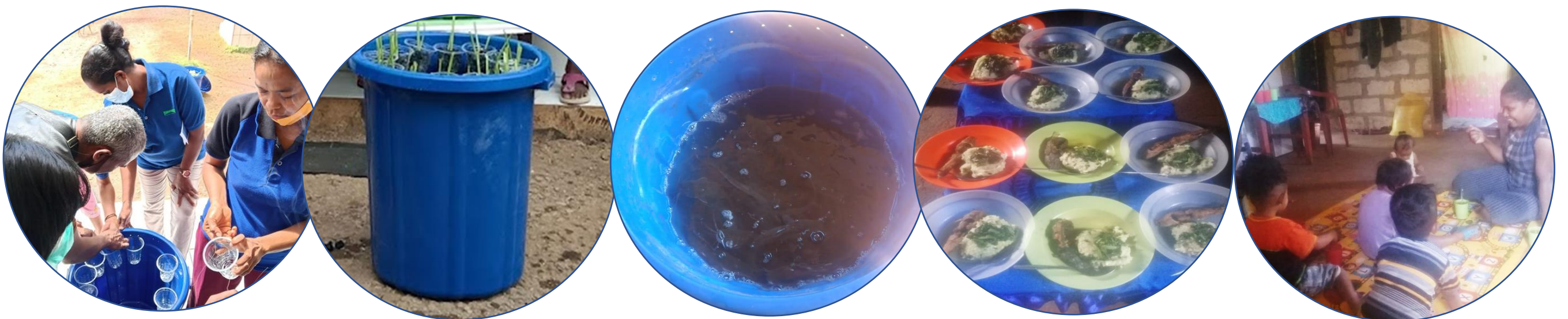


High prevalence of stunting amongst children in central Kupang Regency

- A limited number of **feeding frequencies and low protein intake** supplied by families in one of the most disadvantaged areas located in the central of Kupang Regency, Timor island, Eastern Indonesia.
- The insufficient protein intake made worse by a **long drought season** (more than 8 months per annum) in the island which led to a **high prevalence of stunting** amongst the children.



Objective Introducing a simple aquaponics system that easily adoptable by the community to help tackle the stunting problems.



Methods and Results

We trained the community leaders especially health cadres from the village's posyandu (integrated health center) to learn about the aquaponics system. We were using **catfish** *Clarias* spp and **kangkong** *Ipomoea aquatica* that co-culture in a-80L-water-container. Two months after the inception, we feeding the babies twice (a total of 12 infants under 5 yo) within the posyandu. The collected data on weight, height, and stunting status based on ages as shown in the Table 1. Although the stunting status has not changed in the duration of the project, strong evidence showed that there was a significant difference in mean height-for-age z scores between samples ($t_{11} = -6.059$, $p < .001$). The families were also able to offer their children more persistent frequency and diversity of protein sources. However, water scarcity is still the main problem faced by the community as out of seven containers only two were able to be harvested.

Table 1. Initial and final weight, height, and nutritional status of infants

ages (mo)	Initial			Final*		
	weight (kg)	height (cm)	stunting status	weight (kg)	height (cm)	stunting status
11	8.9	70.5	very short	9	70.5	very short
16	7.8	67.5	very short	8.1	69	very short
16	8.4	68.5	very short	8.8	70	very short
16	6.8	69	very short	7.1	69	very short
19	9.5	72	very short	9.8	72	very short
26	12.4	84	normal	13.4	84	normal
36	13.4	95	normal	13.8	95	normal
37	12.5	89	normal	13.1	89	short
49	11.8	87	very short	12.2	87	very short
52	15.2	99	normal	15.6	99	normal
53	13	91	very short	14	92	very short
55	13.8	93.5	short	14.5	94	short

* One month duration

Concluding Remarks

As we are continuing the project, longer observation (6-12 mo) should provide a real benefit of protein supply to the infants especially those who are both under 24 mo and above 36 mo of ages.