GUAM DEPARTMENT OF AGRICULTURE
194th WESTERN PACIFIC REGIONAL FISHERY MANAGEMENT COUNCIL MEETING ISLAND REPORT

SHORE-BASED FISHERIES
Report Period: July 1, 2022 through December 31, 2022.

Shore-based Survey	Number Scheduled	Number Completed
Creel Survey	36	36
Participation Survey	12	12
Total number of shore-based Surveys	48	48

Table 1. Number of inshore surveys scheduled and conducted for the time period.

The top 7 shore-based species harvested between July 1, 2022 and December 31, 2022 in terms of total weight are shown in Table 2; *Selar crumenophthalmus* – atulai, with 3527 kg. caught, followed by *Mulloidichthys sp*. - ti'ao, *Caranx melampygus*-tarakito, *Caranx* spp. juveniles- i'e,, *Naso unicornis*- tataga, *Balistoides viridescens*- pulonon, and *Ellechelon vaigiensis*- laiguan. Commonly encountered methods during participation surveys include hook and line with 423 fishermen and 487 gear, talaya with 40 fishers and 36 gear, gill net with 10 fishermen and 9 gear, snorkel spearfishing with 34 fishermen and 34 gear, hooks and gaffs with 2 fishermen and two gear, surround net with 4 fishermen and 4 gear, and other methods with 4 fishermen and 4 gear. (See Table 3). The total number of fishermen and gear observed was 519 and 578, respectively. The CPUE and landings for each of the top shore-based methods are shown in Table 4.

Species	Total weight (kg)
Selar crumenophthalmus- atulai	3527 kg.
Mulloidichthys sp. - ti'ao	933 kg.
Caranx melampygus- tarakito*'*	724 kg.
Caranx spp. juvenile- i'e	650 kg.
Naso unicornis - tataga	617 kg.

Balistoides viridescens- Pulonon	563 kg.
Ellechelon vaigiensis- laiguan	417 kg.

Table 2. Shore-based top 7 species caught by weight for time period.

Method	**Number of Gear**	**Number of Fishers**
Hook and Line	487	423
Cast Net	36	40
Gill Net	9	10
Snorkel Spear	34	34
SCUBA Spear*	0	0
Hooks and Gaffs	2	2
Surround Net	4	4
Other Methods	4	4
Totals	578	519

Table 3. Top Shore-based fishing methods for the time period. *SCUBA fishing was made illegal in March 2020.

Method	**CPUE (kg./gear hour)**	**Total kg.**
Hook and Line	.0951	7,444 kg.
Throw Net	.1485	5,197 kg.
Gill Net	.0019	3 kg.
Snorkel Spear	.0581	189 kg.
Hooks and Gaffs	.0437	11 kg.
Surround Net	1.2993	672 kg.
Other Methods	.0997	109 kg.

Table 4. Shore-based CPUE and total catch by method for the time period.

BOAT-BASED FISHERIES

Report Period: July 1, 2022 through December 31, 2022.

The number of boat-based creel surveys and participation surveys conducted during the six (6) month period followed the regular number of surveys scheduled per month. There are eight (8) creel surveys per month for a total of 48 creel surveys for the six-month time period and two (2) participation surveys per month for a total number of 12 participation surveys per month. The total number of 60 scheduled creel and participation surveys for the time period were all completed (Table 5).

Boat-based Survey	Number scheduled	Number completed
Boat-based creel surveys	48	48
Participation surveys (VT Counts)	12	12
Total Number of Boat-based surveys	60	60

Table 5. Number of boat-based surveys scheduled and conducted for during the time period.

For the time period, pelagic species made up five of the top eight species caught by fishers (see Table 6). Skipjack tuna continues to be the top species landed, making up 57% of the troll catch and 46% of the overall boat-based harvest. The top and 6th most landed species, skipjack and yellow fin tuna, are landed predominantly by commercial trollers. Bottomfishing has had an increase in landings, but probably due to the significant increase in deep bottomfishing. Bottomfish landings are reflecting less fishing in the shallow strata and more fishers targeting the deep bottomfish strata. As a result, the deep bottomfish species *Etelis coruscans* (onaga) was 5th for the time period. Commercial spearing by free divers spearing has increased, with *Naso unicornis* making the 7th top species caught.

