



## 1. SEA CUCUMBER ACTIVITIES

### 1.1 MONITORING & FARM ACTIVITY

Continuous collaboration with the Vast Ocean on monitoring farms and trials is ongoing. Monitoring of sea cucumber farms at Talafo'ou community in Tongatapu as the remaining community with success rate of sea cucumber growth and survival rate, and Makave community in Vava'u is carried out by the aquaculture teams continuously for growth and survival.

The aquaculture team together with the VO managed to collect broodstock from various farming sites and SMAs as part of preparation for spawning of sea cucumber which will be carried out by the VO team at their facilities.

## 2. PEARL FARM ACTIVITIES

The aquaculture team managed to collect pearl oyster broodstocks and clean-up at the hatchery to prepare for another spawn run. From the 8/11/22 – 21/12/22 the team managed to collect 71 pearl oyster broodstocks from Ministry lines to use for spawning. 30 broodstocks were transferred from Vava'u to try and use for spawning. However, due to various factors such as; gonads were not mature enough and the weather conditions changing often (rainfall occurring frequently) oysters were not able to spawn. Way-forward for the aquaculture is to continue attempting to spawn using broodstocks from both Tongatapu and Vava'u.

### 2.1 MONITORING & STOCK-TAKING

Continuous monitoring of the Ministry Pearl lines is carried out by the team as well as stock taking to monitor the availability of spats. With the increasing numbers of Licensed farmers, it is important for the number of spats available to be enough for a continuous supply for the farmers. Details below for stock take activities:

| Oyster Stock (Oct – Dec) |      |
|--------------------------|------|
| Available broodstock     | 365  |
| Spat (Dec - Jan)         | 2008 |

A total of 24 new licensed Pearl Farmers were approved and passed by the Ministry for this quarter. A total of 15 from Vava'u, 7 from Ha'apai and 2 from Tongatapu. The aquaculture section is then responsible for providing and deploying each pearl line and distributing of spats. Details below the total number of official licensed Pearl Farmers:

| Licensed Pearl Farmers |           |           |           |
|------------------------|-----------|-----------|-----------|
|                        | Old       | New       | Total     |
| Tongatapu              | 2         | 2         | 4         |
| Ha'apai                | 7         | 7         | 14        |
| Vava'u                 | 19        | 15        | 34        |
| <b>Total</b>           | <b>28</b> | <b>24</b> | <b>52</b> |

### 2.2 DEPLOYMENT OF SPAT COLLECTOR

Collecting of pearl oysters from the wild is another way for farmers to obtain spats. Due to the increasing number of farmers, a spat collector training was also conducted in Vava'u towards the farmers. The purpose was to encourage and empower the farmers on the importance of deploying their own spat collector line in order to support the Ministry's hatchery production of spats. 3 private spat collectors were deployed after the training. Farmers will keep and culture the spats from their own spat collector while the spats from the Ministry's spat collectors will be shared amongst all the farmers in Tongatapu, Vava'u and Ha'apai. The Aqua team in Vava'u managed to deploy spat collectors for the Ministry and for the individual farmers with the results shown below:

| Spat collector deployment |           |
|---------------------------|-----------|
| Ministry Line             | 11        |
| Individual Farmers        | 3         |
| <b>Total</b>              | <b>14</b> |

## 3. GIANT CLAM ACTIVITIES

### 3.1 MONITORING GIANT CLAM

Monitoring of hatchery larvae is on-going at the larval tanks grow-out. Monitoring of giant clam broodstock at the Fangatapu SMA is also ongoing





carried out by the team. Numbers of broodstock available still remains the same with a total of 87 giant clams. Distribution of giant clams have yet to start with the communities of Tongatapu. However, distributions have already commenced in Vava'u with the information below:

| SAM Community Clams distribution - Vv |                            |       |
|---------------------------------------|----------------------------|-------|
| SAM Community                         | Clam Species               | Total |
| Ovaka                                 | <i>T.squamosa/T.derasa</i> | 15    |
| Otea                                  | <i>T.squamosa/T.derasa</i> | 10    |
| Matamaka                              | <i>T. squamosa</i>         | 10    |
| Falevai                               | <i>T.squamosa/T.derasa</i> | 10    |
| Taunga                                | <i>T.squamosa/T.derasa</i> | 10    |
| Eueiki                                | <i>T.squamosa/T.derasa</i> | 15    |

