

A Model of Sustainable Food Security: The *Mondau* Farming System of the Tolaki Community in South Konawe District Southeast Sulawesi Province

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Food availability has become a global issue that is increasingly being discussed, especially with the occurrence of various significant events such as the COVID-19 pandemic, war, climate change, and others that can affect the food security of a nation and country. Departing from this, this research will examine sustainable food security in the Tolaki community through local traditions in the form of the *mondau* farming system. The research is located in South Konawe Regency, Southeast Sulawesi Province. The implementation of this study used a qualitative research approach. The research informants were determined purposively to consist of farmers who still implement *mondau* cultivation, community leaders, government officials, and agricultural extension workers. This research examined the *mondau* farming system supporting sustainable food security in South Konawe District. The research data collection used in-depth interview techniques, participant observation, and literature study to strengthen data findings in the field. Data analysis was conducted using a qualitative descriptive analysis method that refers to the Miles and Huberman (1994) model, which includes data reduction, data display, and conclusion drawing. The results showed that the shifting cultivation system (*mondau*) applied by the Tolaki community in South Konawe is a traditional form of agriculture passed down from generation to generation. This system reflects a way of farming and a manifestation of the values of local wisdom that are rich and deeply rooted in Tolaki culture. The *mondau* farming system supporting food security acts as crop diversification, soil fertility management, and resilience to climate change. In supporting community food security, the *mondau* farming system can be seen from four aspects, namely food accessibility, food availability, food quality and food sustainability.

Keywords: *Mondau* tradition, Tolaki community, food security, sustainability

INTRODUCTION

Experts have conducted studies on dryland farming or shifting cultivation on both a global and national scale. On a global scale, such as in India (Singh *et al.*, 2004), Mexico (Baumhardt and Salinas-Garcia, 2006), Africa (Bennie and Hensley, 2001), and the Philippines (Sarian, 2008). On a national scale (Indonesia itself), studies on cultivation have been conducted, such as in Java in the Baduy Baten community (Iskandar and Iskandar, 2017), Sumatra in Nagari Silayang (Dendi *et al.*, 2005), Kalimantan in the Bengkilu community (Barchia *et al.*, 2022), and in the Sulawesi community (Umar and Yusuf, 2019). In addition, similar studies have also been conducted in Southeast Sulawesi in the Buton community (Killowasid *et al.*, 2020), the Muna ethnic community (Sakir *et al.*, 2021), and the Wakatobi Island

community (Kandari *et al.*, 2017). Studies both in several countries and in various regions in Indonesia, it is found that various indigenous communities in rural areas still carry out the process of cultivation in various parts of the world by prioritizing the customary and cultural values of the local community as an activity to meet the needs of life in the form of community food needs by utilizing land around the forest area (Sokoy, 2022). Their cultivation still prioritizes the protection of nature and its biodiversity, which is realized by not cutting down trees carelessly when burning or making fire barriers. Rituals are carried out to ask for protection from the Almighty as the owner of the universe, which indicates the existence of horizontal and vertical relationships between humans and nature and between humans and the Creator. Then, one of the ethnic groups in Southeast Sulawesi that still applies the field farming system is the Tolaki ethnic group in

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South Konawe Regency. The field system carried out by the Tolaki community in this area is known as *mondau* (Idaman and Aminah, 2017). *Mondau* is done by clearing the forest and then cultivating the land into fields to be planted with field rice after leaving for a while but will return to the first land. This system is known as turn-back cultivation, so, unsurprisingly, one farmer can have fields in several places. This *Mondau* activity has been institutionalized and is a legacy of the ancestors still carried out today. Actors involved in the *mondau* process are community leaders (*toono motuo*), traditional leaders (*puutobu*), ritual leaders (*o'sando*), religious leaders (*o'ima*) and field owners (*patani*). The initial stage carried out by the head of the family who owns the field is to ask for help from the ritual leader (*o'sando*) to find a good day for *pesuri mbondau*, which is a system of knowledge about farming weather in order to get the right day to start clearing the field. After obtaining a good day, the field owner will notify *puutobu*, *o'ima*, *toono motuo*, and call family members and closest neighbours to start clearing the field. The stages in Tolaki community farming are *mosalei* (cutting grass and roots), *monduehi* (cutting trees), *mekere* (making fire barriers), *humunu* (burning), *moenggai* (cleaning the remaining grass and branches that are not burned), *mewala* (fencing the field), *motasu* (planting field rice), *mete'ia inimo* (guarding the field), *mosowi* (cutting field rice). In the above stages, there is one stage to invoke the owner of nature called *ombualaa taala* (Allah SWT), namely the *Motasu* ritual. *Mombotudu potasu* is led by a community leader called *O'Sando* or *mbuowai*, who can read spells in the form of a request for permission to the owner of the universe so that the entire farming process can run smoothly, and the harvest will be successful. In the process of clearing fields, the Tolaki community is very concerned about environmental safety and natural sustainability (Nurti et al., 2024), namely when burning the field, first clean around the field (*mekere*) covering an area of 3 to 5 meters which functions as a barrier so that the fire does not spread to the land or into the forest. At this stage, all family members and neighbours will only leave the land clearing site once the fire has been extinguished to ensure that the fire does not spread to the land or forest. All farming processes (*mondau*) are carried out by prioritizing togetherness or cooperation, which contains customary and cultural values (Makmur and Dastina, 2018) called "*samaturu*" or "*participating together*", which is aligned with the term "*metealo-alo*" (providing mutual assistance), "*mepoko'aso*" (become one), and "*medulu*" (unite) in the sense of "*medulu mbenao*" (one in feeling), "*medulu mbonaa*" (one in opinion), and "*medulu mbo ehe*" (one in will). Along with the process of modernization in agriculture as a form of change in agricultural activities, including farming, there has been a process of mechanization in agricultural activities in the form of the entry of technology into the agricultural sector (Kansanga et al., 2019; Sassenrath et al., 2008), namely the use of agricultural technology tools such as tree cutting tools