Species	Total Expanded Landings (metric tons)
Katsuwonus pelamis (skipjack tuna)	98.5
Coryphaena hippurus (mahi mahi)	43.2
Acanthocybium solandri (wahoo)	21.7
Selar crumenopthalmus (mackerel scad)	7.3
Etelis coruscans (onaga)	6.7
Thunnus albacares (yellowfin tuna)	7.0
Naso unicornis (blue-spine unicornfish)	4.0
Makaira mazara (blue marlin)	2.0

Table 6: Top eight (8) species caught by boats by weight for time period.

Approximately 212.9 metric tons of fish was harvested by boat-based fishers (see Table 7). The most common boat-based method was trolling, which harvested 173.3 metric tons, approximately 81% of all boat-based landings, 63% of all trips, 68% of fishing hours, and 58% of people fishing. Deep bottom fishing trips continue to land more fish than shallow trips, 8% of all boat-based landings. Spearing was the third most common method, landing 7% of boat-based landings.

Boat-Based Method	Landings (metric tons)	Trips	Hours	Persons
Trolling	173.3	4,899	24,456	13,009
Bottom fishing	15.1	1,516	6,549	4,449
Snorkel spear	14.7	771	2,815	3,412
Atulai night jigging	6.2	424	1,681	947
Jigging	1.6	109	243	313
Gillnet	1.7	63	144	155
Other methods	0.3	33	35	31
Total Landings	212.9	7,815	35,923	22,316

Table 7: Expanded landings, participation, and effort values for the top boat-based fishing methods for time period.

CPUE values and species breakdown are dependent on intercepting fishers and surveying their catch to the species level. Except for gillnetting, trolling had the highest CPUE for the time period (2.52 kg/gear-hour) probably due to the large tuna catches of the Micronesian commercial trolling fleet that make up the majority of interviews (see Table 8).

Boat-Based Method	CPUE (kg/gear-hr)
Trolling	2.52
Bottom fishing	0.91
Snorkel spear	1.55
Atulai night jigging	1.16
Gillnet	9.48
Jigging	1.72

Table 8: Boat-based CPUE for the top five (5) boat-based methods for time period.

BOATING ACCESS PROGRAM:

Construction of Agat Marina's Dock B. Three of the four docks at the Agat marina were replaced by the Port Authority of Guam (PAG), with Dock B not repaired due to funding challenges with the Port. Agriculture has funded phase 1, the demolition and removal of the damaged Dock B components and will be contributing $500K towards the construction phase. As a result, the Port Authority has agreed to set aside Dock B solely for recreational boaters. This will increase the number of available berths for local recreational boaters at the Agat Marina.

- The MOU for the Dock B replacement project was signed by the Governor of Guam on September 6, 2021.
- On September 16, 2021, a Conditional Notice to Proceed (NTP) for the project was granted by US Fish and Wildlife Service (USFWS), notating that PAG may proceed with all the steps leading to, but not including actual construction activities for the replacement of Agat Marina's Dock B and Public Boat Ramp Repairs.
- Per USFWS, a final NTP for the construction and repairs will be issued upon submission of the requisite environmental compliance and permits to USFWS.
- PAG is currently in the process of developing the Scope of Work (SOW) for the projects. PAG is currently in the procurement phase, with the bid package posted on the Port's website March 18th. The closing date was May 5, 2022.
- A ground breaking ceremony was held on July 11, 2022 at Agat Marina for the construction of Dock B. AIC International Inc. won the bid for the construction of Dock B.
- AIC International Inc. was issued the Notice to Proceed (NTP) on August 8, 2022. The upgrade to the dock will use no-rot recycled plastic composite material, marine-grade aluminum frames and stringers, stainless steel components, connections, and accessories. For this project, $500,000 of Sport Fish funding is being used for Dock B. The total cost of the project is $1,494,750 with the Port Authority of Guam paying the difference. Dock B will be set aside solely for use by recreational boaters.

Update: The design of Dock B is at 65% completion as of February 9, 2023. The design work was expected to be completed by the end of February 2023, permitting should be completed by the end of May 2023, and construction completed in August 2023. In addition to constructing

Dock B, some of the pilings have developed significant rusting along the water line. The Port will be repairing these pilings before the components of Dock B are put in place.

Figure 1. Dock B Ground Breaking Signage.

