Marine Fisheries Service for implementation. This talk will provide a general overview of the Council process and highlights the importance of community input in the decisions made to ensure the sustainability of the fishery resources of the US and its jurisdictions.*

The latest Council activities can be found at - <http://www.wpcouncil.org/>

4:00

Presenter: Marlowe Sabater (Western Pacific Regional Fisheries Management Council)

Title: **Managing Fisheries Under Annual Catch Limits**

Abstract: *The Reauthorization of the Magnuson-Stevens Act in 2006 had significantly changed the way Regional Fishery Management Councils deal with managing the US fisheries through implementation of annual catch limits (ACLs). Stock and output control-based approaches like ACLs pose problems for fisheries that are multi-gear, multi-species and spatially diverse by nature. The National Standard 1 Guidelines of the National Marine Fisheries Service is reliant on the existence of Maximum Sustainable Yield (MSY) for stock managed under ACLs. This provides very little guidance for reef fishes that has very few stock assessments in which the overfishing limit, a critical component of the ACL process, is based upon. Biological reference points that determine stock status are lacking for most of the species. Managing stocks that are data deficient proved to be a big challenge. This presentation outlines the approach that the Western Pacific Regional Fishery Management Council took in specifying ACLs for reef fishes in the US Pacific state and territories. Gaps and challenges were identified and recommendations are provided to enhance management of reef fish stocks under a catch limit system.*

The latest information on ACLs can be found at - <http://www.wpcouncil.org/2014/06/27/press-release-federal-fishery-managers->

recommend-new-annual-catch-limits-address-other-measures-for-us-pacific-islands/

5:45

Presenter: Marlowe Sabater (Western Pacific Regional Fisheries Management Council)

Title: **Lunar Calendar Presentation**

Abstract: *Since 2007, the Western Pacific Regional Fishery Management Council has been working with the CNMI community to develop a lunar calendar that would facilitate their participation in fisheries science and management. The lunar calendar symbolizes this effort, as fishermen traditionally attuned their fishery practices to the lunar cycle. The goal of the lunar calendar is to include the consideration of relevant information that has typically not been included in fishery management decisions and strong community involvement. The forum being presented provides the beginning of the next steps of increasing the functionality of the lunar calendar by documenting traditional fishing techniques and knowledge into a citable reference to be used by the CNMI community.*

The latest lunar calendars can be found here -

<http://www.wpcouncil.org/education-and-outreach/lunar-calendars/>

VIII. Managers Meeting on ESA issues, Agenda and Notes

Wednesday February 6th – Day 2, Managers Meeting

Endangered Species Act and Fisheries - Update and Discussion

Facilitated by Trey Dunn DFW

8:00 A look at the recent ESA petitions including how local researchers and managers can contribute to NMFS analysis and what a listing could mean for fisheries in the CNMI.

Agenda

- | | |
|---|---------------|
| 1. Meeting Introduction | Trey Dunn |
| 2. Introduction of Participants | Trey Dunn |
| 3. Identification of Rapporteur | Trey Dunn |
| 4. Setting of Ground Rules | Trey Dunn |
| 5. Napoleon Wrasse | |
| 5.1. Background of ESA Petition | David Nichols |
| 5.2. Connections to the Bumphead Parrotfish request | |
| 5.3. Description of Existing Fishery or Interaction | |
| 5.4. Data Sources | |
| 5.5. Potential impact on CNMI fishery | |
| 5.6. Discussion of relevant or overlapping local management | |
| 6. Damsel Fish | |
| 6.1. Background of ESA Petition | David Nichols |
| 6.2. Description of Existing Fishery or Interaction | |
| 6.3. Data Sources | |
| 6.4. Connection to Coral Recommended for Listing | |
| 6.5. Potential impact on CNMI fishery | |
| 6.6. Discussion of relevant or overlapping local management | |
| 7. Recommendations | |
| 8. Resources | |
| • Bumphead Parrotfish (negative finding on petition to list and other information): | |
| http://www.nmfs.noaa.gov/pr/species/fish/bumpheadparrotfish.htm | |
| • Humphead Wrasse: | |
| http://www.nmfs.noaa.gov/pr/species/petitions/humphead_wrasse_petition_10.29.12.pdf | |
| • 8 Species of Pomacentrid Reef Fish: | |
| http://www.nmfs.noaa.gov/pr/species/petitions/pomacentrid_reef_fish_petition_2012.pdf | |
| • Corals proposed for listing under the ESA: | |
| http://www.nmfs.noaa.gov/pr/species/invertebrates/corals.htm | |

During this session David Nichols provided an overview of marine species that had recently been petitioned for listing under the Endangered Species Act. Since the time of the workshop there have been several updates and findings for these and other species. The best way to keep up with the status updates is to follow the NOAA PIRO Protected Resources Division website.

http://www.fpir.noaa.gov/PRD/prd_index.html

IX. Managers Meeting on Regional Data Gaps, Agenda and Notes

Thursday February 7th – Day 3, Managers Forum

Data and Fisheries Management

Facilitated by Arnold Palacios DLNR

8:00 A look at CNMI fisheries data and management to outline the gaps in our knowledge and the needs we have in order to address pending or potential management activities, including but not limited to looking at ACLs, existing management measures and new management priorities.

