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## Analysis Of Sorghum Local Food Development Analysis Community-Based For Food Security And Nutrition In Lembata And East Flores, East Nusa Tenggara Province

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### Keywords

Food system, local wisdom, local food, sorghum, sustainable food system.

### Abstract

This study analyzed local food development with community-based sorghum in two villages in the Lamaholot region, Lembata Regency and East Flores, East Nusa Tenggara. Research how sorghum development is related to the national food system by Food Law No. 18 of 2012 and according to the Sustainable Food System of FAO, as well as analyze how the food system is related to SDGs (2) without hunger. The research design is a mixed method, combining qualitative and quantitative analysis. The research resource persons were farmers, village heads, traditional leaders, religious leaders, cultural leaders, and local governments. Research findings show that the development of local food in both villages of the Lamaholot Tribe is in harmony with nature, respects all living things as a unit, and is by local wisdom. Community practices strongly support sustainable food systems. The practices carried out impact social, environmental, and economic sustainability. The above findings are reinforced by the results of quantitative analysis, which shows that: 1) The development of local food based on sorghum meets the expectations of farmer group members and is by local wisdom. 2). There is a linkage between the local food system of sorghum and the national food system and sustainable food system for environmental, social, and economic sustainability. Judging from the linkage of the national food system, it is obtained that the development of local food meets the elements of food availability, access, and utilization. 3) Development of local food sorghum as an alternative to overcome food security and nutrition.



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### 1. Introduction

Food is a necessary human right—the right to individual food access. Every country protects food availability, hunger, and nutritional vulnerability. Many efforts are being made to overcome this, but food insecurity, hunger, and malnutrition are still prevalent (Miglietta, Coluccia, Pacifico, & Malorgio, 2023). The impact of climate change is one of the causes of the global food crisis, which affects hunger and malnutrition

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(The Guardian, 2021). The State of Food Security and Nutrition in the World reports that around 690 million individuals, or 8.9 percent of the world's population, are still experiencing hunger conditions.

The pandemic and the Ukraine war have left the world's food system vulnerable, as all countries secure food for the country. The war's impact has affected food prices and global food security (Matheus, Kantur, & Timba, 2023).

Climate change impacts the agricultural and food sectors, affecting food availability and declining food security. Exacerbated by the pandemic and the conflict between Ukraine and Russia, food security in Indonesia is being impacted.

Twenty-two world countries are stopping their exports. Indonesia is one of the countries that import the most food. The vulnerability of the food system in Indonesia is illustrated in the report on Indonesia's hunger level, which is 73 out of 116 countries (Global Hunger Index 2021) and the third highest compared to Southeast Asian countries (Meo, Tokan, & Rodriques, 2023).

Indonesia is still dependent on imports. Indonesia has the potential for biodiversity of diverse food sources by the diversity of ecosystems. The biodiversity of food sources is enriched by cultural diversity, geographical and ecosystem conditions, and local wisdom that affects the community's lifestyle, including a diverse local food system and source culture, and is still maintained and practiced by local communities. An adaptive and resilient food system is needed to protect the food fulfillment of Indonesian citizens according to Food Law No. 18 of 2012 and a sustainable food system according to FAO's global policy (Firmansyah, 2023).

This is in line with transformation efforts towards regionalization of Indonesia's food system that is healthy diets-nutritious, inclusive, equitable, sustainable, resilient, and built by local food systems based on local locality potential (Noegroho, 2022)

Research conducted by Nelson Chanza in Sub-Saharan Africa documented the practices of communities that still use local food and maintain local wisdom capable of food sovereignty. Based on this research, local communities are still implementing food systems by FAO standards, including four pillars, namely the pillars of availability, accessibility, utilization, and stability, which are practiced based on the wisdom of local communities (Chanza & Musakwa, 2022). In Indonesia, the Baduy community in Ciptagelar Village still upholds ancestral traditions in food system management, which can be adopted as a food security management system to maintain national food sovereignty (Astutik, Kusdiwanggo, & Mahda, 2018).