Harbor of Refuge. Agriculture is assisting the Port Authority of Guam (PAG) with the repair of the Harbor of Refuge. The facility currently does not meet Coast Guard standards, with the moorings and concrete anchors needing replacement. Agriculture is using its Boating Infrastructure Grant Tier 1 funding to fund 75% of the repair work and provide a pumpout station for transient boaters. To qualify for BIG funding, 75% of the Harbor of Refuge's moorings will be set aside for transient vessels to use. DAWR received five (5) BIG awards, with most of the funding to be subawarded to the Port. The total amount of all the BIG Tier 1 awards is $900,000.

The MOU for the project was signed on February 22, 2021, with a "Notice to Proceed" issued by the Port in April 2021.

- On August 24, 2021, the draft Invitation for Bid (IFB) packet was submitted and received by Port Procurement.
- On August 31, 2021, a Procurement Planning Meeting was held with stakeholders. In attendance was Procurement, Legal Counsel, Engineering Manager, and Planning.
- The Guam Attorney General (AG) reviewed and approved documents because procurement was over $500,000
- Port Procurement and Legal Counsel reviewed and finalized IFB Package for compliance.
- The Project Coordinator entered the Harbor of Refuge requisition, which is being routed for review and signature. Once approved, the next step is to issue the IFB during the first quarter of FY22 to renovate the moorings and construct a pump out facility.
- The bid submittal and opening for the Harbor of Refuge was scheduled on Friday, February 18, 2022 at 14:00 / 2:00 P.M.
- DAWR, Port, and Federal Aid staff discussed the project in April 2022. The current high cost of the project and a lack of a larger pool of bid applicants due to current military and other projects make it necessary to change the original scope of work. Port is currently

finalizing a scaled down scope of work to fit the current available BIG funds. Agriculture received approximately $800,000 for the project.

Update: ART Constructors, LLC was awarded the contract for this project on June 26, 2022, with the contract signing, pre-construction meeting, and NTP issued August 15, 2022. The initial estimated completion date was February 4, 2023, but two sunken boats in the Harbor of Refuge mooring area changed the completion date to April 5, 2023. PAG will need two weeks to remove the sunken boats. A total of 48 moorings are being installed for the project, with 75%, or 36 moorings, set aside for transient vessels. In addition to color coding the moorings for transient vessels, the moorings will be numbered, with transient boats given the buoy number to use.

Figure 2: New moorings at Harbor of Refuge site

Figure 3: Two sunken sailboats in the Harbor of Refuge

Merizo Pier and Boat Ramp Facility. Contractual work is being proposed to repair damage at the Merizo pier and boat ramp facility and to assess the pier for structural integrity.

Merizo pier

- The work at Merizo Pier involves:
    - replacement of missing ladders
    - repair of damaged lights
    - repair and replacement of damaged decking planks
    - removal and replacement of damaged bordering planks
    - fasten loose bumpers

Update:

- The repair work at the pier has been delayed due to only two (2) contractors submitting bids, rather than the required six. This may void the contractor having been recommended to be awarded the contract with a bid of $95,800. The assessment of the pier is currently undergoing DPW's procurement process. Next step for the project is the publication of the Request for Quotation, which is being reviewed by DPW.

Merizo Pier Structural Assessment

Update: The advertisement is being processed to bid on the project.

Figure 4. Damaged pier walkway planks temporarily filled with concrete to reduce additional plank damage by wood rot.

Regulations

Table 9. Law Enforcement Arrests Information from November 2022 to February 2023.

Case No:	Sex	Ethnicity	Violation	Location
22-30705	1 Male	Chamorro	Illegal Fishing (spear) in MPA`	Piti MPA
22-31059	1 Male	Chuukese	Illegal Fishing (spear) in MPA	Piti MPA
22-31240	1 Male	Chuukese	Illegal Fishing (hook & line) in MPA	Piti MPA
23-3656	1 Males	Taiwanese	Illegal Fishing (spear) in MPA	Tumon MPA
23-4064	1 Male	Chamorro	Illegal Fishing (hook & line) in MPA	Tumon MPA
Totals	**5 Males**			

Special permits still continue to be issued for the seasonal take of:

- Atulai (Big Eye Scads),
- *l'e'* (Juvenile Jacks)
- Ti'ao (Juvenile Goat Fish)
- Manahak (Juvenile Rabbitfish)

Fisheries Management Plan

DOAG is taking steps to develop a Fisheries Management Plan for Guam, recognizing the need to define a path that puts Guam's fisheries on a positive track and guide the community on the use, restoration, conservation, development, and managements of Guam's fisheries. The purpose of the FMP is to provide a comprehensive approach to better manage fisheries habitat and fish stocks on Guam. The FMP working group had its initial meeting on January 27, 2021 to address these and the strategic needs and plans of a Guam FMP.