The notes below are based on observations and perceptions from the managers that took part in the February 7th managers meeting on regional data gaps including: NOAA PIRO HCD, DLNR, NOAA PIFSC, DFW Fisheries, UOG / PMRI, SPC, The Council, Retired (WPacFIN), NOAA CRED, MES, RARE / MINA, NOAA Fellow (DFW), NAU Students, Hawaii Seafood Council, NOAA PIRO SF, DEQ / MMT, Tinian DLNR. ***Recommendations that emerged from these discussions are numbered and bolded throughout this section.***

Agenda

- | | | |
|---|------------------------------|-----------------|
| 1 | Meeting Introduction | Arnold Palacios |
| 2 | Introduction of Participants | Arnold Palacios |
| 3 | Identification of Rapporteur | Arnold Palacios |
| 4 | Setting of Ground Rules | Arnold Palacios |
| 5 | Reef Fish | |

5.1 Description of Existing Fishery

List of known activities:

- *Commercial spear fishery*
- *Noncommercial spear fishery*
- *Commercial hook and line (reef and shallow bottom)*
 - *Juvenile fish runs*
- *Noncommercial hook and line (reef and shallow bottom)*
 - *Juvenile fish runs*
- *Cast net fishery*
 - *Juvenile fish runs*
- *Net use exemptions*
- *Atulai (big eye scad)*
- *Net use on Rota and Tinian*

5.2 Data Collection Sources and Gaps (FD = Fisheries Dependent, FI = Independent)

- *Commercial spear fishery*
 - *Saipan creel (most successful with small boat activities)*
 - *MES Market Surveys*
 - *PMRI Market Surveys*
 - *1993 and 1998 work*

- *Noncommercial spear fishery*
 - *Saipan creel (most successful with small boat activities)*
 - *Socioeconomic survey information*
- *Commercial hook and line (reef and shallow bottom)*
 - *Saipan creel (successful with small boat and shoreline fishers)*
 - *Trip tickets?*
 - *Juvenile fish runs*
 - *Saipan creel?*
- *Noncommercial hook and line (reef and shallow bottom)*
 - *Saipan creel (successful with small boat and shoreline fishers)*
 - *Juvenile fish runs*
 - *Saipan creel (for juvenile jack run or e'e, it is mostly successful, but can cause over expansion due to the high number of interviews and ease of identification) The juvenile goat and rabbitfish runs are less well identified by the creel.*
 - *This information appeared within trends of the NAP data*
- *Cast net fishery*
 - *Juvenile fish runs*
 - *Saipan creel?*
 - *This information appeared within trends of the NAP data*
- *Net use exemptions*
 - *DFW Data Section Surveys*
- *Atulai (big eye scad)*
 - *Only captured for west side Saipan in creel*
 - *Possibly captured in part by market surveys*
 - *This information appeared within trends of the NAP data*
- *Net use on Rota and Tinian*
 - *Data collected by Tinian DLNR*

Identified Gaps

- *Big Boat Fishing Activities*
**Saipan creel does not catch this*
- *Tinian and Rota have no creel*
- *Tinian and Rota are not fully represented in market surveys*
- *Shore based activities not near Saipan lagoon are often missed in creel*
- *Deep water complex of reef fish that have no FI survey information*
- *Shore based spear fishing*
- *All pulse fisheries can either be missed or result in over expansion, especially as new fisheries emerge*
- *The importance of ecological function and how that feeds back to reef and habitat health*
- *A better understanding of the range of our 'stocks' and the interconnectivity between jurisdictions.*

Recommendation #1 - Market Survey Trend Analysis

Possible underutilized data - A market survey comparison between 1994 and 1998 suggested that the size and number of fish at the market was in decline. We now have 2012 market data (2013 and 2014 too) to carry the comparisons forward. This could even be compared with information from the NAP (Nutritional Assistance Program), but that data is in a challenging format. Comparing these sources of information could provide an interesting picture of market changes over time. NOAA PIFSC may be able to provide support for the socioeconomic end of working up this type of information. – Recommendation - that we form a sub-group to address how to best work with this and evaluate.

In yesterday's meeting it was highlighted that some of our previous management measures were made without a complete picture of the science, and some of those measures we are very proud of. The net ban may be the best example of this. But now that we have so much new data we can revisit and look at future management or policy recommendations which federal partners may be able to assist.

Recommendation #2 – Increased Transparency

We also need to increase our transparency in methods and data so that it is easier to generate agreement about findings.

Recommendation #3 – Better partnering between CRED, DFW and MMT to address gaps

We have a lot of gaps in our range of coverage. This can be improved by merging more of the CRED, DFW and MMT activities.

We could also ask each of the presenters to include a list of data gaps or needs from their work into their summary points as part of the workshop proceedings.