In the social structure of the Baduy indigenous people, local knowledge covers various social, community institutional, and economic aspects that are closely related to livelihoods and food needs (Mirajiani & Widi, 2022). On the other hand, the community food system based on local wisdom can shift if it is not managed correctly, as in the Waimangit village, Buru Regency. As a result, the open flow of communication and transportation has changed the consumption patterns of people who still hold local wisdom (Umanailo et al., 2018).

East Nusa Tenggara (NTT) attracts attention to food issues, primarily based on BPS data in 2018, which recorded the ratio of malnutrition sufferers in NTT as the highest nationally, reaching 9.7. Thus, for every 10 thousand people in NTT, nine people are malnourished, a figure far above the national average of 1.7. (BPS, 2018). However, although it is included in the category of vulnerable food, NTT has diverse local food sources, including carbohydrates, proteins, and vitamins, according to its ecosystem. Local wisdom is still widely practiced in everyday life to maintain the diversity of biological resources (Setiarto, Widhyastuti, & Saskiawan, 2016).

Timorese people in East Nusa Tenggara Province still utilize local knowledge in food management through the use of local food to overcome food security problems (Puspita, 2017). One example is the Boti Community on Tomor Island, Nusa Tenggara, developing local food sources of cereals such as local rice and corn, and sorghum barley for the food sovereignty of carbohydrate sources that are managed according to local rules and institutions so that they survive with local food.

Sorghum (*Sorghum bicolor* L. Moench) is a carbohydrate source for plants from Africa, but it has been domesticated in Indonesia for a long time. The plant is very adaptive, grows on dry land, and does not require a lot of water. This plant has the advantage of being sugar-free (gluten-free). In addition to food, this plant's seeds, stems, and leaves can be used as feed and biodiesel sources. This plant grows a lot in Indonesia, from Sumatra to eastern Indonesia. However, it became difficult to find because it was rarely consumed.

In Indonesia, sorghum is found in Java, West Nusa Tenggara, and NTT, especially in dry and marginal lands. Sorghum grows a lot in the NTT region, which is dominated by semi-arid (dry land) ecosystems with

various types of colors, heights, and harvest ages; in the NTT region, sorghum is known by multiple names such as Pepsi, mina, color corn, mesas, waterloo, rote corn, wataruhamu.

Sorghum has the advantage of growing in diverse soil types and being widely adaptable. Sorghum plants have an even root system and are more tolerant of hard and shallow soils than corn plants. Another plus is the ability of sorghum to grow in various areas with soil fertility levels ranging from low to high, as long as the soil has sufficient depth, which is more than 15 cm.

The government has encouraged the development of cereals other than rice and maize through sorghum, jewawut, and hutong z of local food systems with community-based sorghum in two villages in the Lamaholot region, how the development of the national food system related to Food Law No. 18 of 2012 and according to the Sustainable Food System (Sustainable Food System) of FAO. Third, how is the food system related to SDGs (2) without hunger?

The objectives of this study are to analyze how the development of local food systems with community-based sorghum in two villages in the Lamaholot region, explore how the development of the national food system is related to Food Law No. 18 of 2012 and according to the Sustainable Food System of FAO and analyze how the food system is connected to SDGs (2) without hunger.

## **Materials and Methods**

### **Research Design**

The purpose of this study is to analyze the development of community-based sorghum local food systems for food security and nutrition, national food systems according to Sustainable Food Systems, community institutions supporting food security and economy based on local wisdom and sustainable food development systems or SDG's (2) without hunger.

The method used to analyze related aspects of research is mixed, namely qualitative and quantitative. Qualitative research produces descriptive data in written or spoken words, recording people's views and observable behavior. The data produced in qualitative research is illustrative and not numerical data. In general, data analysis in qualitative research involves a conceptual discussion of the problem under study. (Moleong, 2019).

The research was conducted in two villages, namely Kawalelo Village, Demon Pagong District, East Flores Regency, and Wuakerong Village, Nagawutung District, Lembata Regency, which has been developing local sorghum food since 2015. The selection of resource persons in Kawalelolo Village, East Flores, and Lembata used purposive sampling techniques.