(*chain saw or senso*), pest sprayers, and other tools. Likewise, in opening fields in the Tolaki community in South Konawe Regency, some farming communities have also used these technological tools to facilitate the opening of fields and eradicate pests. In addition, there has also been a shift or change in farming activities involving labour (Washtfelt, 2018). Farmers with more than 2 hectares of land usually use additional labour by paying daily wages; empowered people are young but already married. The number of hired labour required is usually around 2 to 3 people, while the type of work that requires hired labour is when cutting down large trees that require cutting tools. In addition, the type of work that requires hired labour is during the pest spraying process because, generally, the field farmers rarely have the appropriate equipment, so they prefer to rent to farmers with tree cutters and pest sprayers. The process of farming in the Tolaki community, especially among field farmers in South Konawe Regency, has been institutionalized and is an ancestral heritage since ancient times, which continues to be maintained amid the current modernization and agricultural mechanization (Erni, 2015; Shepherd, 2010). The institution of field agriculture in the Tolaki community is realized from the process of cultivation, which is always carried out every season with a fixed cycle at the end of each year, which begins with the preparation stage starting from September to November and the planting period is usually at the end of December to January. The cycle follows the season and weather, where September to November is the period of cleaning the fields until burning, then drying and cleaning again until ready for planting. The *mondau* tradition has been institutionalized as a routine activity of the Tolaki community every year, which has rules and customary and cultural values, as said by Cameron (1984); Dacin et al. (2002), development institutions are a complex of rules (values, symbols, norms, procedures) and organizations (structure and status as well as functions and roles) that influence behaviour (behaviour / patterned behaviour) to direct, accelerate and maintain change for the achievement of common goals that are considered valuable in an order. Agricultural and rural development institutions are hierarchically arranged from the individual level to the lowest to the highest international level (Scoones, 2013).

In line with Jervis (1998); Mwakisisya's (2020) concept of the local social system as an arena for local level development activities, where the interconnectivity between local administration, local markets and local communities is named as a trigonal relationship. Furthermore, Singh (2004) argues that development has three fundamental elements: resources, organizations and norms. Organizations are actors that manage several resources based on certain norms. The organization is formed as a result of the configuration of three existing systems, namely (1) village administration (e.g. government organization), (2) village market (e.g. producer organization) and (3) village community (e.g. voluntary



organization). Farming activities carried out by rural and inland communities aim to fulfil their primary needs through staple foods such as rice, corn, tubers, vegetables and nuts (Kahane *et al.*, 2013; Bourke and Allen, 2009). Meeting the community's basic needs is undoubtedly the responsibility of all elements of the nation, not just the government, but all elements of society have the same responsibility to achieve community welfare. To achieve this, sustainable food security is needed, namely the availability of staple food consumed by the community in every cycle or planting period (Pawlak and Kolodziejczak, 2020). Food availability has a profound meaning; namely, food not only has quantity or amount but also quality or is feasible and adequate to meet the community's needs (Siegner *et al.*, 2018). Food availability has many factors, such as production systems, land area, labour, capital, farmer management, and institutions (Jayne *et al.*, 2014). One that plays a vital role in sustainable food security is the involvement of actors in striving for field production to always have the expected quantity and quality. In the cultivation process (*mondau*) in the Tolaki community in South Konawe to realize sustainable food security, two key actors are directly involved: field instructors and field farmers (Fiaz *et al.*, 2018). As government representatives, agricultural extension workers are responsible for ensuring that field production is maintained in quantity and quality (Anderson and Feder, 2007). To achieve this, extension workers conduct intensive communication with farmers. The communication is carried out both before the planting period and during the harvest period. In the communication, extension workers can convey various modern farming techniques in the fields and any products supporting increased yields of field rice production, such as superior varieties of field rice, field rice fertilizers, and environmentally friendly pest sprayers. Then, some of the results of the *mondau* tradition will also be sold to meet the secondary needs of the Tolaki community. The habit of the community in storing crops until the next harvest period shows the sustainable food security of the Tolaki people. Sustainability of needs and food security can only be achieved if the cultivation process (*mondau*) takes place every season and is ensured always to preserve nature and the environment.

