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Deputy Director**DMWR AGENCY REPORT SECOND QUARTER FY24****1. Shore-based creel program:**

The Shore-based Creel Survey completed a total of 182 runs, accomplished 65 sampled surveys within 66 Weekdays and 13 Weekend/Holiday for this second quarter. The monitoring team recorded 72 Participation counts and 58 Interview data including opportunistic interviews that will calculate an estimate of catch and effort data from October to December. The data accumulates and generates expansion totals that express the estimated fish catch landings by gear type of the near shore fishery. Note: Manu'a participation data is not included in this report because its fishing activities are more comprehensive than the main island of Tutuila. In addition, the data system needs to be updated in order to make necessary changes that will enable the data encoder to replace or add in new survey routes.

Below are the results generated from the data collected this quarter; Total expanded catch with no pooling for this quarter is estimated at 3,643 lbs.; the total expansion for Gear/Hr totals to 3,219lbs; and the expanded total for Catch/ Gear-Hr is 1.13lbs; these results describes an increase from last quarter's report.

The expanded catch/ effort summary by gear methods:

2024	Rod and Reel	Gleaning	Spear-Snorkel	GillNetActive	ThNet	Handline
January to March	1331lbs	1104lbs	740lbs	202lbs	137lbs	128lbs

The catch summary also provides a list of species composition in total landings without pooling. The five dominant species for this quarter are listed below.

- | | |
|---|---------|
| 1. Top shell/ <i>T. niloticus</i> / Aliao | 708lbs. |
| 2. Striped surgeonfish/ <i>A. lineatus</i> / Alogo | 499lbs. |
| 3. Rainbow runner/ <i>E. bipinnulatus</i> / Samani | 479lbs. |
| 4. Bluefin trevally/ <i>C. melampygus</i> / Malauli | 362lbs. |
| 5. Bigeye scad/ <i>S. crumenophthalmus</i> / Atule | 264lbs. |

The Project Lead reported back to work on Feb 27th 2024. Project Lead participated in interviewing the last candidate for Manu'a technician position. For the mainland of Tutuila one technician was hired in January 2024 and one more vacancy is still available. This quarter we processed purchase request for a new program vehicle for FY2024. Shore-based program continues collaboration with Boatbased Project Lead on creel data reporting for WPacFIN Semi-annual reports.

2. Key Reef Species Program:

Objectives 1: Conduct replicated fish visual surveys in 14 reef slopes and 14 reef flat sites in Tutuila Island; 6 sites in Manu'a; 4 sites in Swains; 4 sites in Rose Atoll;

Accomplishment(s): Reef Flat and Slope

Completed 8 reef slopes:

1. Fagasa
2. Alega
3. Alofau
4. Amaua
5. Fagaalu
6. Fagaitua
7. Matu'u
8. Nuuuli

Completed 6 reef flats

1. Alofau
2. Amanave
3. Aua
4. Auto
5. Fagaalu
6. Nuuuli

Staff assisted and participated in fish ID training and survey methodology by CRAG scientists Peter Houk, Alice Lawrence and Miri Vaeoso. A collaborative effort to support coral reef monitoring surveys in American Samoa. Staff were calibrated in fish identification and exposed into utilizing Coral Net software to assist with benthic analysis. Coral reef monitoring will continue in next quarter.

Life history

Staff were able to collect 125 fish samples for this study. We were able to collect enough samples for *Lethrinus amboinensis* and scared oviceps. Team is continues to try and collect enough samples for the remaining 3 species for the upcoming otolith and gonads training in May 2024.



Collection of otoliths and gonads from an emperor fish.