The variables used in this study consist of 2 groups for qualitative and quantitative methods. The research aspects used in the research are the development of local food systems, national food systems, sustainable food systems, governance of community business institutions, and the impact of food systems on SDGS (2). This study uses three variables: community food systems based on local wisdom, sustainable food systems and community business management, and linkages with the Development Goals.

### **Data Collection Methods**

Data is collected through the use of secondary data and primary data. Secondary data are obtained through literature studies such as journals, mass media news, legislation, and global agreements. In this study, the secondary data used are national and international journals related to the food system, local wisdom that the community and community institutions still practice, and national and global policies related to the food system. Primary data is collected through observation, structured interviews, data-focused discussion (FGD), and in-depth face-to-face and online interviews, such as video calls and telephone and Zoom meetings. Data collection will be carried out in August-November 2023.

With data collection methods using FGD, structured interviews, and in-depth interviews. The analysis method uses Content Analysis. The research began June – August 2023, with visits to location villages and online interviews.

## 2. Results and Discussions

### Description of Research Data

The object research was carried out in two villages, namely Kawalelo Village, Demon Pagong District, East Flores Regency, and Wuakerong Village, Nagawutung District, Lembata Regency, East Nusa Tenggara Province. Both of these areas are from the Lamaholot Tribe. The Lamaholot tribe, also called Lamkolot, Lamholot, Solor, or Larantuka, is one of the tribes that inhabit the area in east Flores regency (mainland and Adonara-Solor Island) and Lembata regency, East Nusa Tenggara Province, Indonesia.

The main objectives of the research are to examine further the development of local food systems with community-based sorghum in two villages in the Lamaholot region, the development of a national food system Food Law No. 18 of 2012 based on FAO's Sustainable Food System, and how the food system contributes to SDGs (2) without hunger. The following is displayed: the profile of the research location and profile information of resource persons consisting of respondents and informants. The respondents or research subjects who were asked for responses to questions through questionnaires were sorghum farmers in both villages. Some farmers, especially group administrators and other stakeholders, became informants in this study.

### Profile of Kawalelo Village, Demon Pagong District, East Flores Regency

Kawalelo Village is a pemekaran village previously Kawalelo and was part of Watotika Ile Village. Based on information and data obtained in the field, the rainy or wet season in Kawalelo Village is only two months, with an average temperature of 32 0 C and an altitude of 8 meters. It also has a flat and hilly coastal area. Based on village data, the area of dry land that has become agricultural land is 700 hectares, and the area of unused dry land is 172 ha from Kawalelo Village 4,266 Ha. The situation of the population of Kawalelo Village is one the villages with a small number of 653 people or 165 households, which is dominated by low-income families, as many as 143 families, and elementary school education levels of as many as 219 out of 653 people livelihood of most of the population works as dryland farmers as many as 329 people.

### Profile of Wuakerong Village, Nagawutung District, Lembata Regency

Wuakerong, which means a place to hang areca nuts. The population of Wuakerong Village in 2023 is 693 people, with the number of families in Wuakerong Village as many as 184 households. The people of Wuakerong Village come from the Lamaholot Tribe, who practice mutual assistance and obey government rules and local cultural customs. The socio-cultural life of the people of Wuakerong Village also still has rites according to traditional customs, which are passed down from generation to generation and are still being implemented.

### Local Wisdom and Food Culture of Lamaholot Tribe and History of Sorghum Development in Kawalelo Village and Wuakerong Village

The people in Kawalelo Village and Wuakerong Village came from the same ancestor, namely the Lamaholot Tribe, which later developed into a sub-tribe that inhabited the East Flores mainland area. Solor Island, Adonara Island and Part of Lembata Island. A local culturalist revealed that the main livelihood of the Lamaholot ethnicity is known as ola Lali Delhi (farming) by mula seda (planting), join hokan (cleaning/caring), hudud hub (harvesting), pao pain (raising livestock), here today (iris tuak), niu bati (animal labor), ola nuha (catching fish), and neket tane or weaving (Sura and Zam-Zam., 2018, page 23). In the food system, the Lamaholot people know this fixed and stable place of residence called: "Lewo." The earth is a mother, sister, and typical home, so harmonizing humans, plants, and animals with the surrounding environment, including abiotic ecosystems, must be maintained as the integrity of creation and its sustainability.