MATERIALS AND METHODS

The research has been conducted for approximately 2 (two) years, starting from the field preparation stage in early 2022, field data collection, analysis and interpretation of field data, and report writing until finalization in early 2024. This research took place in the South Konawe Regency, Southeast Sulawesi Province. This is because the Tolaki people in South Konawe Regency have lived as farmers for decades and have made *mondau* farming a livelihood system. Some people still maintain customary and cultural values in *mondau* activities, but some have experienced changes in farming activities. This

research uses key informants, primary informants and additional informants. The determination of informants was carried out purposively (intentionally) by paying attention to five main aspects. First, farmers who still carry out *Mondau* farming, Second, O'sando as the organizer of the *Mondau* ritual ceremony, Third, informants from community leaders such as *puutobu*, *toono motuo*, *o'ima* who know a lot and have past and present experiences related to *Mondau* farming. Fourth, from government elements, namely the village head, sub-district head, Head of the Agriculture Office, Head of the Food Crops Office and staff who can support research data, and Fifth, from field agricultural extension workers. The implementation of this study uses a qualitative research approach, namely research in which social reality is approached in terms of the quality of that reality (Priya, 2021; Fossey *et al.*, 2002). This type of research is descriptive qualitative research, which qualitatively describes various phenomena found in the field (Vaismoradi *et al.*, 2013). In this regard, the paradigm of this research is to use the Postpositivism paradigm. Discourse and knowledge are social realities (Means and Mowatt, 2024). Reality is constructed in a context and social life and is exploratory; the theory can be born and developed in the field (Mills and Mills, 2011). This paradigm believes that qualitative research's relationship between the researcher and reality is interactive. Therefore, postpositivism advocates a verification process of observation with a multi-method approach, one of which is triangulation. According to Bogdan and Biklen (1997), qualitative methodology is a research procedure that produces descriptive data in the form of written or spoken words from people and behaviours that can be observed. Meanwhile, according to Ormston *et al.* (2014); Parker (2004), qualitative research is a study to understand the phenomena experienced by research subjects (behaviour, perceptions, actions, etc.) holistically by describing in the form of words and language in a unique natural context by utilizing various scientific methods. In line with that, Ograjensek (2016) explains that qualitative-exploratory research describes what is happening, including who, when, where or about the characteristics of a symptom or social problem, patterns, shapes, sizes and distributions.

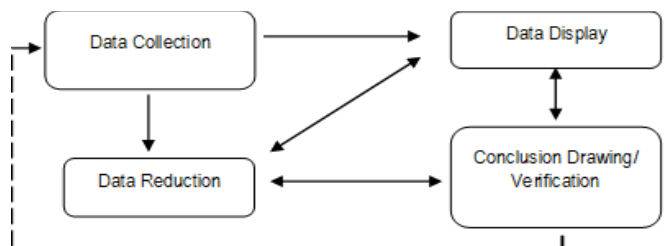


Figure 1. Miles and Huberman qualitative analysis model.

This research focused on studying the *mondau* farming system and formulating the *mondau* farming system in



support of sustainable food security in the South Konawe Regency. The research data collection used in-depth interview techniques, participant observation and literature study to strengthen the data findings in the field.

Data analysis was carried out using a qualitative descriptive analysis method that refers to the [Miles and Huberman model \(1994\)](#), that there are three main components that researchers must realize: data reduction (data reduction), data presentation (data display), and conclusion drawing (conclusion drawing). To obtain data whose truth can be believed, the validity of the data is tested through the triangulation of sources and methods. This was done to reduce the possibility of misinterpretation. As [Stake \(2010\)](#) said, triangulation is using multiple perceptions to clarify meaning and verify the repetition of interpretation observation. [Farquhar et al. \(2020\)](#), said that triangulation is a technique that combines various data collection techniques and existing data sources. Triangulation aims to trace the inequality between data obtained from one informant and another. The use of triangulation techniques includes three things, namely method triangulation, data source triangulation, and theory triangulation.

RESULTS AND DISCUSSION

A. Mondau Farming System in Tolaki Tribal Community:

The practice of shifting cultivation in rural communities is one of the traditions that continues today. Shifting cultivation is a livelihood for some people to fulfil their daily needs ([Roslinda et al., 2023](#)), especially the need for food in the form of local rice, which is still the foundation of the hopes of farmers in rural areas, especially those who do not have irrigated rice fields. Shifting cultivation activities are traditions or habits passed down from generation to generation from previous parents with procedures that follow wisdom values ([Dkhar and Tiwari, 2020](#)), such as cooperation, local knowledge, and traditional tools that support the implementation of shifting cultivation.