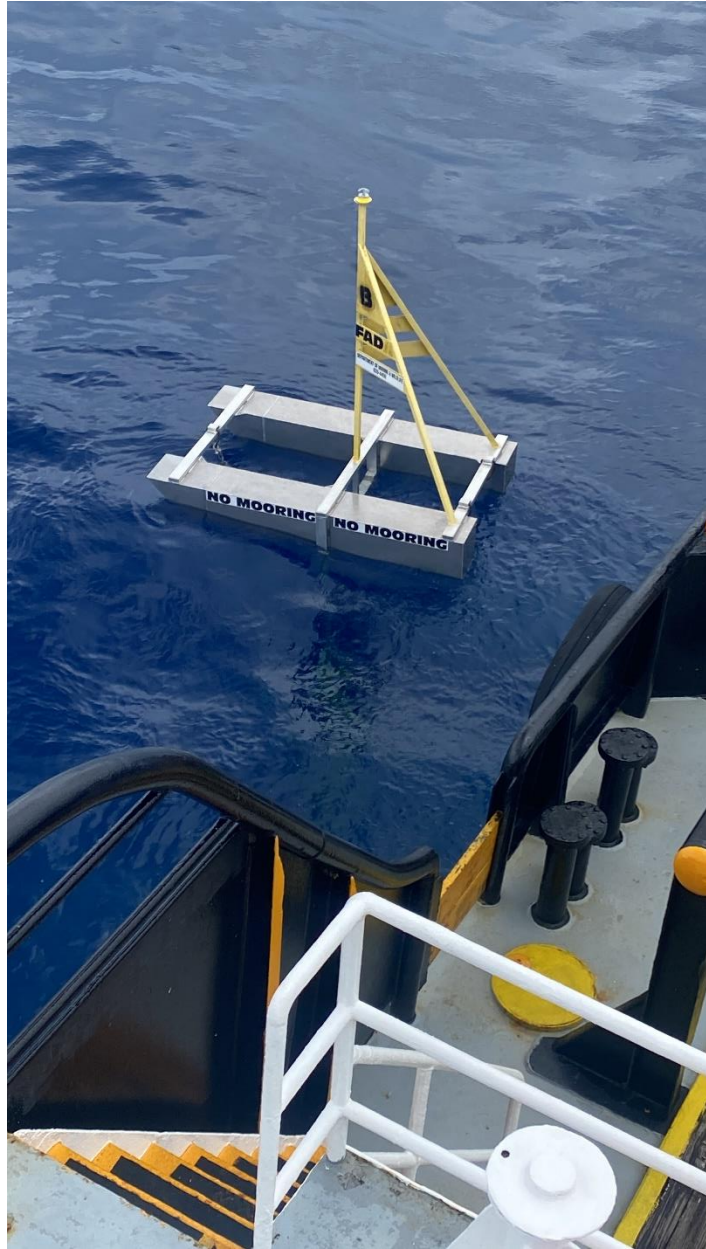
Staff conducting underwater coral reef monitoring.

3. Sportfish Life History Program:

Staff continue to coordinate with the partner molecular laboratory, the Australian Genome Research Facility (AGRF), which is generating microsatellite population data from the samples collected from Savaii, Upolu and Tutuila (for the bottomfish *Lutjanus gibbus*, *Lutjanus kasmira*, *Lethrinus rubrioperculatus*, and for the reef fish *Acanthurus lineatus*).

4. Fish Aggregation Device Program:

The overall goal of this program is to provide fishermen with access to pelagic tuna fisheries through the deployment of Fish Aggregating Device (FAD). main objective of this program is to maintain 5 deep-water FADs and conduct regular survey of their status and survey fishermen's who use these FADs. There are 5 sites: FAD A off Aunuu, FAD B, off the Pago harbor, FAD C off Vaitogi, FAD D off Tapu-tapu and FAD E off Fagasa. The program currently uses two FAD buoys: the catamaran buoy and the Indian Ocean design. FADs A and B are off catamaran buoy design. FAD B buoy was lost recently, mostly probably to rough sea conditions, and its buoy drifted to Western Samoa. FAD B has been recently replaced. FAD B has lost its main buoy but the whole FAD is mainly intact. The program is currently working with its FAD product provide in New Zealand for a bigger buoy for better visibility. So at the moment, all 5 FADs are in place according to the program's main objective. Staff interviewed various sportfishermen for their catch and assisted preparations in the recent l'a Lapoa Fishing Tournament. The photos below were recently taken during the redeployment of FAD B.





5. Boat-Based Creel Survey Program:

Staff conducted interview and participation surveys of active alias that contributed to the landings from longline, bottomfishing, trolling, mix bottomfishing/trolling and spearfishing activities. Surveys were conducted randomly throughout the month for at least 3 weekdays a week and 2 weekends per month. Throughout this quarter, there were 41 fishing trips with fishing efforts recorded from 15 interviews. Species landed by the local alias are reflected in the port sampling through Boat-based Creel Surveys.

The market sales of pelagic, bottomfish, and nearshore species are found in the Commercial Invoice System. Registered vendors in the Commercial Invoice System are local businesses that purchase fresh and/or frozen local fish. In accordance with A.S.A.C 24.0905, Dealers Records need to reflect all this pertinent information on the invoices provided by the department. Purchase transactions such as Resold (purchase from another business) and Imports are also reflected in these commercial invoices. Under A.S.C.A 24.0305, vendors need to submit their invoices on or before the 16th of every month. The department sends a team on a courtesy visit to all vendors to ensure data quality and control. Invoices collected do not always reflect purchases made during the collection. Some invoices are collected or submitted to the department at a later date which will

alter the present numbers reflected in this report. There are currently 74 vendors in the Commercial Invoice System which have all been visited every month this quarter.