The land care system in the Lamaholot tradition is carried out in cooperation by both families and tribes and implements non-limit agriculture. The production process starts with providing seeds, planting, care, harvesting, food storage in granaries, and processing as a cycle of activities carried out by the Lamaholot community, especially Lamaholot women.

The study results show that the development of local food systems in both villages in Lamaholot is based on using nature by paying attention to the environment and respecting all living things on earth. Plant cultivation is still carried out naturally without chemicals. This illustrates that the community food system based on local wisdom is well managed. Rituals usually precede natural resource utilization activities. They still believe that if the right is violated, it will cause disaster. This finding is supported by (Mirajiani & Widi, 2022).

Referring to this description, it can be concluded that the approach strategy taken by the community, expressed by Rachman and Ariani (2002), is first, food is a basic human need. This shows that local wisdom passed down contains positive values about harmonization between humans, nature and plants, and culture. Second, the formation of local institutions or social institutions that integrate with the life cycle of community traditions; Third, the concept of granaries and increasing the role in food security by applying local wisdom.

### **History of Sorghum Development in Wuakerong Village and Kawalelo Village**

The condition of Wuakerong Village and Kawalelo Village, especially Likotuden Village, is that Wuakerong Village is located far from the village's city center. As explained earlier, the Demong Pagong District area is dominated by dry land, including Kawalelo Village is dominated by dry land and tends to be barren. Based on the results of observations and interviews conducted, the food sources of carbohydrates and vegetables consumed by the community come from conventionally developed agricultural land.

It has been mentioned above that the consumption patterns of the people in the two villages come from food sources that are around, both from garden products, livestock, and fish catches in the sea. Especially for carbohydrate sources, they consume corn tubers and other cereals in fields, although not as often as their ancestors did. However, changes in natural conditions, such as prolonged droughts, also affect the decline in community crop yields, even leading to crop failure. This condition also affects the availability of food for the community.

Referring to several studies on climate change conducted in East Nusa Tenggara, there are potential impacts caused, including the agricultural sector. Amid existing conditions, sorghum is here to answer the challenges of the community (farmers) who often experience crop failure and crop failure. From the idea of Maria Loretha, a local food activist, tried to collect local seeds of cereals other than rice, one of which is sorghum on the mainland East Flores Island and surrounding islands. Sorghum is a plant that does not require much water and is very suitable for agricultural land in NTT. Sorghum is an ancestral seed inheritance, which is another proof that sorghum has existed since ancestors, as shown through various local names. Sorghum is socially inseparable from food issues.

Based on the description, a process encourages collaborative ideas to strengthen strategies to overcome climate change that impacts the food system, such as rainfall and temperature. According to local wisdom, farmers are accommodated in a community institution as a strategy to strengthen the food system and support food security. The results of this study are supported by empirical studies by (Chanza & Musakwa, 2022).

Referring to the presentation, the results showed the involvement of local governments and communities in the development of sorghum as an effort to accelerate the diversification of food consumption based on local resources as one of the solutions to food security and nutrition, which has an impact on social, economic and environmental aspects. This finding describes the relationship between the development of the national food system, the Food Law No. 18 of 2012, and the Sustainable Food System. The results of this study are supported by previous research, which states that policies are needed to help the community's food security system in facing potential threats that disrupt the stability of the food supply chain and sustainable food system by utilizing local wisdom (Campbell et al., 2022).

### **Sorghum Food Development Practices in Kawalelo Village and Wuakerong Village**

**Sorghum development practices carried out in the Lembata and East Flores districts began to be developed in 2014**



People in both villages cultivate sorghum after training from the Larantuka Social and Economic Development Foundation. They still apply a planting preparation rite called Hape Nulife to ask permission from their ancestors, Lera Wulan Tana Ekan. Garden owners and members of groups that will plant sorghum store their seeds in a frame made of woven palm called Dese/Deseq/Sokal.