In this regard, one community that still carries out shifting cultivation is the Tolaki tribe in South Konawe. The Tolaki community is an ethnic group that inhabits the Southeast Sulawesi region, especially in South Konawe Regency ([Kambo, 2021](#)). They have a solid agrarian culture, with the shifting cultivation system as one of its characteristics. Mondau cultivation, a form of shifting cultivation, has been a hereditary practice adopted by the Tolaki people for centuries. *Mondau* cultivation involves rotational land use, where land used for farming can return to its natural state for several years before being used again. This system allows the soil to recover its fertility naturally, thus supporting sustainable agricultural production. The Tolaki community has a farming tradition inherited by their ancestors. It is still implemented and preserved as a form of local identity ([Amatillah and Lestari, 2021](#)), namely the *Mondau* tradition or shifting

cultivation. The tradition of shifting cultivation systems in the Tolaki community has existed since the emergence of the Konawe Kingdom (around the 15th century) by recognizing a type of rice called *pae mepae* (fast rice) harvested after 100 days of age. How to plant rice Tolaki people see the condition of the land area. The fertility of the land and the sparse population make it possible to carry out a shifting cultivation system. The former cultivation can be re-cultivated after 5 years to 7 years. This shifting land management system continues to be carried out to this day. Shifting cultivation is a way of farming the Tolaki Tribe from generation to generation by utilizing the forest as a cultivation land to be processed properly in order to get satisfactory results. This is as said by informant Sainal (first), explaining that;

"The activity of shifting cultivation or mondau in the Tolaki Community in South Konawe as a community tradition that cultivates land for the purpose of growing rice in the field with the aim of meeting daily needs is a hereditary legacy from our ancestors. Activities carried out starting from clearing land, planting, until the storage period in the barn are always coupled with traditional mondau rituals. The existence of these rituals can be concluded that the Tolaki people who inhabit the South Konawe region are agrarian communities who mostly inhabit rural areas ", (interview, November 18, 2023).

Generally, the Tolaki people's livelihood is farming in the fields, rice fields, long-term crop gardening, labouring and farming, and other activities that still use methods based on traditional technology. The process of tillage activities until picking the results of farming in the fields and rice fields is an activity of cooperation between family and other family members.

Furthermore, as stated by another informant, Aspar (second), said that;

"We Tolaki people in South Konawe cultivate land or mondau in mutual cooperation or with the regional term, namely samaturu medudulu mepokoaso, where if there is one family doing mondau activities, other families will spontaneously help work on the field and will be done reciprocally until all families who open their fields are finished in mondau activities", (interview, November 18, 2023).

The Tolaki people, both those who live in villages with traditional farming practices and those who live in cities as employees or business people, consider a sacred central symbol called *kalo* important in their culture. *Kalo* in Tolaki culture is comprehensive in scope. In farming ceremonies, *kalo* is used as 1) Forest stakes, land to be cultivated for farming; 2) Ritual tools in every ceremony; 3) Signs of abstinence to protect crops in the field; 4) Binding of production tools. In general, *kalo* is made from rattan. Still, in the ritual of cultivation, it is made from wood roots, namely when used as forest stakes and forest clearing ceremonies, and especially when for the ceremony of planting and harvesting rice, a gold necklace is used, and when for plant guards, it is



made from bamboo. At the same time, rattan is still used for binding production tools.

The implementation of the *mondau* tradition by the Tolaki community in South Konawe is undoubtedly motivated by the community's belief in the mantras conveyed in the *mondau* tradition that can protect their crops in the fields from pests and supernatural beings. The community believes there are negative impacts if rituals are not performed (Kurnianto *et al.*, 2022). So from the stage of selecting the location of the field to the stage of picking the results is always coupled with a religious ceremony to worship *sanggoleo mbae* (spirits, rice, rice goddesses), as well as to reject bala from spirits, both bala in the form of accidents inflicted on humans and in the form of bala that causes damage to crops through pest interference; rats, pigs, sparrows, pianggang, caterpillars, and so on. The rituals in farming are; *mondaliu nd'u* (annual agricultural ceremony), *merondu* (forest cutting ceremony), *mombotudu* (rice planting ceremony), *mombewulahako* (early rice harvesting ceremony), *molonggo* (calculation ceremony on the harvest), *mowiso i ala* (rice storage ceremony in the barn). Furthermore, the ceremonies carried out in the *mondau* tradition are also believed to be symbols of mutual communication between humans and gods and goddesses, especially the goddess of rice. The community believes that without this communication relationship, they and their crops will not be blessed by gods and gods. This means that there is a possibility that the community will experience calamities, crop failure, a lack of production, and low value. In addition to the rituals of cultivation manifested in *kalo*, the people of South Konawe also embody the value of behavioural actions by obeying the rules in *o wua* and *olawi*. *O wua* (fruit) means one plant that can produce more fruit if the farmer obeys all the rules and does not violate the taboos in land cultivation, planting, and plant maintenance. Meanwhile, *olawi* is the result of production, especially in rice plants. The people of South Konawe believe that mantras or prayers in a plant ceremony can produce more results as desired by the community.