The numbers between creel surveys and commercial invoices will vary. Data from commercial invoices include local landings from fishermen who use their alias, miscellaneous catches from longliners, and nearshore fishing activities. Whereas creel surveys or port sampling are only landings from fishermen using alias.

6. **Community-Based Fisheries Management Program:**

HIGHLIGHTS OF ACTIVITIES:

CFMP and Key Reef Monitoring team continued monitoring activities for the giant clam cages in Sa’ilele and Faga’alu on dates as tabled below. Activities included removing trays from cages, scrubbing debris and algae off cages and clams, rearranging clams for optimum space, placing trays again in the cages and tightening fishing lines holding mesh cage together, securing the rebar shelves with tie wire and securing rebars into sand substrates. All clams were alive and well and complete in numbers.

Date	Village	Status
01/18/2024	Fagaalu	Alive and all accounted for
1/19/2024	Sailele	Alive and all accounted for
1/25/2024	Sailele	Alive and all accounted for
1/26/2024	Sailele	Report from Mayor on loss of clam cage (See more details below)
2/8/2024	Fagaalu	Alive and all accounted for
2/29/2024	Fagaalu	Alive and all accounted for
3/1/2024	Fagaalu	Alive and all accounted for, 1 dead
3/20/2024	Fagaalu	Alive and all accounted for

Sailele incident:

A total of 107 giant clams were transported to Sa’ilele on the 1st December 2023 as a result of the ‘Atoa o Samoa’ Learning Exchange with the Ministry of Agriculture and Fisheries (MAF) Samoa.

After biological monitoring assessment of the site conducted by DMWR and MAF on the 29th November 2023, Sa’ilele reef flat was deemed feasible as one of 2 sites to host the imported juvenile giant clams for grow out and restocking. Site selection dynamics used for assessment to ensure best survival rates included:

- * Water depth at 1-10 meters
- * Water temperature at 25-30 degrees C
- * Water salinity at 32-35 ppt salinity
- * Clean and clear seawater
- * Not rough seas
- * Ideal protection from predators

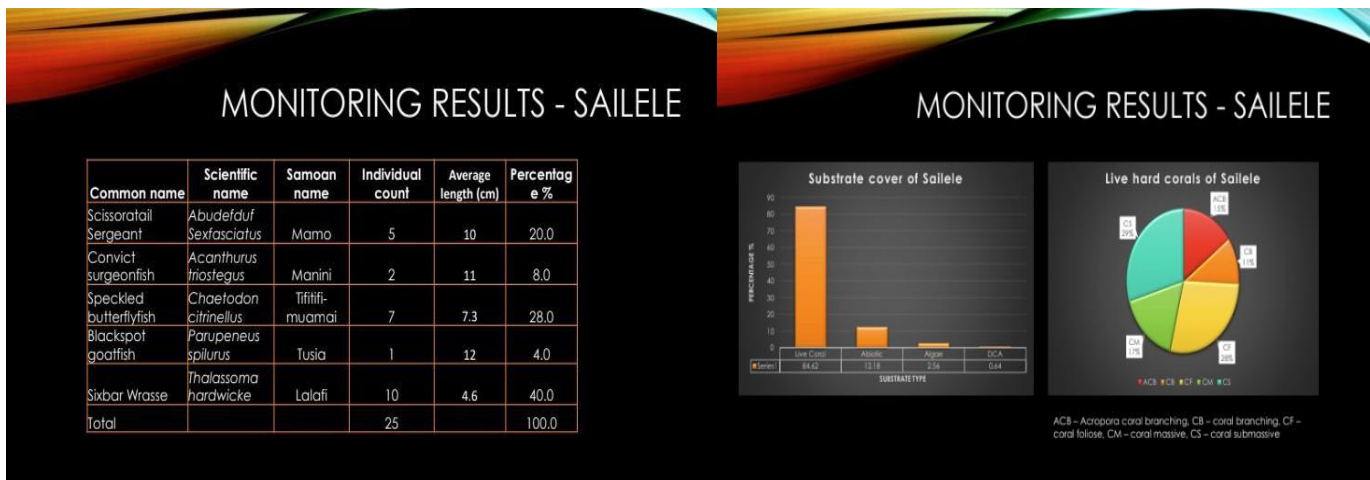
The site overall has a good variety of substrate and coverage of coral species. Sa’ilele is also a priority host site due to designation of its village Marine Protected Area in the CFMP program.