5.3 Stock Assessment Goals

Recommendation #4 – Collect and analyze more statistically relevant data to better highlight management needs

What we need here will vary based on our proposed management strategies. Catch limits would need stock assessments, size limits would need life history, MPAs would need other types of information. Should we address what direction we want to go with management first? We also need to know where we are at to see what we need, so which first? First we need to know what the problem is. So, is there a problem that needs management action? Do we have enough data to suggest we need additional management? We don't know much about the life history of our reef fish which may make it impractical to look forward to any management with the incomplete

6 Bottom Fish

6.1 Description of Existing Fishery

- *Commercial*
 - *Big boat activities in 1994-1995*
 - *Ongoing small boat activities locally, at pinnacles and N. Islands*
- *Noncommercial*

- *Big boat tourisms activities also in mid 1990s*
- *Ongoing small boat activities locally, at pinnacles and N. Islands*

6.2 Data Collection Sources and Gaps

- *Mandatory logbook submissions required as of 2009 if you sell any (even 1) fish over the course of the year which includes a permit and daily log record even if it was not sold. There are approximately 10 boats permitted, but there are likely far more people selling at least 1 bottom fish throughout the year, so we are missing data for many other active fishers. This reporting requirement is not required for all deeper fish caught, just all deep fish that are part of the BMUS (bottom fish management unit species). However, shallow bottom fishing, like red gill emperor, can require this logbook even if it isn't that deep.*
- *Any boat over 40ft is also required to submit trip reports, but WPacFIN has never received one of these records, so the data is being missed.*
<http://www.pifsc.noaa.gov/WPacFIN/>
- *Rota and Tinian are missed almost completely.*
- *DFW also has a considerable amount of bottom fish information sitting in excel files that can be examined to look at the landings over approximately 10 years of monitoring.*
- *MES has also started a market survey for bottomfish.*
- *The Nutritional Assistance Program (NAP) also has some information on bottomfish that could prove useful*
- *Stocks issue*

Recommendation #5 – Improve / expand bottomfish data collection to improve Annual Catch Limits (ACL) estimates

Receipt book information is a subset of the logbook information which also includes personal consumption and that which is given away. (Perhaps proxies could be set based on the relationship between the amount sold and the amount kept)

The information we are missing here could drastically impact the ACL thresholds. If we do a better job of monitoring this could cause us to exceed our quotas quickly, especially if the larger boats begin to submit information. I.e. we need to be careful not to interpret improved information as overfishing.

The management description of what type of bottom fishing you are doing can also be defined by the amount of weight used to achieve certain depths.

6.3 Stock Assessment Goals

The additional need is to capture the recreational/subsistence component. This can be assisted by studies using bot cams and Baited Remote Underwater Video Stations (BRUVS) in conjunction with research cruises. According to estimated ACLs we are underutilizing this resource, assuming the commercial landing and creel information used to generate the catch estimates is near accurate.

- 7 Pelagic Fish *(topic skipped due to time constraints)*
- 7.1 Description of Existing Fishery *(topic skipped due to time constraints)*
- 7.2 Data Collection Gaps *(topic skipped due to time constraints)*
- 7.3 Stock Assessment Goals *(topic skipped due to time constraints)*
- 8 Invertebrate *(topic skipped due to time constraints)*
- 8.1 Description of Existing Fishery *(topic skipped due to time constraints)*
- 8.2 Data Collection Gaps *(topic skipped due to time constraints)*
- 8.3 Stock Assessment Goals *(topic skipped due to time constraints)*
- 9 Review Existing Federal Requirements *(topic skipped due to time constraints)*

9.1 Annual Catch Limits

There is now a considerable amount of data that can help us move forward with better numbers here. This marked a move from an effort based to a catch based management approach.

i. Reef Fish ACLs

Until now extraction estimates were based on catch information from the CNMI creel program (also trip tickets?). The Council concedes 0-3 to local management, but the catch limit threshold for ACLs is still based on catch within those 0-3, i.e. closures would only affect waters beyond the 3 miles. This data is inconsistent, but this has been the only data that is available for trying to manage the requirement within the MSA.

New ACL's will be set by 2014, so new data and a model based approach is being created to set these levels. PIRO has recommended setting a 2012 status quo, but other models are being examined to establish both MSY and average catch. These estimates will be presented at the Scientific and Statistical Committee (SSC) meeting in February and a final decision on approach will be made thereafter. To maintain consistency evaluations of ACL thresholds will be based on the same monitoring efforts that fed into the decision. If data gaps become filled that information will not contribute to whether we have exceeded our thresholds.

The 4 jurisdictions are using the same approach, but the differences in the creel programs both spatially and temporally have led to very different results between the jurisdictions. This is what led to a few of the strange results. The new levels set for reef fish will have an expected lag in reporting so overages will result in reduced ACL allowed in the following year. The Council does not have a plan to preempt or expect adoption of similar ACL rules within local waters at this time.

ii. Bottom Fish ACLs

These ACLs were based on commercial purchase database that goes back into the 1980's. We should not be at risk of exceeding our ACL limits or having overage adjustments set.