The people of South Konawe also carry out the *monda'u* tradition due to its geographical location, which requires the community to continue or fulfil their needs by farming on the move or *mondau*. As said informant Gulias (third) who explained that;

"The emergence of the culture or tradition of mondau, in South Konawe due to the condition of the region which is mostly in rural areas with a stretch of hills and mountains also known as the Andoolo stretch, which is a vast area with forests both flat and hilly so it is very suitable for farming activities or mondau", (interview, November 16, 2023).

The emergence of the *mondau* tradition is also due to the economic factors of the South Konawe Community in meeting their daily needs. As stated by informant Remas (fourth) who said that;

"One of the backgrounds of the field farmers in South Konawe is due to economic factors and related to food issues to meet basic needs and daily food, thus requiring the Tolaki community to garden in order to meet their daily needs. Therefore, the farming community in South Konawe cleared land by monda'u", (interview, November 16, 2023).

The emergence of the *mondau* tradition in Tolaki culture is due to the integration of their ancestors' habits into the lives of the Hongoa Village Community, which has become a must-do. This is a form of devotion of the Hongoa Village Community to the values, norms, or art left by their ancestors to continue to be developed and preserved in the pattern of the farming system.

Based on the results of the research, the stages of implementing the *mondau* tradition in the Tolaki Community in South Konawe Regency can be categorized into several stages, namely: The first stage, which is the preparation stage, includes 1) *monggiikii ando'olo* (selection of farming locations), 2) *mohoto o'wuta* (pre-farming ceremony); The second stage, which is the opening of the field, includes; 1) cutting down small trees, *masalei* (cutting roots), 2) *membodohi monduehi* (cutting down large trees), 3) *humunu* (burning), 4) *moenggai* (cleaning the remaining combustion), 5) *mewala* (making fences); The third stage, namely the Planting Period, with *motasu* (planting) activities, the fourth stage, namely Maintaining the fields, including; 1) *mosaira* (cleaning the grass), 2) *mete' ia inimo* (protecting the plants); and the fifth stage, including; 1) *mosowi* (harvesting), 2) *mowiso i ala* (putting rice into the barn).

B. The Role of the Mondau Farming System as Sustainable Food Security: The *mondau* farming system is one form of shifting cultivation that the Tolaki people in South Konawe Regency have long practiced. *Mondau* cultivation is an integral part of the social and cultural life of the Tolaki people and an agricultural system supporting sustainable food security. Anggraini *et al.* (2022) state that supporting food security and the sustainability of a community's life in the face of crises and food shortages can be overcome by maximizing the potential of long-established community traditions. In this narrative, we will examine how the *mondau* farming system contributes to food security, environmental sustainability, and cultural preservation of the Tolaki people. In addition, there are at least several roles of the *mondau* farming system in food security, namely;

1. Crop Diversification: One of the advantages of the *mondau* farming system is crop diversification. Tolaki people grow various food crops such as rice, corn, cassava, beans, and vegetables in one growing season. This diversification improves food security and reduces the risk of crop failure due to pest attacks or climate change (Njeru, 2013). By growing various crops, communities can ensure sufficient and diverse food sources throughout the year (Kahane *et al.*, 2013).



2. Soil Fertility Management: The *mondau* system utilizes natural cycles to restore soil fertility (Villa *et al.*, 2018). After several years of cultivation, the land can revert to secondary forest for several years. During this period, the land undergoes a natural succession process that re-enriches the organic and mineral content of the soil. Thus, when the land is reused for farming, soil fertility is restored, allowing for optimal agricultural production,

3. Resilience to Climate Change: The *mondau* farming system also provides resilience to climate change. By practicing land rotation and crop diversification, Tolaki communities can reduce the risk of crop failure due to extreme weather (McCord *et al.*, 2015). In addition, this practice also helps maintain the balance of the local ecosystem, which is important in the face of climate change. Vegetation that grows during the land recovery period helps absorb carbon dioxide, reducing the greenhouse effect and mitigating climate change.

C. Mondau Farming System as a Strategy for Sustainable Food Security in the Tolaki Community: In a changing world with increasing population growth and pressure on natural resources, creating a sustainable food system is more important than ever (Capone *et al.*, 2014). During climate change, conventional food systems that rely on monoculture agriculture and chemical pesticides have shown their limitations (Altieri *et al.*, 2015). In the face of this challenge, shifting cultivation has emerged as a promising alternative. These systems produce food, restore ecosystems, improve soil health, and strengthen food security.