## 4. POND FARM ACTIVITIES

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

Monitoring and feeding of the fish farm are ongoing carried out by the team daily. Again, the advantages of culturing fish in cages includes a much lesser labor intensive when harvest, and very efficient to monitor and feed. The team managed to collect mullet fingerlings and stock into cages.

Numbers below updated stock density for mullet fingerlings stocked to pen & floating cages

| Mullet Stocking Data |             |               |            |
|----------------------|-------------|---------------|------------|
| Date                 | Pen cage #2 | Floating cage | Total      |
| 29/07/22             | 29          | 29            | 58         |
| 01/08/22             | 23          | 13            | 36         |
| 02/08/22             | 106         | 60            | 166        |
| 11/08/22             | 7           | 0             | 7          |
| 12/08/22             | 206         | 50            | 256        |
| 27/09/22             | 220         | 0             | 220        |
| 25/11/22             | 110         | 0             | 110        |
| <b>Total</b>         | <b>701</b>  | <b>152</b>    | <b>853</b> |

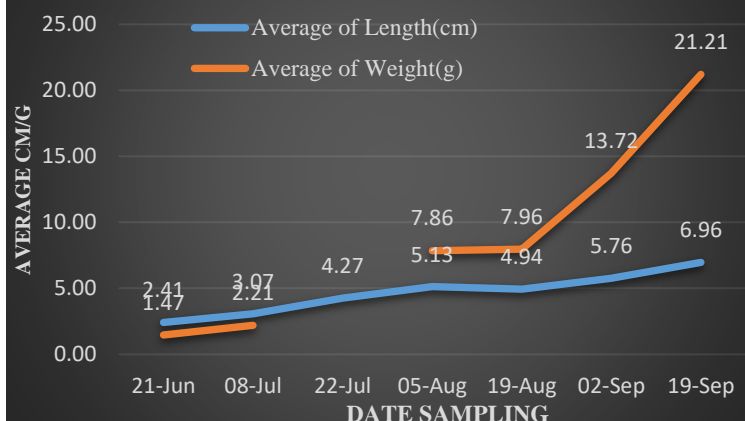
### 4.1 SHRIMP FARM

Clearing of the shrimp pond farm is ongoing carried out by the team in preparation for capturing and collecting shrimp fry's and stocking more in to the farm

### Monitoring Sea cucumber at SMA Farms

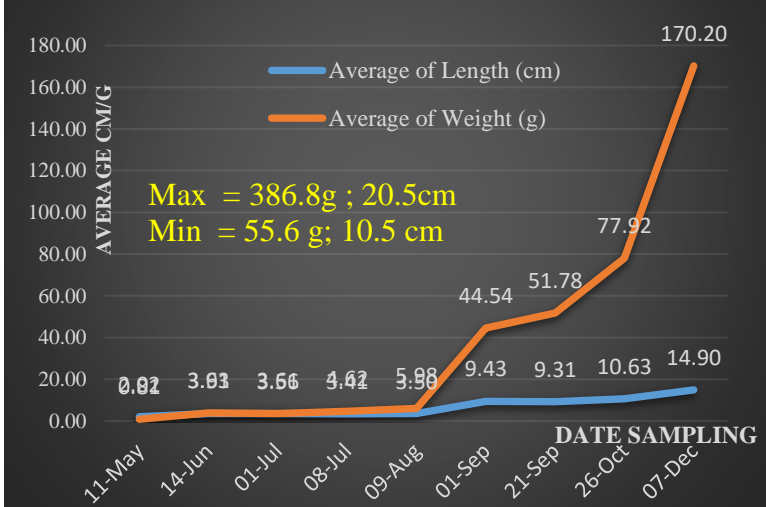


### Growth rate of Golden Sandfish at Makave SMA, Vava'u



Results of monitoring and measurements of sea cucumber farm from Talafo'ou & Makave (Vv) SMAs. Survival & growth rate for on both sites are increasing well