From the initial January 27, 2021 meeting, it was decided to establish the 5 sub-groups below and that DAWR Fisheries staff will mainly lead the sub-groups:

1. **Data-science:**
    a. Fisheries Data
    b. Habitat Resources
2. **Economy/Business:**
3. **Enforcement/Regulatory/Policy:**
4. **Community:**
5. **Education/Outreach:**

The 5 sub-groups had initial meetings mainly with DAWR Fisheries staff to discuss their approach prior to meeting with a larger group. The sub-groups then opened up the meeting to a larger group consisting of other local and federal agencies, non-profit organizations, and fishers to obtain recommendations and comments on moving forward with the plan and what to incorporate into the plan. The leaders (Fisheries staff) of the 5 sub-groups have also been meeting with the DOAG Director to provide updates on their sub-group meetings and recommendations from the DOAG Director on moving forward.

The Bureau of Statistics and Plans Guam Coastal Management Program (GCMP) will work with DOAG by providing contractual support to obtain services from a planning agency to facilitate and draft the FMP. GCMP staff will provide contract service monitoring and general planning technical assistance. This framework that will help guide and keep the initiative together as it moves through the various stages of the FMP development.

On August 11, 2021, the second Fisheries Management Plan (FMP) large group meeting was held. The different subgroups provided updates to the larger group. These updates included many recommendations including but not limited to license requirements, bag limits, size limits, urban development regulations, and enforcement. The next step will be to consolidate all of the recommendations of the subgroups into one in order to draft the plan. NOAA is providing technical assistance to DOAG such as assisting with a cluster analysis of DOAG's creel data and having the local NOAA Coordinator assist with consolidating information for DOAG.

On October 24, 2021, DOAG met with the local NOAA coordinator who will be providing support to map and record the process of the plan's development to ensure DAWR keeps on track with accomplishing developing the plan. DOAG and NOAA discussed that the next steps of the plan would be to develop vision, goals, objectives, and targets.

On November 4, 2021, a community FMP meeting was held at the Santa Rita Mayor's Office A total of four members from the southern fishing community showed up to put forth their input and ideas, and shared issues that they have been encountering in our fishing community and on the water. Community comments included deploying the FADs, additional boat ramps, support for licensing, concerns about enforcement and monitoring, support for bag & size limits, mandatory catch data reporting, and more informational/educational signs.

On November 10, 2021, an FMP meeting was held with Fisheries staff to discuss the vision, goals, objectives, and targets. Staff developed the vision statement and goals below, and each subgroup is to develop its own objectives and targets.

Vision: "An adaptive, responsive, and consultative approach to fisheries management ensures fishing is a low risk to Guam's aquatic resources and used in a way that optimizes benefits to the residents of Guam."

Goals: 1.) Rebuild fish populations and improve ecosystem health to support long-term sustainable use of the resources and;

2.) Ensure that the residents of Guam have access to the resources they need and benefit directly from long-term stewardship

Objectives - Each subgroup to create objectives, goals, milestones etc.*****

Targets or Milestones

Activities - Limits, reporting, enforcement, etc.

On November 23, 2021, another central community FMP meeting was held at the Department of Agriculture DAWR.

DOAG DAWR decided on a list of 12 priority species for the FMP. The species selected are based on composition of total landings, consistent top species identified in landing reports, and cultural significance. DOAG DAWR is working on the identifying the targets for management.

1. *Acanthurus lineatus*
2. *Naso lituratus*
3. *Caranx melampygus*
4. *Kyphosus cinerascens*
5. *Lutjanus fulvus*
6. *Chlorurus frontalis*
7. *Epinephelus merra*
8. *Lethrinus olivaceus*
9. *Scarus schlegeli*
10. *Monotaxis grandoculis*
11. *Bolbometopon muricatum*
12. *Cheilinus undulatus*

NOAA PIFSC will assist with data analysis based on the list of species.