Temudo *et al.* (2015) revealed that in shifting cultivation systems, land is used alternately for different types of crops, such as field rice including cereals, vegetables, fruits, and nuts. Each crop provides different benefits to the soil and the surrounding environment. For example, legume crops provide essential nutrients to the soil through nitrogen fixation, while rooted crops improve soil structure. The key to the sustainability of this system lies in the wise management of natural resources. Instead of relying on chemical pesticides and fertilizers, shifting cultivation relies on diverse cropping patterns and crop rotation to control pests and plant diseases. This reduces the risk of pest resistance and maintains biodiversity in Indonesia. In addition to ecological benefits, shifting cultivation systems have positive social impacts (Hecht *et al.*, 1988). Practices such as joint planting and land co-management strengthen community ties. In addition, this approach allows smallholders to remain empowered by reducing dependence on external inputs such as expensive chemical seeds and fertilizers. While there may be an initial adjustment in switching to this system, shifting cultivation can eventually lead to more stable and economically sustainable outcomes. Increasing farmers' self-reliance and reducing the cost of external inputs helps reduce vulnerability to market fluctuations and economic changes (Behera and France, 2016). Technology also plays a vital role in optimizing shifting cultivation systems. Developing crop

varieties resistant to changing environmental conditions, innovative organic pest control techniques, and sophisticated soil monitoring systems can improve agricultural efficiency and productivity. Despite its many benefits, implementing shifting cultivation systems also faces challenges. One of them is resistance to long-standing conventional farming practices. Education and outreach to farmers about the long-term benefits of this approach are crucial to overcoming this. Shifting cultivation is an essential chapter in the story of the food system's evolution towards sustainability. Strengthening the relationship between people, the environment, and food offers a holistic and sustainable solution to the complex challenges facing the world today (Mehrabi *et al.*, 2022). With shared awareness and commitment, a greener and more abundant future can be achieved through small steps to implement this system. In this regard, the Tolaki Community in South Konawe, regarding food security, has long anticipated shifting cultivation or *mondau*. With this farming system, the Tolaki community can meet their daily needs without experiencing extreme food shortages because farming results can meet their needs. This is because the fields they plant are not only field rice crops but other crops in the form of vegetables, corn and chilli seeds that they can sell so that their income is fulfilled from the beginning of opening the fields to post-harvest. In connection with the preceding, in line with the narrative of informant Lukman (50 years) (Fifth), said that;

"We do this mondau cultivation is to be able to fulfill our daily needs because rice is now increasingly expensive so we cannot buy, besides that this mondau is a habit from our previous parents that must be continued to maintain traditions and local wisdom in protecting our gardens or fields so that they are not taken by others and are not invaded by companies that are currently starting to enter our village such as oil palm entrepreneurs and nickel mining companies", (interview, December 12, 2023).

The above narrative shows that *mondau* cultivation is still being carried out by the Tolaki Community in South Konawe to fulfil their daily needs and continue their parents' habits to protect their land or fields from being taken by other people and private companies. *Mondau* farming practices are a form of traditional agriculture that has been the backbone of food sustainability in many rural communities worldwide. Despite technological advancements and agricultural modernization, *mondau* farming as a form of traditional agriculture still plays an important role in ensuring sustainable food accessibility for rural communities (Kansanga *et al.*, 2019). Traditional *mondau* farming is not only about food production but also an integral part of the lives of rural communities in South Konawe. Agricultural methods passed down from generation to generation produce food and maintain environmental sustainability (Rivera-Ferre, 2008). Local crops developed in traditional *mondau* farming are often suited to local climatic and soil conditions, reducing dependence on outside inputs



such as environmentally damaging chemical pesticides and fertilizers. In addition, *mondau* farming, as a form of traditional agriculture, can produce local food production that can meet the needs of the farming community and the surrounding community so that food availability can be met in every season and post-harvest. This can be realized because the harvest from field rice can be stored until entering the next farming season. Food security must include accessibility, availability, safety and sustainability. Accessibility here means that every household can fulfil the family's food sufficiency with good nutrition. Food availability is the average amount of food that meets consumption needs in a region and household, while food safety focuses on the quality of food that meets nutritional needs. Sustainability refers to the continuous availability of community household food through cultivation activities using the *mondau* field system. Thus, it can be stated that the *mondau* farming system supports sustainable food security in South Konawe, which includes;

1. Food Accessibility: Traditional agriculture often emphasizes plant and animal diversity, which supports a balanced and nutrient-rich diet. By growing different types of food crops and raising different types of livestock, rural communities can ensure a diverse food supply throughout the year (Herrero *et al.*, 2013). It also reduces the risk of crop failure due to higher resilience to climate change and plant diseases. Traditional agriculture strengthens local economies by creating jobs and helps reduce rural poverty (Byerlee *et al.*, 2009). These agricultural practices promote community empowerment by providing better accessibility to local resources. Traditional farmers often utilize local knowledge and traditional practices to improve their productivity and food security without relying on expensive modern technologies. In this regard, *mondau* cultivation in the Tolaki community in South Konawe as a form of traditional agriculture can ensure food accessibility. The community can easily reach food sources, namely field rice, and increase food accessibility in the community to local food sources, be it field rice, vegetables, corn, and tubers, which are the food products of the farmers. This was as expressed by informant Suwarno (53 years) (Sixth) and informant Aspar (55 years) (Seventh), who said that;

"The community here is not difficult to obtain food supplies such as rice, vegetables and corn because generally we are field farmers who plant these food crops on average, where when we mondau around the land we plant vegetables, tubers and also corn, so that before the harvest of field rice the need for local food has been fulfilled", (interview, December 12, 2023).