9.2 Federal/CNMI Waters

Previously mentioned that the Council recognizes the right of the CNMI to manage 0-3 for fisheries issues. Kili proposal for the CNMI to officially regain 0-3 will be reintroduced this congress. This issue has evolved considerably since 2012 with CNMI now officially having jurisdiction around those island that are not DOD lease areas or part of the Marianas Trench Monument.

10 Review of Existing CNMI Management Measures

Possibly list those in the conversation at this time to frame the data needs. Which have support and which don't? Are these rules sufficient? Do we even know the real state of the reef fishery and reef fish populations as it relates to MSY?

- *Scuba spear ban*
- *Net bans*
 - *Local law in Rota and Tinian allows subsistence (under pressure locally)*
- *MPAs*
- *Allowing indigenous access (brought up on Wednesday)?*
- *Is night fishing an issue? Could this be addressed by size class or effort regulation? Note that the distinction between legislation and regulation is important. Regulation provides much needed flexibility in the framework especially with all of the new information that is becoming available, where legislation can be extremely rigid. Regulation also avoids, at least in part, the political issues that can surround legislation.*

11 Other Recommendations & Observations

Recommendation #6 - To produce the workshop proceedings via contract and find funding

Recommendation #7 - Development of a CNMI fisheries managers and science committee (DFW Lead) *That we form a committee to address potential management needs based on discussions related to available data. We should set deadlines for the committee and for the sharing of information so that we can address what we have and trends we are seeing.*

Recommendation #8 - That we address the most important data gaps and work to find funding and resources to fill them. *Many of the key data gaps are discussed in the sections above, but as these needs are likely to be quite fluid setting priorities and targets should also be a key function of the proposed science committee (see Recommendation #7)*

Other Observations

Bottomfishing is likely underutilized locally but must be addressed with a sound business approach to be successful. This is fertile ground for partnering with SPC and other groups.

Invertebrates Issues, thoughts and concerns:

Data Gap – Gleaning (caught to some degree by creel?)

Data Gap – The lobster fishery

Data Gap – Ghost crab harvest? (brought up at Wednesdays Meeting)

X. Participation and Feedback from Attendees

Tuesday, Feb 5th - 83 attendees, according to sign-in sheet.

Wednesday, Feb 6th - 68 attendees, according to sign-in sheet

Thursday, Feb 7th - 64 attendees, according to sign-in sheet

| Session Evaluations | | | # of attendees who evaluated session | % of evaluators providing each response | | | | |
|---------------------|-----------|---|--------------------------------------|---|------|--------|------|------|
| | | | | Not useful | | Useful | | |
| | | | N | 1 | 2 | 3 | 4 | 5 |
| TUESDAY | Session 1 | Dave Hamm- History of data | 29 | 0.0 | 10.3 | 34.5 | 31.0 | 24.1 |
| | Session 2 | Local agency research efforts | 32 | 3.1 | 6.3 | 18.8 | 31.3 | 40.6 |
| | Session 3 | Fed agency research efforts; ESA, Gourley | 32 | 3.1 | 9.4 | 9.4 | 37.5 | 40.6 |
| WEDNESDAY | Session 4 | Fisheries and business | 13 | 0.0 | 7.7 | 23.1 | 30.8 | 38.5 |
| | Session 5 | Economics of CNMI fisheries | 15 | 0.0 | 0.0 | 26.7 | 33.3 | 40.0 |
| | Session 6 | Reg history and eval of spec. studies | 15 | 0.0 | 0.0 | 26.7 | 26.7 | 46.7 |
| THURSDAY | Session 7 | Comm spearfishing trends- Gourley and Houk | 14 | 0.0 | 0.0 | 14.3 | 14.3 | 71.4 |
| | Session 8 | Enforcement | 15 | 0.0 | 0.0 | 20.0 | 46.7 | 33.3 |
| | Session 9 | Fed management | 15 | 0.0 | 0.0 | 13.3 | 40.0 | 46.7 |

-- Overarching Theme

--In general, those who evaluated sessions found Session 1 to be the least interesting/useful, Session 7 to be the most interesting/useful. Other than Session 1, all sessions were scored as either a 4 or a 5 by at least approximately 70% of evaluators.

-- Tuesday Sessions:

Based on open-ended comments, attendees were particularly interested in Gourley's talk regarding HB17-299 and Dave Nichol's talk regarding the ESA listing.

-- Wednesday Sessions:

Open comments did not yield clear indication of what was most interesting; comments weren't useful or irrelevant.

-- Thursday Sessions:

Open comments did not yield clear indication of what was most interesting; comments weren't useful or irrelevant

Participants' responses to questions:

- **What other topics do you feel would be most important to cover in the future?**
 - Relationship between pollution and fish health/population
 - Indigenous rights and cultural practices in fishing
 - Trends in fisheries other than spearfishing (e.g., bottomfish)
 - Youth/Community outreach
 - Effectiveness of regulations and enforcement
 - Community-based management, increasing fishers' input

- **Do you feel that the general public understands federal fisheries regulations? If not, what do you think could improve public understanding?**
 - Mix of yes and no responses. But, in general, people felt regulations were not easily accessed and understood. There is also a lack of awareness of the regulations and how they impact users.

