

Erik Elliot September 11th,2018

**Dusun Sili: Dietary Study / Preliminary Report**

During the dry season months of July and August 2018, the village of Sili was under dietary observation by the NGO Health Access Sumbawa. The study was led by Erik Elliott, Health Sciences student at Western University, Ontario, assisted by several community partners.

Sili is located in the province of Nusa Tengarra Barat (NTB), one of the most underprivileged regions in Indonesia. 22.78% of the province’s population falls beneath the poverty line, resulting in significant nutritional deficiencies. 30.5% of children under 5 are reported to be underweight. Childhood nutritional deficiencies, lack of sanitation facilities and clean drinking water are closely associated with stunted growth. Stunting affects 48.5% of the population in NTB Region. This not only affects one’s height, but also results in serious cognitive development issues. Regions heavily affected by stunting, such as NTB, can expect to have a 2% decrease in their GDP due to the loss of human capital.

**Key observations about the Sili diet**

1. The observed diet suggests that villagers are consuming less than 50% of the recommended daily intake of protein based on their body weight. A low protein diet is not conducive to physical and mental development. When coupled with a diet that lacks sufficient vitamins and minerals, stunted growth is an expected outcome. The people of Sili show signs of stunting, as recorded by the local Puskesmas (Health Clinic). Stunting can be prevented with proper diet from conception through the first 2 years of an infant’s life; the time when major neurological development is taking place.
2. More than 70% of the diet consists of boiled rice. This is due to its inexpensiveness and its ability to make the consumer feel satiated. White rice is devoid of any significant nutrients other than calories.
3. Side dishes consumed are mostly gathered from wild sources or purchased from outside the valley. Other than a few staples such as eggs and cabbage, the quality of the food purchased is low. The most common items purchased are instant noodles and biscuits. Biscuits are often used as a meal replacement, especially for children. Instant noodles are often served over boiled rice, to add flavor and texture.
4. The hunted/gathered food is of much higher quality, nutrient-dense side dishes such as seafood and moringa leaves and fruit. However, the supply of wild-grown foods has greatly diminished compared to a few decades ago. Wild food from the fields and ocean can supplement the diet but are not available consistently enough or in sufficient quantity to provide villagers with an adequate diet. Seafood in particular is unevenly distributed.
5. Very little of the diet is cultivated locally, despite the fact that the principal occupation in Sili is farming. The HAS Community Garden Program has demonstrated that a wide variety of fruits and vegetables can be grown successfully in Sili year-round when gardens are well fenced and irrigated.

**Recommended Actions for H.A.S.**

A transition from reliance on hunting/gathering to more locally grown sources of vegetables, fruits, and plant-based protein may be the most affordable opportunity to improve the Sili diet. The main challenge to overcome will be apathy. There does not appear to be widespread discontent or concern among the people about the current diet. Experience in other areas shows that it is very difficult to improve a community’s diet with nutritional education programs alone. Most programs fail.

Therefore, a successful program will take a market-demand, consumer-focused approach. This should include programs which increase the supply of fresh foods that are already popular with the people, such as eggs, shrimp, moringa, bananas, and long beans. This might be accomplished by supporting local growers and/or by improving transportation and distribution channels to Sili.

Additionally, nutrient –rich food products might be developed and test marketed to the target population. A sanitary food processing center would be required. Examples might be savory nut products (such as peanut butter), dried nuts, seeds and fruit-based snack foods, nutrition bars, fruit leathers, or vitamin enriched rice and noodles. The goal would be to replace many unhealthy meal-substitute snacks with nutrient-rich alternatives. Success will require development of the right products, offered at the right prices with the right packaging and promotions. In other words, Programs such as Harvest for Heath (an initiative of Health Access Sumbawa) must be executed skillfully to compete with popular “junk food”.