"Our community in South Konawe, especially in my village, thank God, so far we have never felt a shortage of food, be it rice, or tubers and vegetables because we always plant in our fields, such as local vegetables, sweet potatoes, corn, tomatoes, eggplants, chili seeds, and even we can also sell the

crops to local residents so that no residents feel a lack of food or food, besides that we also used to store crops as supplies when food in the market is getting more expensive and unaffordable", (interview, December 12, 2023).

Based on the narrative of the two informants above, it can be seen that the food accessibility aspect of the Tolaki Community can be fulfilled because of the role of field farmers who plant a variety of food crops that can meet their daily needs. In addition, there are also food reserves that will increase the food security of the Tolaki community if they face extreme situations. Traditional *mondau* farming plays a vital role in ensuring sustainable food accessibility for the people of South Konawe. By strengthening the connection between people, environment and culture, traditional agriculture provides a solid foundation for food well-being. Governments, international institutions, and communities need to unite to support traditional agriculture as an integral part of the solution to the global challenge of ensuring food security for all (Sasson, 2012). Despite technological advancements and agricultural modernization, traditional farming still plays an important role in ensuring sustainable food accessibility for rural communities. These agricultural practices promote community empowerment by providing better accessibility to local resources. Traditional farmers often utilize local knowledge and traditional practices to improve their productivity and food security without relying on expensive modern technologies (Altieri *et al.*, 2012).

2. Food Availability: In the face of widespread modernization and globalization, traditional farming is important in meeting local food needs in rural communities (Altieri *et al.*, 2012). Far from the spotlight of modern technology, traditional farming continues the legacy of ancestors who have survived for centuries. Through *mondau* farming in the Tolaki community in South Konawe, we have fulfilled the availability of local food needed by the local community. Even the outside community can get crops from field farmers traded in traditional markets or residents' homes. As stated by informant Misnawati (50 years) (Eighth) argued that;

"As traditional field farmers or mondau we can fulfill our food availability every month and every season, because our crops whether it is field rice or others such as vegetables, yams, corn and Lombok seeds can be partially stored and also sold to other residents and there are even residents from outside the village who come to buy our crops so that the residents' needs for food can be met without any obstacles", (interview, December 12, 2023).

The informant's statement above shows that local food availability in the South Konawe community, both as field farmers and residents from outside the village, can be fulfilled so that residents do not feel difficulties obtaining food. Traditional farming also plays a vital role in maintaining biodiversity, ensuring the availability of diverse local food. Traditional farmers can produce a wide range of food products through more diverse and sustainable farming



systems such as various vegetable crops, fruits and herbs. This provides wider choices for local consumers and maintains food security in the face of climate change and other challenges. Das *et al.* (2021) explain that traditional farming reflects local wisdom, preserves biodiversity and promotes sustainable natural resource management. In a modern era of challenges, maintaining and strengthening traditional agricultural practices is essential to maintain local food security and ensure environmental sustainability in rural areas. In conventional farming practices, land and water are often overexploited, ultimately leading to environmental degradation and decreased agricultural productivity (Nwokoro and Chima, 2017). However, traditional farming tends to prioritize a more sustainable approach. By utilizing natural resources wisely and maintaining the balance of the ecosystem, we will be able to ensure food availability sustainably. It is undeniable that women play a central role in traditional agricultural practices. They are responsible for planting and tending crops and are often involved in processing the harvest and maintaining biodiversity around the household. As such, traditional farming is also one of the vehicles for women's empowerment in rural areas, allowing them to contribute to family income and agricultural decision-making (Mensah and Yakson, 2013).

3. Food Safety and Quality: During climate change, conventional food systems that rely on monoculture farming and chemical pesticides have shown their limitations. In the face of this challenge, shifting cultivation is emerging as a promising alternative. These systems produce food, improve ecosystems, enhance soil health, and strengthen food security. In shifting cultivation systems, land is used alternately for different crops: field rice, cereals, vegetables, fruits, tubers and nuts. The key to the sustainability of this system lies in the wise management of natural resources (Erni, 2015). The results of research on farming communities using the *mondau* system in South Konawe show that in the implementation of shifting cultivation practices, some farming communities have also used liquid fertilizer as a modern tool used by field farmers with the aim that their field rice plants are more fertile and bear fruit quickly. In addition, they have also used liquid insect poisons sprayed on field rice plants, but their use is still very limited, and they are only used when the rice has not yet borne fruit. This means that farmers use insect poison only to keep the field rice plants from being attacked by pests when the field rice begins to bear fruit. Then farmers, usually after the rice has borne fruit, no longer use insect poisons to keep the field rice from being contaminated with chemical pesticides. This is as stated by informant Gulias (52 years) (Ninth) said that;

"indeed now I have used a pest sprayer to protect my field rice plants from pest attacks that usually appear when my field rice will bear fruit, several types of insects that often appear are small caterpillars and leafhoppers, but the liquid pesticide I use only when my field rice will bear fruit, and

after fruiting then I do not use the pesticide again so that my field rice is not contaminated with insect poisons so that my crops are kept safe from the influence of chemicals", (interview, November 14, 2023).