- **Has the information presented during this workshop changed your opinion regarding the current status of fisheries within the CNMI? If so, how?**
 - Few responses, but they were mixed. Some said they already felt sharing data was important and they already did share it; others said they don't share it, and they will continue to not share it.

- **Do you feel that the general public understands local fisheries regulations? If not, what do you think could improve public understanding?**

- Most said no. Need for more outreach. Need to go to villages and communities to make folks aware and so they understand the meaning and purpose of regulations.

- **Participants' stakeholder groups**

| Type of attendee * | Number of responses each day | | |
|------------------------|------------------------------|-----------|----------|
| | Tuesday | Wednesday | Thursday |
| Commercial fisherman | 0 ** | 5 | 2 |
| Subsistence fisherman | 0 ** | 7 | 3 |
| Recreational fisherman | 0 ** | 3 | 3 |
| Bottomfish fisherman | 18 | 9 | 7 |
| Spear fisherman | 17 | 8 | 4 |
| Talaya fisherman | 7 | 5 | 3 |
| Pelagic fisherman | 13 | 6 | 6 |
| Rod & reel fisherman | 11 | 7 | 6 |
| Vendor | 3 | 2 | 0 |
| Manager | 5 | 2 | 1 |
| Scientist | 7 | 2 | 4 |
| Student | 3 | 2 | 3 |
| Public | 5 | 7 | 3 |

* Categories are not mutually exclusive (i.e., participants selected all categories that applied)

** Category was not an available option on Tuesday evaluations.

Data are based on responses to question on evaluation, not based on group identified on sign-in sheet.

- **General comments**

- Comments in general seemed to indicate that it was not a forum in which they felt comfortable asking questions, attendees didn't feel comfortable asking even simple questions. This has a big impact if want to get general public involved. This is a common response to scientific, formal presentations. Several comments about the presentations being too complex for them to understand, presenters talked too fast, presenters more interested in saying everything they wanted to say than providing

information in a manner understandable to non-scientists. These are important things to remember in planning upcoming workshops, if the goal is more involvement and participation from the public.

- But, several people did write questions, which is good! Idea of answering questions via radio is good. Could take those questions that are relevant to CNMI and address them by topic, as you suggested.

Observations and analysis of survey findings were put together with the support of NOAA's Pacific Island Fisheries Science Center, with special thanks to Cindy Grace-McCasky.

Raw survey data can be found in Appendix XIII. Sessions were ranked on a scale from most interesting (5) to least interesting (1). A mark in the boxes for Fisher Type, Methods or Other indicate how the attendee identified themselves and their activities as a fisher. Text entries indicate comments related to each heading type.

XI. Survey and Poster Questions

Short Survey - Tuesday, February 5th

Please rate the following on a scale of 1 (not useful) to 5 (very interesting)

- Session #1 1 2 3 4 5
- Session #2 1 2 3 4 5
- Session #3 1 2 3 4 5
- What did you find most interesting about today's sessions?
- What did you find least interesting about today's sessions?
- What other topics do you feel would be most important to cover in the future?
- What type of participant are you? (mark all that apply)
Bottom Fisher Spear Fisher Talaya Fisher Pelagic Fisher Rod&Reel Fisher Vendor
Manager Scientist Student General Public
- Have today's talks affected your opinions about sharing your catch data? If so, how?

Short Survey - Wednesday, February 6th

Please rate the following on a scale of 1 (not useful) to 5 (very interesting)

- Session #1 1 2 3 4 5
- Session #2 1 2 3 4 5
- Session #3 1 2 3 4 5
- What did you find most interesting about today's sessions?
- What did you find least interesting about today's sessions?
- What other topics do you feel would be most important to cover in the future?
- What type of participant are you? (mark all that apply)
Bottom Fisher Spear Fisher Talaya Fisher Pelagic Fisher Rod&Reel Fisher Vendor
Manager Scientist Student General Public
- Do you feel that the general public understands local fisheries regulations? If not, what do you think could improve public understanding?

Short Survey - Thursday, February 7th

Please rate the following on a scale of 1 (not useful) to 5 (very interesting)

- Session #7 1 2 3 4 5 Didn't Attend
- Session #8 1 2 3 4 5 Didn't Attend
- Session #9 1 2 3 4 5 Didn't Attend
- **What did you find most interesting about today's sessions?**
- **What did you find least interesting about today's sessions?**
- **What other topics do you feel would be most important to cover in the future?**
- **What type of participant are you? (mark all that apply)**
Fisher Type: Commercial Subsistence Recreational NA
Methods: Bottom Spear Talaya Pelagic Rod&Reel
Other: Vendor Manager Scientist Student Public

- Do you feel that the general public understands Federal fisheries regulations? If not, what do you think could improve public understanding?
- Has the information presented during this workshop changed your opinion regarding the current status of fisheries within the CNMI? If so, how?