BASELINE DATA		SA'ILELE
CLAM NUMBER		107
CAGE NUMBER		1 big cage (2x1m)
TRAY NUMBER		6
AVERAGE SIZE (CM)		10
DATE DEPLOYED		12/1/2023



Placement of cage at date of deployment 12/1/2023

Biological monitoring results for clam deployment site assessment in Sa'ilele



Incident: On Thursday, 25th January 2024 at about 1545 hours, the Mayor of Sa'ilele Mr. Tuiagafotu Galu Topeto reported to DMWR on phone that the clam cage had gone missing from the site where it was deployed. He stated that his brother, Mr. Topeto Topeto went snorkeling the evening before on Wednesday at around 1600 hours to check on the clams after a series of high swells and strong wave action that day. Due to time constraints and weather conditions that evening, the Fisheries Monitoring team noted the urgency of the report for first priority response and preparation the following day.

Important note: Fisheries monitoring team checked on the clams the week before on Friday the 19th January on usual monitoring schedule (every 2 weeks since day of deployment) where the clams were cleaned and counted again; everything was observed to be set in place.

Last sighting of clam cage at monitoring date Friday, January 19th 202



Response: A total of 6 Fisheries staff from Key Reef and CFMP teams responded to Sa'ilele on Friday, 26th January 2024 at 0900 hours to the incident reported. The Mayor was not present during the engagement due to family commitments; his brother Topeto Topeto was present for explanation and confirmation of details reported by the Mayor the previous day during the phone call. He confirmed all details and guided the team to 2 dead clams he placed in a bucket as the only two found on the beach after his search underwater and along the shoreline. Mr. Topeto accompanied the Fisheries team around the beach to show effects from strong wave action and high tide activity in the village earlier that week. He also assisted with the search for the rest of the clams/cage around the beach and underwater.

2 dead clams found by Mr. Topeto on 01/25/24



Some debris at Sa'ilele indicating rough conditions and extension of wave breaking activity



Dominant sites where dead clams were found

After searching for an approximate 3 hours on shore and underwater, the Fisheries team managed to collect 29 dead clams scattered across the beach and 5 live ones found underwater near the cage location. The rebars that stabilized the clam cage on the seabed were retrieved and neither the cage nor the trays were recovered. The 5 live clams were transported to the giant clam site in Faga’alu where they will be monitored and kept safe with the other 550 clams originally deployed in Faga’alu.



(L) Live clam located near deployment site: Dead clams found along the beach (R)

Recommendations:

- Sailele site is still feasible for giant clam survival
- Take 1 cage of 50 bigger size clams before end of this quarter (by end of March 2024)
- Build rebar table for the cage for suspension
- Add in more rebars and tie wire for better stability and security of cage to rebar table

CFMP team conducted the initial village meeting with Fagasa village on January 30th 2024. This was in response to their interest in joining the CFMP program. The village meeting included the high chiefs of the village and the mayor and included a presentation from CFMP team on some of the benefits and importance of the program and what it entails for the village and overall sustainability of marine resources in American Samoa. We welcome Fagasa

into the program and look forward to working with the village in the years to come with projects to be implemented.



CFMP team conducted a meeting with the Faga'alu Fisheries Management Advisory Council on the 31st January 2024. The meeting's main objective was to discuss with the Mayor and Chiefs of the village and draft the village by-laws to regulate activities within the Marine Protected Area. A draft was developed and is to be detailed in the village Fisheries Management Plan for Faga'alu, currently in development and to be finalized before end of this fiscal year.



CFMP team joined CRAG on a monitoring survey training in Fagasa village on the 5th March 2024, with Scientist Peter Hauk from the University of Guam and Consultant Ms. Alice Lawrence from Wales. The training served to upskill certified divers in the monitoring team on fish, benthic and invertebrate survey methods and fish identifications out in the reef slopes. The ultimate goal is for CRAG and DMWR Fisheries to merge monitoring teams to cover all coastal sites within respective sections.



CFMP team ongoing activities and other highlights for this quarter included JCR-FMP meetings with NOAA for territorial Fisheries management plan, participation in NOAA meeting of Coral critical habitat declaration, Nautilus research vessel workshop on data and survey information, watershed management planning for Amanave and Faga'alu and village MPA Fisheries management plans drafting. CFMP team also assisted in all reef flat and reef slope monitoring surveys in Key Reef sites (please refer to Key Reef report section covering village MPA sites as well).