



## 1. SEA CUCUMBER ACTIVITIES

### 1.1 FARM ACTIVITY

The results of monitoring indicate successful growth and survival rates for sea cucumber farming in both the Talafo'ou and Makave communities. The Ministry has conducted consultations and informed both communities about the expansion of their sea cucumber farms. Talafo'ou has expanded its farm to a 50m x 50m cage, while the Makave community has expanded theirs to a 50m x 150m cage. The purpose of this expansion is to prepare for transitioning from trial farming to commercial farming, with the aim of improving the livelihoods of these communities. Once the cages are prepared, the Ministry has transferred 1700 juvenile sea cucumbers from the mariculture facility to each of the farms. The transfer of juveniles to the Makave community in Vava'u Island was successful. Continuous monitoring of survival and growth rates is being carried out jointly by Ministry staff and the community in both locations

Releasing juveniles to farm cage at Makave by the community members



Construction of expanded sea cucumber cage at Talafo'ou



Transferring & hand over of sea cucumber juvenile to Makave Community



Transfer & release sea cucumber juveniles at Talafo'ou

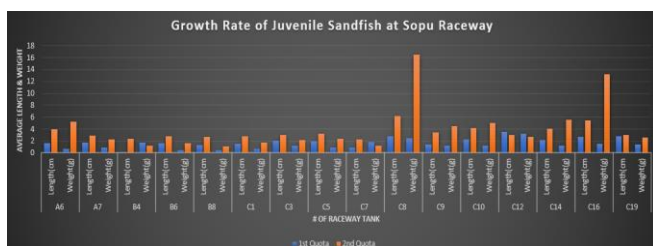






## 1.2 MONITORING ACTIVITY

The Sopa Mariculture team conducts ongoing monitoring of the juvenile sea cucumbers. This monitoring includes bi-weekly measurements of length and weight to track their growth rate, along with twice-weekly feeding. The ultimate goal is to distribute these juveniles to the SMA communities for use in their own farms. The graph below illustrates the monitoring results in comparison to the first quarter.



The ongoing monitoring of sea cucumbers within the communities is collaborative effort involving the aquaculture staff and the Community SMAs.

## 1.3 HARVEST & PROCESS FROM FARM

The aquaculture team maintains its collaboration and assistance with Vast Ocean in sea cucumber activities and data recording. Vast Ocean successfully executed a second harvest, processing, and exportation of the sea cucumbers. The increased numbers and the success of the second harvest suggest that farming has been effective, with the aspiration to replenish the wild stock in the ocean. Here are the recorded data and numbers from the second harvest and exportation:

Date	# Pieces	Wet Body (from pond - with internal organs)		Wet Body (without internal organs)		Well cooked (before preserved)		Total # of Harvest (pcs)
		Weight (KG)	Avg Weight (pcs/g)	Weight (KG)	Ave. Weight (pcs/g)	Weight (KG)	Ave. Weight (pcs/g)	
01-Jun	504	166.5	330.4	190.1	377.2			10954
02-Jun	593	508.5	857.5	193	325.5	103.2	174.0	
03-Jun	505	264.2	523.2	149	295.0	101.3	200.6	
05-Jun	2021	1145.7	566.9	531	262.7	121.1	59.9	
06-Jun	2400	1587.8	661.6	163.6	68.2	134.7	56.1	
07-Jun	2648	883	333.5	154.7	58.4	113.2	42.7	
08-Jun	1993	1150.6	577.3	412.4	206.0			
09-Jun	290	108.7	374.8			28.1	96.9	
<b>TOTAL</b>		<b>5815.0</b>	<b>4225.1</b>	<b>1793.8</b>	<b>1593.9</b>	<b>601.6</b>		

- Commodity – Golden Sandfish
- Status – dry (product)
- Weight – 181kg
- Number of pcs – 10,954 pcs
- Destination port – Sydney, Australia

## 2. PEARL FARM ACTIVITIES

### 2.1 TRAINING WITH HA'APAI PEARL FARM

The aquaculture team travelled to Ha'apai with the aim of conducting training, capacity building and extension services for the Pearl farmers. Objective was to offer assistance to the development of Pearl industry, thus contributing to the development of aquaculture

- Harvesting and grading of Mabé Pearls
- Training new farmers on farming practices and improved management techniques
- Improve skills of the Ha'apai Pearl Association on seeding
- Spat distribution

The trip was a follow-up training from previous training the year before of seeding activities. The training was successfully carried out for 10 days with the activities carried out at the main office in Pangai and the outer island communities of Felemea, 'Uiha & Lofanga. An important part of the follow-up is harvesting of the pearls that were seeded the year before. The farmers were able to tell from the harvested pearls if the seeding was done properly and accordingly. Good quality pearls are the results of proper seeding. The staff managed to show the farmers the right way of harvesting without damaging the Pearls.