The community carries out the above practices in cultivating food agriculture, such as sorghum and other food seeds. Most societies still follow ancestral rites handed down in the Lamaholot tradition. Rites are usually performed at the time of opening and harvesting. They still perform rites for the ancestors to approve, the plants can grow well, and the ancestors guard the crops until the harvest.

This description shows that there is high involvement from community institutions with parties, namely local governments, NGOs, traditional leaders, religious leaders, and communities, in maintaining food security systems based on local wisdom on the impacts of climate change. The research of Makondo and Thomas supports the results of this study. (2018).

### **Linkage of Sorghum Local Food System Practices Based on Local Wisdom of Kawalelo and Wuakerong Village Communities with Sustainable Food Systems at the global level**

Sustainable food systems at the global level are defined as providing food to meet basic human needs and provide benefits somewhat, equitably, and sustainably. FAO affirms in its vision that sustainable food and agriculture systems provide nutritious food accessible to everyone derived from ecologically managed natural resources. According to (Astuti, Sumarni, & Saraswati, 2017), local wisdom emerged as a form of human effort to survive by interacting with their environment in a balanced manner to avoid damaging nature. In general, the wisdom of local wisdom is obtained from generation to generation verbally without written rules but obeyed by the local community. Referring to FAO, there are three indicators of the application of the concept of sustainability, namely:

#### **1. Soil and plant health:**

In general, agricultural practices carried out by the community implement ecological agriculture to maintain planting and plant health; based on data from the Ministry of Agriculture, until 2022, as many as 27 sorghum varieties have been released by the Minister of Agriculture. (Kemntan, 2023).

The community has collected and owned local types of sorghum that were previously almost extinct. The cultivation pattern of sorghum planting, developed by farmers in both villages, still applies natural agriculture without using chemical fertilizers. The community admits they prefer seeds set aside from previous crops for plant seeds. The seeds are considered more adaptive and able to survive the stress of extreme drought that occurs in both locations. In addition, the diversity and protection of sorghum varieties are maintained with cultivation in several villages and dry lands.

#### **2. Water-saving application (low water footprint)**

Based on sorghum cultivation practices in both villages, sorghum plants do not require much water compared to rice and corn. Based on the confession of farmers in both villages, sorghum plants require less water than the corn and rice crops they previously planted.

The experience of farmers is in line with the results of research conducted by sorghum researchers. Based on data and practices, sorghum is a plant that does not require a lot of water. Sorghum plants have advantages, including drought tolerance, high salt content, and wide adaptability. The harvest age of sorghum plants is 3-4 months, and water requirements per season are 4,000 m<sup>3</sup>, lower than corn and sugarcane, which require water, respectively 8,000 m<sup>3</sup> and 36,000 m<sup>3</sup>.

#### **3. Food Loss and Food Waste**

Based on scientific data and practices carried out by farmers in both villages, sorghum plants are proven to have benefits from roots, stems, leaves, and seeds. Similarly, waste from what is produced in the post-harvest process can be processed into animal feed, organic fertilizer, and broomsticks.

### **Social Sustainability**

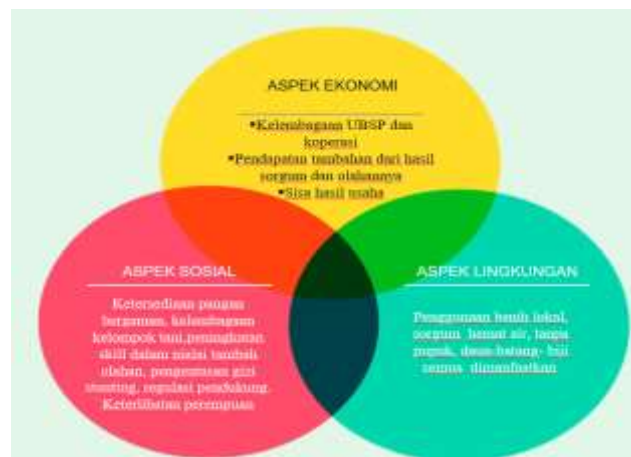
From field findings in both villages, research shows that people are starting to make sorghum as an alternative to local food. People have understood that sorghum is a carbohydrate food source once consumed by their ancestors, the Lamaholot Tribe.