DOAG DAWR in partnership with NOAA and TNC hosted a hybrid workshop on June 1-2 & 7-9 from 9:00 a.m. to 11:00 a.m. using an online decision-support tool – FishPath. Various stakeholder participated in the process to help identify locally appropriate management options for Guam. Of the 12 priority species chosen, only 5 were completed using the FishPath tool.

DOAG DAWR will meet to discuss how to move forward with the results and inputs from the workshop.

DOAG DAWR is also planning a future workshop to discuss the non-fisheries portion of the plan since Guam's FMP will include an ecosystem approach to fisheries management.

Update: The UOG Marine Laboratory (ML) in coordination with DOAG DAWR completed Phase 1 of the FMP study to collect and clean all available fisheries dependent and independent datasets for coral-reef fishes around Guam. The Bureau of Statistics and Plans (BSAP) is funding Phase 2 of the study involving species assessments. This phase involves examining trends for priority species that make up 90% of the catch biomass over the past three decades.

Concurrently, NOAA PIFSC will work on completing the management strategy evaluation (MSE) for the remaining 12 species that were originally chosen. DAWR will choose management options for PIFSC to evaluate under the MSE. DOAG DAWR will be scheduling community meetings.

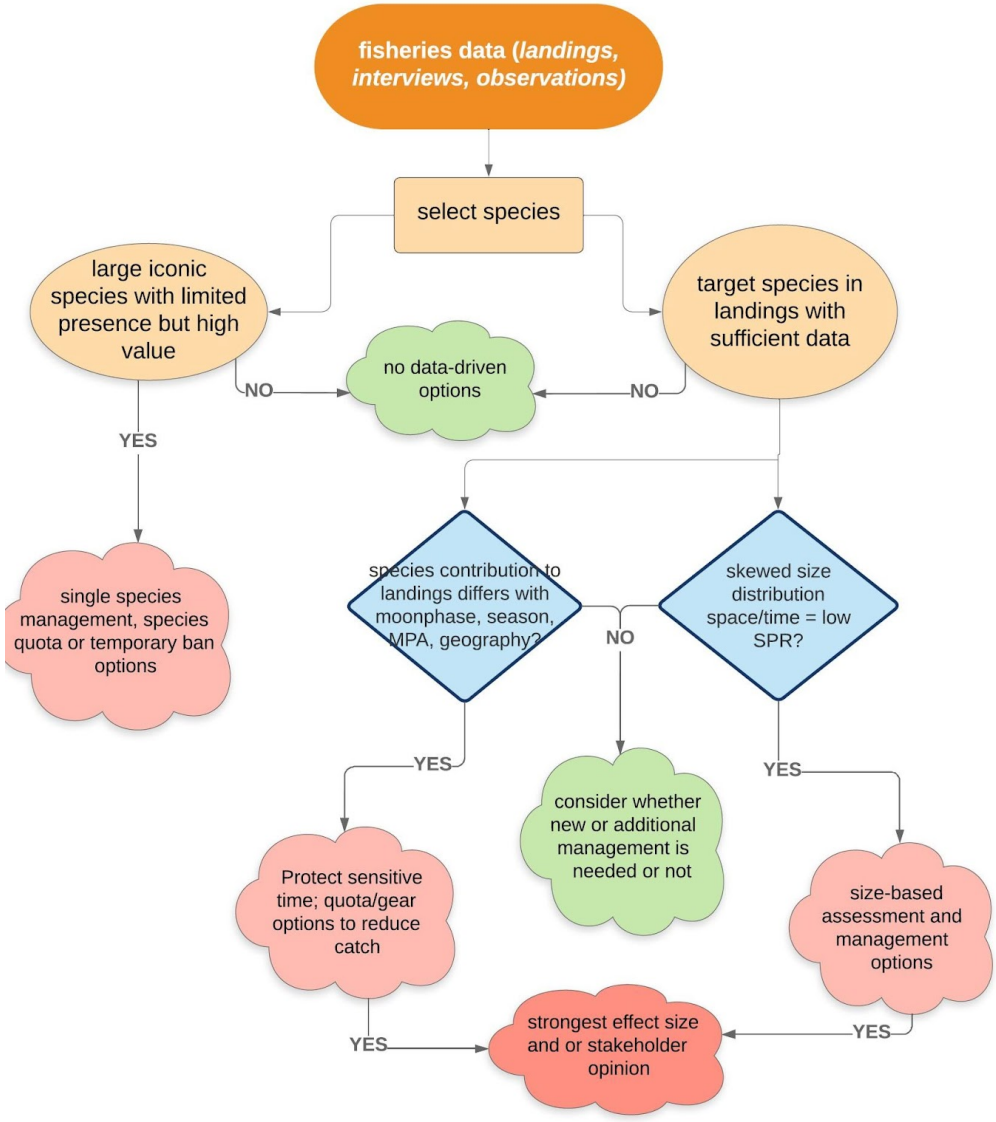

Figure 5. A potential decision tree that would be created in partnership with Guam DAWR stakeholders to assess the priority coral-reef fish species.