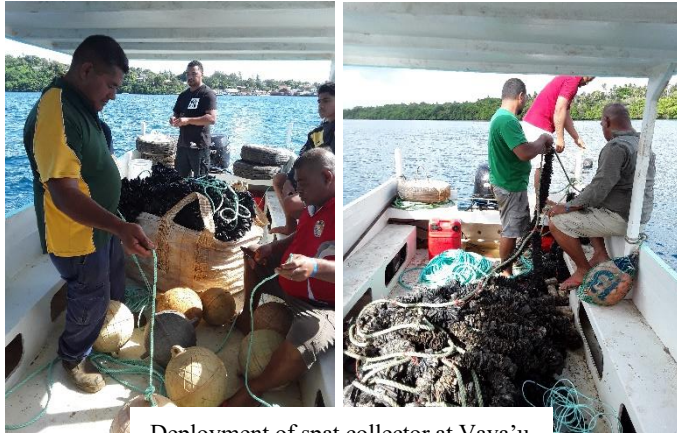
### Growth rate of Golden sandfish at Talafo'ou SMA



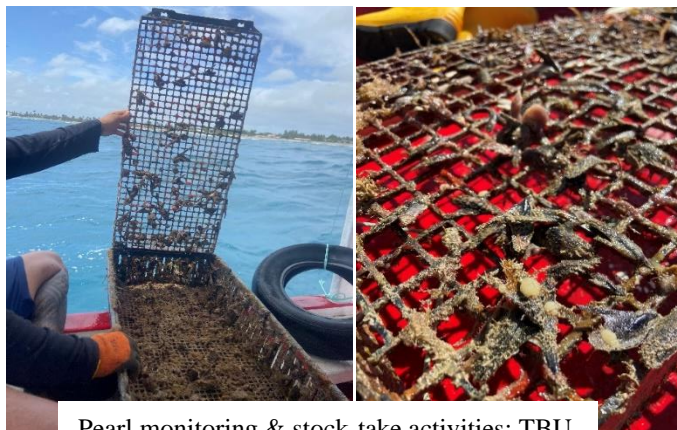




## Pearl Farm Activities



Deployment of spat collector at Vava'u



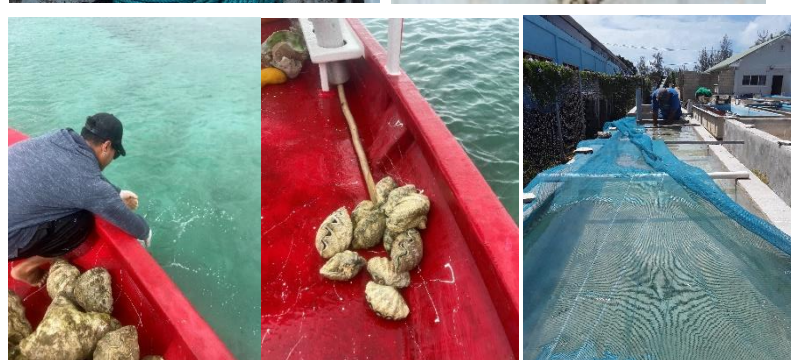
Pearl monitoring & stock-take activities: TBU



## Giant Clam Activities



Giant clam distribution: Vava'u



Monitoring of larval tanks grow-out @ hatchery & broodstock @ Fangatapu



Fish Pond activities