Good practices by the community began to expand in other districts, including two districts at the county level. In East Flores Regency, the local government replicated the practice carried out by the Public Health Section of the East Flores Regional Government Health Office with the "Love Cart" program for Stunting Attacks using sorghum and moringa (SOLOR). Women cadres of Posyandu and puskesmas staff are actively involved in Gempur Stunting with SOLOR.

Policies in two districts in NTT show a policy agenda related to sorghum. This can be seen in the policy of East Flores Regent Regulation number 61 of 2017 concerning the Diversity of Local Food Consumption in East Flores Regency, which includes sorghum as a food source. In Lembata Regency, local food is also one of the priorities in the 2017-2022 RJPMD policy.

### **Economic Sustainability**

Sorghum cultivation has given birth to an economic supply chain of sorghum involving the roles of various parties. Farmers who are members of UBSP and sorghum cooperatives in two program villages managed by Yaspensel have been able to process sorghum into different processed foods made from sorghum raw materials (rice, flour, porridge, cereals, noodles, liquid sugar, pop gum, bread). Likotuden sorghum cooperative already has sorghum production houses, including UBSP Ile Nogo in Wuakerong Village. Farmers benefit from being members of UBSP and cooperatives, both in the form of ease of loans in times of need and the rest of the business results.



**Figure 1**

**Aspects of Sustainability (Environmental, Social and Economic)**

## **Meal Preparation**

### **a. Production**

Based on the findings and results of interviews with sources and informants in two research villages, sorghum is a source of carbohydrate food other than rice. They stated that the planting patterns on their land varied with intercropping systems. The process of cultivation of sorghum is carried out naturally without the use of chemical fertilizers. The production process was done in two villages to manage their agricultural land

using local wisdom and natural resources. Efforts to protect nature and the environment so that environmental pollution by pesticides does not occur so that the balance of land ecosystems is maintained. The post-harvest process is carried out in the field by cutting the sorghum stems to half the plant using a sickle. The stems left behind are allowed to grow again to produce new sorghum panicles (grains) and are ready to be harvested again.

#### b. Distribution

The community's distribution process is straightforward, where farmers will usually harvest and carry out post-harvest processes on their land. After the sorghum seeds are dry, they will usually be stored in the granary of each farming family. They will bring sorghum seeds to Yaspensel's production house or cooperative to be soothed using a scooping machine. After being sowed, the sorghum rice is ready for consumption. Farmers usually eat sorghum according to family consumption needs or for other purposes, such as sold through cooperatives or other buyers.

#### **Utilization**

At first, it was somewhat difficult for people to return to consuming sorghum, even though the food was an ancestral source. However, they tried to process sorghum into varieties of rice and flour. Sorghum is processed into good foods such as pastries, wet cakes, cakes, and sorghum cereals, and the stems are processed into liquid sugar. In the above way, sorghum rice and various preparations are in demand for public consumption and change people's consumption patterns. People's consumption behavior is influenced by consumption patterns on food availability, purchasing power, knowledge, and attitudes toward biological resources to be processed into food or beverages for human consumption. (Nursiah, 2018) Regarding health, sorghum has an excellent nutritional content with a low glycemic index and high fiber. Food utilization aims to achieve optimal health by consuming food through an appropriate diet (Miglietta et al., 2023).

#### **Access to food**

Based on findings in the field, the development of sorghum by the community has added to the variety of community food. In addition, it is easy to obtain sorghum because they grow it utilizing local potential. Practices were carried out as an effort for community-based food security and independence.

This is to the principle of food security contained in the Food Law, which states that food security is a condition in which food needs from the state level to individuals are met and characterized by the availability of adequate nutrition in adequate, safe, diverse, nutritious, equitable, and affordable quantities and quality. This situation is also consistent with religious values, beliefs, and culture. It is easier for people to access sorghum because the community produces and cultivates the plant independently. Sorghum has also added to the diversity of community food sources, especially in the availability of various carbohydrate sources.