Proposed Poster board Questions

Session #1 - Historical Perspectives to Fishing in the CNMI

Please share your thoughts regarding Session #1, were there any issues or topics that you would like to hear more about or concerns or recommendations that you would like to share?

Session #2 - Local Agency Research Efforts

Please share your thoughts regarding Session #2, were there any issues or topics that you would like to hear more about or concerns or recommendations that you would like to share?

Session #3 - Federal Agency Research And the Role of Data

Please share your thoughts regarding Session #3, were there any issues or topics that you would like to hear more about or concerns or recommendations that you would like to share?

Session #4 – Fisheries and Business

Please share your thoughts regarding Session #4, were there any issues or topics that you would like to hear more about or concerns or recommendations that you would like to share?

Session #5 – The economics of fishing in the CNMI

Please share your thoughts regarding Session #5, were there any issues or topics that you would like to hear more about or concerns or recommendations that you would like to share?

Session #6 – Local Agency Regulation History

Please share your thoughts regarding Session #6, were there any issues or topics that you would like to hear more about or concerns or recommendations that you would like to share?

Session #7 – CNMI Commercial Spearfishing Trends

Please share your thoughts regarding Session #7, were there any issues or topics that you would like to hear more about or concerns or recommendations that you would like to share?

Session #8 – Enforcement

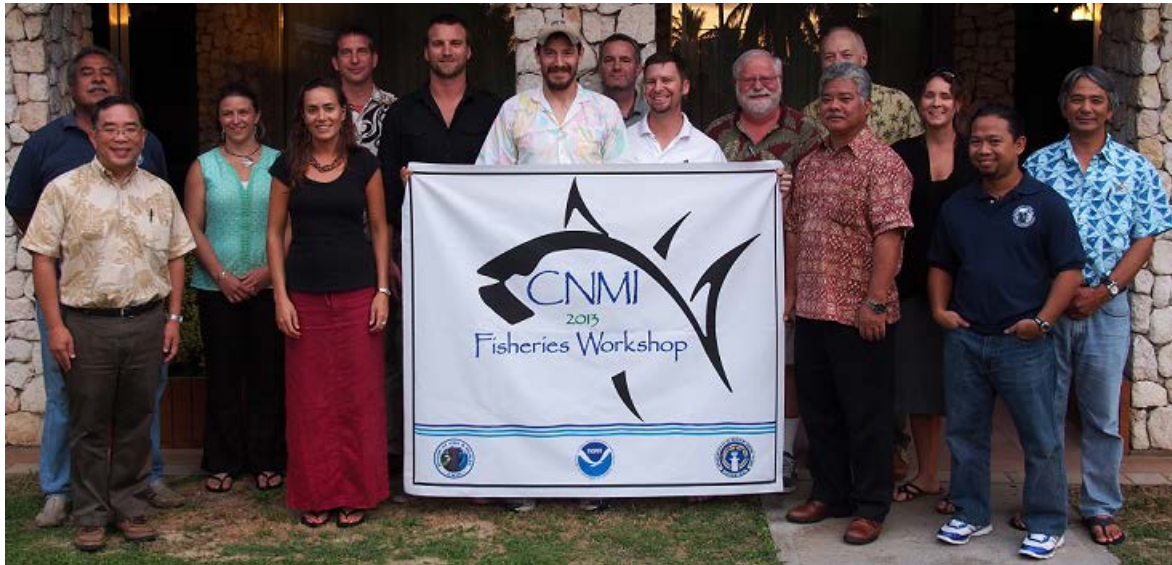
Please share your thoughts regarding Session #8, were there any issues or topics that you would like to hear more about or concerns or recommendations that you would like to share?

Session #9 – Federal Management

Please share your thoughts regarding Session #9, were there any issues or topics that you would like to hear more about or concerns or recommendations that you would like to share?

XII. Acknowledgments

The Workshop included manager's forums, presentations and surveys aimed at getting feedback from the fishing community. The 3 day workshop hosted about 100 participants each day and held 9 different sessions including talks on local and federal management activities, research findings, fisheries economics and enforcement. It would not have been possible without the participation of many local, federal and regional partners, including: CNMI DLNR, DFW, CRM, DEQ, NOAA PIFSC, CRED, WPacFIN, WPRFMC, The US Coast Guard, SPC, PIFG, NOAA PIRO - HCD, PRD, SF, The HI Seafood Council, MES & PMRI.