FADs

Currently, 5 FADs are confirmed online: Agat, Facpi 1, Umatac, #2 and Cocos (Single report Cocos offline) (Table 10). #5 and #6 are unconfirmed. #2 was deployed in October 2019. The Memorandum of Agreement with the Guam Department of Public Works Agency (DPW) was signed by the Governor on July 13, 2019, and DPW signed the work request for the construction of the concrete anchors on July 24, 2020. Purchase orders for new FAD components and deployment will be obtained this new fiscal year.

An updated work request and scope of work to construct FAD Anchors was signed by DPW on January 6, 2021. DOAG forwarded the work requests to BBMR and the Department of Administration (DOA) on January 8, 2021 and provided the signed documents to DPW to construct the anchors. Currently, 10 anchors have been constructed and was completed in August 2021. The contract to deploy 3 FAD Systems was awarded. Two buoys were prepared and deployed on November 24, 2021 - (#3 and Old NOAA). Unfortunately, the third FAD was not available for deployment. The Nature Conservancy (TNC) successfully redeployed FAD #3 and Old NOAA on November 24, 2021. FAD #3 was coupled with a small echo-sounder buoy that will regularly transmit information regarding the location of the FAD and targeted species aggregating underneath it. DAWR and TNC are working to develop a system which will allow the public to access the transmitted information through a system called Smart-aFADs. Information transmitted include:

· Real-time information of how much tuna of different species is underneath each FAD
· Hourly fish biomass estimates at different depths
· Images from SatLink

All information gathered will be posted on various media outlets such as Facebook and whatspp and will assist in better management of FADs and improve their lifespan and recovery rates. Fishers are asked to be mindful of the sensor that extends 30 feet from the FAD #3 and are cautioned not to remove them. Removal will be considered damage to government property. The contract and grant award to purchase additional FAD systems was extended to 150 to 180 days due to delays in shipping. Additional FAD systems will be purchased in FY22 as well as a deployment contract.

The contract and grant award to purchase additional FAD systems was extended to 150 to 180 days due to delays in shipping. One regular FAD system arrived. Contract packets have been submitted to deploy 8 FAD systems and purchase 9 FAD systems in FY22. The possibility of the USCG assisting DAWR in FAD deployments are being worked on.

Update: DAWR received the 2 “New Designs” and 1 regular FAD systems on October 13, 2022. The systems are in storage pending the contract for deployment. The purchase of additional 8 systems are pending contract award.

Plans to replace FAD #3 echo sensor as well as additional sensors to be attached to other FAD buoys are still pending USFW services approval from NOAA. DAWR and USFWS are coordinating with NOAA on the Section 7 compliance.

Figure 6. Old NOAA FAD.

ONLINE:	GPS Coordinates
Number 5 (Unconfirmed)	13’44.7N/144’48.4E
Number 6 (Unconfirmed) (Pati)	13’42.6N/144’01.6E
Facpi	13’ 20.4 N/144’36.5E
Umatac	13’17.0N/144’37.0E
Cocos	13’12.0N/144’41.7E
Agat	13’ 23.3 N/144’ 33.9E
Number 2 (Haputo)	13’ 35.6 N/144’ 45.6E
Number 3 (Urunao)	13’39.9N/144’46.1E
Old NOAA	13’ 43.5 N/144’ 40.8E
OFFLINE:	**GPS Coordinates**
Number 1 (Adelup)	13’32.2N/144’43.1E
Number 4	13’43.3N/144’43.3E
Ledge	13’35.8N/144’40.4E
Facpi 2	13’19.6N/144’33.3E
9 Mile	13’ 15.1N/144’ 28.7E

Table 10. Current status of FADS online and offline.