Farmers and their harvested Pearls from Ha'apai



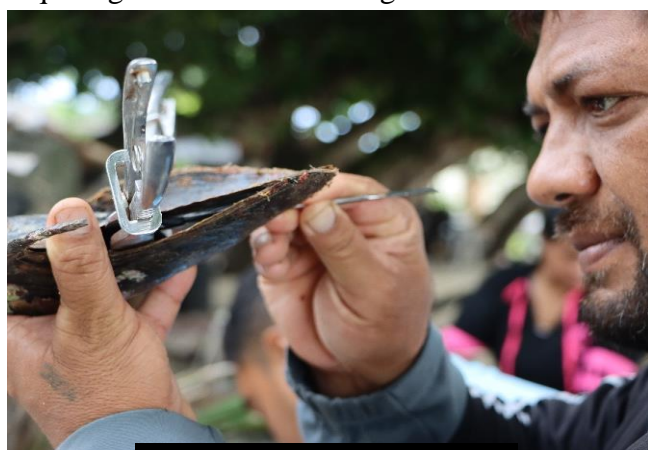




Graded mabé pearls from Ha'apai



During this trip, the distribution of spats (juvenile oysters) was conducted, benefiting both new and existing farmers. Existing farmers received 50 spats each, while newcomers were provided with 100 spats to initiate their farms. Additionally, seeding activities were carried out for farmers requiring assistance in this regard.



Distribution & seeding activities



## 2.2 SPAT COLLECTOR

Continuous work towards the spat collectors is ongoing. Because spat collecting from the wild thrives in Vava'u, the team at the Vava'u office manages and monitors the spat collector line up to harvesting and distributing. Pearl farmer – Atonio Mailangi's spat collector line was also harvested with a total of 217 spats which was transferred to the farmer's main pearl line to be monitored. Successful spats of 250 with 102 bigger in size was also harvested from the Ministry's spat collector line and transferred to Ministry pearl line to be managed & monitored for distribution to farmers. The overarching goal of harvesting spat collectors is to distribute them to Pearl farmers, with careful planning by the team to ensure a balance between the number of spats collected and the numbers of farmers they can support



Harvesting spat collector at Vava'u

## 2.3 MONITORING & DISTRIBUTION

Monitoring of the Ministry's Pearl main lines is ongoing in all Islands; Ha'apai, Vava'u & Tongatapu by each aquaculture team. Distribution of spats from the Ministry in Tongatapu ongoing as well with details below:

Tongatapu Spat Distribution 26 May 2023												
Name of Farmer	Location	Pearl Oyster stock 2023					TOTAL OYSTER 2023	Pearl Distribution 2023				
		Small	Medium	Large	Panel net	Aqua purse		Small	Medium	Large	Panel net	Aqua purse
Pangia	Pangaimotu	100		3	2		100	100			3	2
Sapu Youth	Sapu	100		3	2		100	100			3	2
Sapu Association	Sapu	0		0	0		0	0			0	0







## 3. GIANT CLAM ACTIVITIES

### 3.1 MONITORING GIANT CLAM

Ongoing monitoring of hatchery larvae is taking place at the larval grow-out tanks. The juvenile clams are now visible to the eye without the need of microscopic lenses, indicating a successful spawning earlier this year. However, monitoring of the tanks is still carried out by the aquaculture team on a daily basis to ensure the survival of the juvenile clams until full settlement. This includes regular checking for sea water flow and aeration, water exchange and cover ups when rain is ongoing.



The aquaculture team is actively engaged in the ongoing monitoring of giant clam farms in Vava'u. They maintain records of juvenile clams that continue to thrive at these farms.

SMA Community	Clam species	Total
Ovaka	Squamosa/Derasa	22
Otea	Squamosa/Derasa	10
Matamaka	Squamosa	3
Falevai	Squamosa/Derasa	12
Taunga	Squamosa/Derasa	20
Eueiki	Squamosa/Derasa	18
Utulei	Maxima/Derasa	194

## 4. POND & CAGE CULTURE ACTIVITIES

### 4.1 FIN-FISH (MULLET & TILAPIA)

Daily monitoring and feeding of the fish farm as well as measuring water quality at the pond is ongoing carried out by the team. In addition to these activities, the team managed to captured more than 20 tilapia fish from the pond to be displayed at the Tonga Royal Agriculture, Fisheries, Tourism and Trade Show for Tongatapu.







## 5. TONGA ROYAL AGRICULTURE, FISHERIES, TOURISM & TRADE SHOW

Tonga recently hosted its inaugural Annual Royal Agriculture, Fisheries, Tourism and Trade Show, marking a significant return after a three-year hiatus caused by the COVID-19 outbreak, the 2022 Hunga-Tonga Hunga-Ha'apai volcanic eruption and the ensuing devastating tsunamis. The event centered around the theme "Recovering from the Hunga-Tonga Hunga-Ha'apai," providing a platform for farmers, fishermen and local business to showcase their resilience and hard work in bouncing back from the challenges posed by the pandemic and natural disasters.

Given the crucial role of the Fisheries sector in Tongan livelihoods, aquaculture farming activities were a prominent feature of the Royal Show's competition and exhibitions. These activities aimed to raise awareness and promote the development of aquaculture within the country. The aquaculture section actively participated in the celebration by presenting various set-ups of mini-aquariums, products, posters and informative flyers that highlighted the activities undertaken in this sector. Aquaculture stakeholders including Pearl farmers from each Island were actively involved in the competition and exhibition