XIII. Appendix 1 – Comments from Sessions and Raw Survey Data

- 2/5/2013 For Kaylyn McCoy's talk with the dive tow surveys has any work been done looking into the effects of vessel noise and faster dive movement on fish behavior? i.e. do these possibly chase fish away and affect counts? (Mathew Crane)
- 2/5/2013 Question - To curtail overfishing in certain areas, do you recommend imposing fees/permits to fish in certain parts of our waters?
- 2/6/2013 * Josh C. Muna (286-4059)
- 2/6/2013 For future workshops can hands on practice for participants. For example on fishing
- 2/6/2013 What size or how many centimeter size of fish that can allow or not allow to catch in spear fishing
- 2/6/2013 How can we promote bottom fishing in our community? Many local lack knowledge in bottom fishing can Clayward Tam or anyone else be able to provide knowledge in the near future on deep bottom fishing.
- 2/6/2013 For workshop in the future can the presenters handout the results of their studies? Especially the graph charts. Almost all are not clearly shown on the projector.
- 2/6/2013 it is very difficult to see the graph/charts that is presented on the projector. This is regards to SPC Michael Sharpes presentation. It would be really helpful if the words were move visible.
- 2/6/2013 Traditional fishing has been mentioned several times, can you define Traditional fishing? To me traditional fishing does not involve using the latest technology such as GPS, Penn International Reels...
- 2/6/2013 In regards to Courtney Beaver, how can local fishermen continue to share information that was presented today annual to get updates on Cost-Earnings in the CNMI?
- 2/6/2013 Why Tinian and Rota net fishing is allowed but here in Saipan is not?
- 2/6/2013 It would have been nice to hear from the fishermen more. Maybe a talk about the cultural fishing practices that one of the Carolinians briefly shared.
- 2/6/2013 John Kanekos presentation seemed more geared towards food establishments, not really fisheries/fishermen
- 2/6/2013 I'm Jose Dncapan experience or due to expensive fuel a gas. I have a suggestion so we can save time and money fishing backside of the island is to build a dock on to the back side at Laolao bay, so we can launch our boat there especially with south west wind.
- 2/6/2013 I think the speed of the workshop is detrimental to the overall success. The days chose for the workshops (Fisheries and MPA) may also significantly decrease the attendance by locals.

- 2/6/2013 Start on time. Attendance is small. Great presentations by all presenters.
- 2/6/2013 If 96% of the Hawaii restaurants have a failing grade, where is the best/safest place to eat in Hawaii?
- 2/6/2013 This workshop has been so relevant and organized compared to the MPA workshop. It is very well put together and people recognize your effort! I personally love the raffle idea; it gives an incentive for the public to actually come to the talks... and more importantly ask questions! This aspect has been beneficial to all agencies and attendees.
- 2/6/2013 PS. I agree with frank's idea that indigenous people should be allowed to practice cultural fishing techniques. Please Consider.
- 2/6/2013 Lots of good information need to have verification of presented information
- 2/7/2013 How can MPAs be enforced properly without enforcement?
- 2/7/2013 Where can I find long line fishing data around the Marianas?
- 2/7/2013 How feasible is it to culture/farm yellow fin tuna in the Marianas, as it is presently done in other parts of the pacific.
- 2/7/2013 Question - Im interested to know your view on nontraditional judicial punishment for fishery violations. Current punishment is monetary fine or incarceration. Do you have nontraditional punishment in mind
- 2/7/2013 Session #9 - Presentation on Wespac Council process by Mr. Mitsuyasu should have been one of the first presentations of the 3 days to establish understanding of fisheries management to contrast with shortcomings of fishery management within 3 miles of shore.
- 2/7/2013 Fisheries Management by Legislation is not 1) Science-Based, 2) Based on a fishery management plan (FMP), 3) inclusive and transparent, 4) Compliant with the 1995 FAO Code of Conduct for Responsible Fisheries. This is a common problem with management of marine fisheries within 3 miles of shore.
- 2/7/2013 Guest speakers used scientific language - spoke too fast - graphics were difficult to follow
- 2/7/2013 Size limits are important but it has to be done right.
- 2/7/2013 To John Gourley - Check spelling of your current fish name Hangun. Please check language commission office for better understanding.
- 2/7/2013 Fish are important ecologically, but also for subsistence.
- 2/7/2013 I like Peter Houk's approach to obtaining data. He used information from the NAP to assess our fisheries. Yes, it is not scientific, but it is data! As a scientist, I am often faced with people that think everything revolves around science and that it is the only way to solve anything. Thinking outside of the box is how we discover our most relevant information! He

has taken a new resource and utilized it to better understand our fisheries. Yes, there are setbacks and problems with this method but data is data. Getting something is better than nothing. I believe this resource should be further investigated.