While there may be an initial adjustment in the community in adopting this farming system, shifting cultivation can eventually produce more stable and economically sustainable yields. By increasing farmers' self-reliance and reducing the cost of external inputs such as the use of pesticides, this system helps reduce vulnerability to local food availability (Nyikahadzo *et al.*, 2012). Warner (1991) explains that agricultural technology innovation is important in optimizing shifting cultivation systems. Developing crop varieties resistant to changing environmental conditions, innovative organic pest control techniques and sophisticated soil monitoring systems can improve the efficiency and productivity of traditional agriculture, such as shifting cultivation (Marina *et al.*, 2023). Despite its many benefits, implementing shifting cultivation systems also faces challenges. One of them is resistance to long-standing conventional agricultural practices. Education and outreach to farmers about the long-term benefits of this approach are key to overcoming this. With shared awareness and commitment, a greener and more abundant future can be achieved through small steps to implement this system.

4. Food Sustainability: Shifting cultivation is a traditional agricultural practice recognized and used by communities worldwide for thousands of years. Although it may sound contrasting to modern approaches to agriculture that often use monocultures and agrochemicals, shifting cultivation has been shown to play an important role in maintaining food sustainability, conserving the environment, and supporting social well-being in many communities (Aryal *et al.*, 2010). Shifting cultivation, also known as shifting cultivation or polyculture, is an agricultural system in which agricultural land is not continuously used to cultivate the same crop but alternates between different crops or is used interchangeably with other land or rested for recovery. The practice involves crop rotation, intercropping, and judicious use of resources to maintain soil fertility (Patel *et al.*, 2020).

The history of shifting cultivation can be traced to ancient times when Indigenous peoples in different parts of the world developed this agricultural system to fulfil their food and foodstuff needs. For example, in Indonesia, some rural tribal communities still practice shifting cultivation (Rasul and Thapa, 2003), such as in Kalimantan, Sumatra, Papua, Sulawesi, Maluku and even in Java, where they still use shifting cultivation to survive in harsh and diverse environmental conditions.

The results of research on the Tolaki Community in South Konawe found that the practice of shifting cultivation or *mondau*, which some Tolaki Communities still implement, is also to maintain food sustainability, especially in the families of field farmers who do not have irrigated rice fields so that



the fulfilment of daily needs remains sustainable without depending on modern agricultural production. This can be known based on the explanation of the Secretary of the South Konawe District Agriculture Office, Mr. Muh. Musrianto Tawulo, SP, M.Ap (Tenth), stated that;

"The Tolaki community in South Konawe who still carry out shifting cultivation or the local term mondau is one of the main livelihoods of the local community to continue to meet their daily food needs such as local rice, vegetables, tubers and corn as their main food, and the practice of traditional farming is a manifestation of the food sustainability program as we have programmed in South Konawe, namely by encouraging the community to continue farming even though there are currently irrigated rice fields but by carrying out shifting cultivation, the fulfillment of food needs in farming communities remains sustainable because the planting distance between paddy rice and field rice is quite different so that if the harvest of paddy rice has been sold, the community still has field rice that can meet their daily needs", (interview, November 14, 2023).

Shifting cultivation is not just about food production; it is also an integral part of the lives and cultures of the people who use it. In many places, the practice is closely linked to local knowledge, traditions, and wisdom passed down from generation to generation. For example, in tropical regions such as Southeast Asia, shifting cultivation has been a hallmark of the lives of farming communities (Falvey, 2019). Farmer cultures are often closely linked to natural cycles, rituals related to planting and harvesting seasons, and knowledge about crops and other natural resources. This reflects the deep connection between people and the environment in which they live.

Conclusion: One of the key elements of shifting cultivation systems is sustainable land management. Tolaki people understand the importance of maintaining soil fertility and ecological balance by implementing land rotation practices. The *mondau* farming system in supporting food security plays a role in crop diversification, soil fertility management, and resilience to climate change. In supporting community food security, the *mondau* farming system can be seen from four aspects, namely food accessibility, food availability, food quality, and food sustainability. The development of sustainable food security needs to be carried out by integrating local cultural aspects that have been embraced by the community to increase participation and a sense of shared responsibility in achieving sustainable food security goals based on the utilization of the potential of local culture.

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