SWMs

SWM Systems – Plans to procure an additional 15 SWM components are in the progress.

SWM Deployments:

- 10 SWMS where redeployed in December of 2018. Out of 34 sites (Figure 8) only 31 are deployable with intact eyebolt anchors. Plans to secure a contract to perform the installation of new eyebolts for the 3 areas (14. Blue Hole: Anchor failure, 33. Gabgab # 1: Anchor unable to locate, and 34. Gabgab # 2: Anchor unable to locate) that do not have intact eyebolts will be done in FY20 as well as the remaining 14 deployable sites. Currently, 17 SWMS are online (Table 11).

- **Update:** The SWMs are currently going through the GovGuam procurement process. DAWR already has the components needed for the SWM replacements.

No.	Site Name		Coordinates	Depth (ft)
1.	Double Reef #1		13’36.219N / 144’50.105E	33
2.	Double Reef #2		13’35.713N / 144’49.988E	39
3.	Hilaan	x	13’33.763N / 144’48.985E	45
4.	Gun Beach	x	13’31.470N / 144’48.068E	20
5.	Tumon #1		13’31.032N / 144’47.162E	30
6.	Tumon #2		13’30.641N / 144’47.162E	45
7.	Alupat Island		13’21.608N / 144’46.026E	47
8.	East Agana	x	13’29.337N / 144’45.873E	35
9.	West Agana	x	13’29.046N / 144’44.008E	48
10.	Asan		13’28.646N / 144’42.780E	49
11.	Piti		13’28.602N / 144’41.833E	49
12.	Amphitheater		13’27.914N / 144’40.549E	57
13.	Luminao Reef		13’28.070N / 144’39.366E	45
14.	Blue Hole	x	13’26.177N / 144’37.589E	50
15.	Sharks Pit	x	13’25.260N / 144’38.372E	56
16.	Rizal		13’24.666N / 144’38.953E	46
17.	Haps Reef		13’23.678N / 144’39.196E	50
18.	Alutom Island	x	13’23.072N / 144’38.763E	53
19.	Bangi Piont	x	13’22.373N / 144’38.528E	50
20.	Anae Island		13’21.380N / 144’38.240E	20
21.	Pete’s Reef	x	13’20.652N / 144’38.265E	55
22.	Sella Bay	x	13’19.361N / 144’39.100E	16
23.	Cetti Bay		13’18.932N / 144’39.188E	35
24.	Tuguan Bay	x	13’17.003N / 144’39.665E	37
25.	Bile Bay		13’16.600N / 144’39.700E	48
26.	Cocos #1	x	13’15.900N / 144’39.258E	46
27.	Cocos #2	x	13’15.061N / 144’38.715E	36
28.	Navy Channel		13’14.485N / 144’38.375E	37
29.	Cocos Wall		13’14.250N / 144’39.552E	45
30.	Cocos #3	x	13’14.249N / 144’40.019E	55
31.	Jade Shoals		13’27.189N / 144’39.720E	45
32.	Western Shoals	x	13’27.020N / 144’29.230E	20
33.	Gabgab #1	x	13’26.694N / 144’38.729E	20
34.	Gabgab #2	x	13’26.706N / 144’38.655E	60

Table 11. Current status of SWMs online and offline.

Cultural Signs - November 2022- February 2023

1. Tanguisson beach, NCS-Dededo
2. Paseo, Hagatna
3. Adelup, Hagatna
4. Asan beach park
5. Nimitz beach, Agat
6. Merizo Pier
7. Ge'f Pago, Inarajan (replacement pending)
8. Talofofo bay, Inarajan (Off station, replacement pending)
9. Ipan beach
10. Tagachang beach (replacement pending)

- Surrounding areas of Nimitz beach-Agat, Asan beach, Adelup-Hagatna, Ipan-Beach, Tagachang-Yona, Ge'f Pago-Inarajan, and Tanguisson-Dededo signs were grass trimmed by staff (Martin, Ducusin, and Sasamoto) as needed.
- Litter and debris were removed at the following locations (Tanguisson, Adelup, Tagachang, Talofofo bay, and Asan).
- Tanguission sign was observed several times (3x) before being surveyed and maintained on a different day due to public vehicles constantly parking in close proximity to sign while staff avoided vehicle damage
- Request For Quotes requisitions and signature were sent to vendors for Signs backpack heavy duty leaf blower 2/27/2023
- BPA supplies Purchase Orders for three (3) vendors was awarded and will be used to purchase essential much needed supplies to maintain and repair signs, Friday 2/3/2023.