#### **Community Constitution**

Based on field findings and the narratives of resource persons and informants, farmers interested in planting sorghum formed sorghum farmer groups at the beginning of sorghum development.

Various agreements have been drafted and mutually agreed upon, such as administrators' election and institutional rules supporting the group's shared goals in sorghum development. Findings in the field think that community institutions are a collection of norms at all levels that revolve around basic needs in community life (Soekanto, Marpaung, Himmatushohwah, & Darwita, 2017).

The sorghum group institution initially focused on cultivation and later developed into a joint savings and loans business group in the two research villages. First, UBSP requires its members to make sorghum not only for marketing but also for consumption. Second, UBSP members are farmers with gardens and are needed to plant sorghum. The farmer is expelled based on the rules if the member no longer grows sorghum.

Referring to Radyati, the practice carried out by sorghum business groups in two villages is a Community Enterprise, an entrepreneurial institution owned and established by the community. It aims to address issues faced by the community and is owned and managed by community members. Some of Community Enterprise's



advantages include members' ownership and benefits for members. Members become owners, not workers, and are involved in transparent and accountable governance, creating harmony between members (Worstell, 2020).

### **Community Participation**

Based on practices in both villages, the community is very active in developing the food system chain at the community level, starting from the planning, supply, access, and stability stages of food based on local values and traditions. Values are used in implementing community food system security policies.

### **Linkages to the Sustainable Development Goals (SDGs)**

#### **Two goals are to end hunger:**

In the context of the Sustainable Development Goals, the efforts made by two groups in two villages, namely Kawalelo Village and Wuakerong Village, are already a form of community contribution to the SDGs goals consisting of:

#### **End hunger and ensure food access for every citizen in the village**

To overcome the problem of food insecurity, the government issued a program, namely food diversification. This diversification can be done by utilizing other foods such as cassava, corn, sweet potatoes, taro, and sorghum. Changes in the structure of the agricultural sector are reflected by changes in the process of managing economic resources, which are oriented to efforts to increase production income and community welfare. People in both villages already have food reserves.

#### **Achieving food security and nutrition and reducing stunting in villages**

The idea for the utilization of local food sorghum and protein and vegetable sources given for the provision of supplementary food for toddlers as an effort to overcome malnutrition and stunting came from the Head of the Demon Pagong Sub-District Health Center, where Kawalelo Village is included in its service area. Stunting, malnutrition, and older people affect supplement feeding for children under five (toddlers). In Wuakerong Village, similar efforts were made at the Posyandu and Wuakerong Health Center.

#### **Quantitative Analysis**

1. The variable results of the local food system based on sorghum resulted in an average value of 3.5500, which was more significant than the minimum standard requirement limit of 2.5. It can be concluded that the community's efforts in developing local food sorghum by applying local wisdom and meeting the expectations of farmer group members.
2. The test results for the variable Linkage of the Local Food System with the National Food System resulted in an average value of 3.3107 on a scale of 1 to 4, meaning that respondents assessed the high linkage between the local food system and the national food system.
3. The test results for sustainable food system variables resulted in an average value of 3.4718 on a scale of 1 to 4, meaning that respondents gave a high assessment for sustainable food system variables.
4. the variable contribution to SDG 2 resulted in an average value of 3,550. This value is greater than the minimum standard provision limit of 2.5, so it can be concluded that the contribution to SDGs has become a solution for food security and nutrition to meet what farmer group members expect at the village level.

### **3. Conclusion**

The development of local food of the Lamaholot tribe is based on Lamaholot's local wisdom and is in harmony with nature. The linkage between the development of the national food system of Food Law No.18 of 2012 with the sustainable food system is reflected in the aspects of availability, utilization, and access as well as institutional and community involvement in the development of sorghum as a solution to food security and nutrition, socially, economically and environmentally sustainable. The linkage of the food system with SDGs (2) without hunger lies in using local food and nutrition stunting through food diversity program policies in the form of the Love Movement from SOLOR (Moringa Sorghum).

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