- 2/7/2013 Question - Can you tell us which time of the year sharks are more aggressive so we can avoid fishing (trolling and bottom) during that time to, perhaps, avoid the bycatch?
- 2/7/2013 Consider a slot limited - [Little fish - no catch and let grow to medium] [medium fish - catch] [Large fish - no catch, they produce lots of eggs making lots of little fish] then define sizes to fit the species
- 2/7/2013 Session 7 - Houk, This comment relates to many scientific tables - Recommendation, do not use scientific names 1) Fishermen do not know what scarids and acanthurds are, 2) Figure labels too small, 3) talk too fast
- 2/7/2013 On all different species of fish, size really matters because some fish don't or you won't see them on the reef of Saipan but you might find them on the other islands.
- 2/7/2013 Studies that survey reef fish for sale at vendors need to clearly explain the relationship between what is caught and what ends up for sale to vendors. Are these the same? Is there selection in spearing high value species? Is there high gradient? Do spear fishermen avoid some species? Do vendors avoid/refuse certain species?
- 2/7/2013 Question - where can we get data for the CNMI water/ ocean temperature at certain fathoms?
- 2/7/2013 Question - Why cant fish being sold be a set price for palegic, bottom and reef fish, instead of jumping up and down base on abundance or less?
- 2/7/2013 Comment - Fishermen can go to the NOAA website and download ocean charts around our islands for free.
- 2/7/2013 Session 7 - John Gourley, very interesting and understandable to the lay person; graphics clearly demonstrated concepts. Peter Houk - explained information well except tht he talked very fast so it was difficult to keep up with the talk at times.
- 2/7/2013 Session 7 - I agree with the proposal to establish minimum size limits for sales of reef fishes, other than manahak or E'e.

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|----------|--------------------|---|---|---|---|---|---|---|---|--|--|---|-------------|----|----|---------|----|----|----|-------|----|----|----|----|-----|----|----|-----------------------------------|--|--|--|--|--|
| 2/5/2013 | | 5 | 5 | | | | | | | Benavente and McCoy presentations | presentations - don't we want | agencies are outreaching to local people | | | | | | | | | | | | | 1 | 1 | | | | | If I was a local fisherman, I would share my catch data | | |
| Date | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Most Interesting | Least Interesting | Other Topics | Co | Su | Re | NA | Bo | Sp | Ta | Pe | Ro | Ve | Ma | Sc | Stu | Pu | Co | Local regulations - Understanding | | | | | |
| | Session Evaluation | | | | | | | | | | | | Fisher Type | | | Methods | | | | Other | | | | | | | | | | Daily Question | | | |
| 2/6/2013 | | | | 4 | 4 | 4 | | | | asked questions. In from here please help regulate but do not setriat the locals completely. This is our food sources. | Family fishing is important. Commercial? Not so important especially if its to export. | ld rather eat fish than any imported or preserved foods. Why are we here? | | | | | 1 | 1 | | 1 | | | | | | | | | 1 | bu y bo tto m fis | No! Mormons go house to house. Those running for office do the same. We should spread the word this way. Its more effective and personal. True answeres. | | |
| 2/6/2013 | | | | 5 | 4 | 3 | | | | Catch more fish using less fuel. | None | Seasons for fish | | 1 | 1 | | | | | | 1 | 1 | | | | | | 1 | | No. More public outreach | | | |
| 2/6/2013 | | | | 4 | 4 | 4 | | | | Claward Tam - Catch more fish | small boat fisheries | Session #6 | | 1 | 1 | | | | | | 1 | 1 | | | | | | 1 | | education and presentation by those who conduct the surveys. | | | |
| 2/6/2013 | | | | 5 | 5 | 5 | | | | seafood quality / hoesrolling | Marine Monument | Cultural practices | | 1 | | | | 1 | 1 | 1 | | 1 | | | | | | | | Need more public outreach | | | |
| 2/6/2013 | | | | 2 | 3 | 3 | | | | learning more about the local fishery | blank | Solutions is always something to focus on | 1 | | | | | | | | | | | | | | | | | It seems to be 50/50 | | | |
| 2/6/2013 | | | | 3 | 5 | 4 | | | | Session 5 | Session 4 | How to bottomfish in the CNMI | 1 | | | | 1 | | | | | | | | | | | | | to be more out in the public discussing this issues. | | | |
| 2/6/2013 | | | | | 5 | 5 | | | | discussions are my favorite part of these | NA | public has been effective or lacking on Saipan | | | | | | | | | | | | | | 1 | 1 | | Not just to fisherman but their families and children | | | | |
| 2/6/2013 | | | | 3 | 3 | 5 | | | | regulation back to results | cs could have been a little more | I think it was a well covered varied workshop | | | | | | | | | | | | | | 1 | | | over and over, I am not sure the general public do understand | | | | |
| 2/6/2013 | | | | | | | | | | Found out that I know nothing about fishery in the CNMI. I enjoyed attending. Presentations were right no. | Not enough participation from local fishermen and the community as a whole. | laws and regs, are they helpful to the majority? | | | | | | | | | | | | | | | | 1 | Nope. First of all, the local government doesn't really put in the effort to educate people about our laws. There should be a concern about how detrimental this mind set is to begin with. Until a task force is established to identify an effective method to break down the barriers that will bring the community around to embracing the importance of the existance of laws and regs, the interest will be minimal. (I hope that makes sense) | | | | |
| 2/6/2013 | | | | 5 | 5 | 5 | | | | CNMI Fishermen Market | None | Blank | | 1 | | | 1 | | | | | 1 | | | | | | | | Provide research data for the public to understand. | | | |