Figure 7. Pre-survey, inspection, Tanguisson.

Figure 8. Post maintenance, Tanguisson.

<u>Fishing Platform - November 2022- February 2023</u>

There are a total of 4 Fishing Platforms.

1. Paseo, Hagatna
2. Togcha #1, Ipan
3. Togcha #2, Ipan
4. Ylig bay, Yona

- Paseo, Hagatna Fishing Platform was surveyed and maintained by staff (Martin, Ducusin, and Sasamoto) as needed. Front railing was recently damaged and is in need of repair, sparse litter was removed.
- Offshore Platforms Togcha 1,2, and Ylig were not physically surveyed/maintained due to "high surf, rip current conditions", and presence of Indo-Pacific Man-o-war jellyfish during staff scheduled visits
- Togcha 1,2, and Ylig were visually observed safely from shore, all offshore platforms are on station and serviceable for public use currently.
- Ylig (Togcha Cemetery) beach access has been closed off by Landowners. Thus preventing staff from approaching platform from a safe distance. Other safe avenues are currently being reviewed.
- A proposed draft "Work Request" was submitted for the installation of a gate door, replacement of fiberglass piping, railing, with stainless steel and repainted with "Safety yellow" Marine paint.
- Minimal litter and debris were removed from Paseo location.
- Graffiti/vandalism was observed and removed, by staff (Martin, Ducusin, Koss, and Sasamoto)
- Last survey and maintenance was conducted, Wednesday 2/22/2023 by staff (Martin, Ducusin, Koss, and Sasamoto)

Clam Project "*Na'boka*: Battling Hunger Through Community-Driven Aquaculture Projects"

- DOAG was awarded $113K in federal funds by the Pacific States Marine Fisheries Commission (PSMFC) to import 1,000 giant clams for the purposes of creating

village-owned clam farms. DAWR will develop two sites, teach the public how to grow them, and then hand them over to the people. Youth 'Hima Ambassadors' will be recruited from each village to lead these charges. DAWR received an amended contract from PSMFC following an approved 2-year grant extension, and the account has been re-established.

- DAWR received the Clean Water Act (CWA) Section 401 Waiver from the Guam Environmental Protection Agency (GEPA) on 11/16/22 and determined that any discharge from this project will comply with Guam water quality standards. The US Army Corps of Engineers (USACOE) is reviewing the Pre-Construction Notice application (PCN) for a NationWide Permit (NWP) and will issue a final authorization once the 401 waiver is received. Once the NWP is obtained, the remaining funds ($53,000) for the construction of clam enclosures will be released to DAWR and construction will begin.

Update: On December 12, 2022, DAWR was issued the Nation-Wide Permit Verification Letter from the USACOE. As of February 14, 2023,PSFMC released the remaining $53,000of award funds to DAWR to begin the constructing of the clam farm enclosures. Two Town Hall meetings were conducted: The first at Inalahan Mayor's Office on February 11, 2023, and the second on February 25, 2023, in the village of Malesso', at the Youth Recreation Center. These Town Hall Meetings will be used as a means to establish ties with the community for the success of this project, as these will be community-driven clam farms. During the Town Halls, village members, as well as other attendees from other villages, strategized with DAWR various ways to carry out the project such as: 1.) Site selection, 2.) Monitoring and Surveillance, 3.) Available Participants, 4.) Outreach and Awareness, 5.) Community and Youth Participation, etc. All input and feedback from the community were documented and save and will be used in the upcoming Town Hall meetings. These meetings will be conducted as needed, until the village is ready for the construction of the enclosures. A date will be set for constructing the seen closures and DAWR will plan according for the transport of the 1,000 clams.

Development of a Feasibility Study to Enhance Reef Fish Populations

Update: DAWR received $120,000 in award funds from WSFR for an aquaculture feasibility study. DAWR is developing an RFP to call for proposals to conduct a study to determining the feasibility of in-water and in-land aquaculture systems in and around Guam. This study will be similar to a market analysis to determine all available resources to operate these two types of systems to develop hatcheries in Guam for the purposes of restocking wild populations of marine organisms. DAWR is working closely with BSP to execute the RFP using appropriate protocols established by the Government of Guam.

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