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# Geleng: Bayan Traditional Architecture as The Keeper to Food Security of The Bayan Traditional Community in North Lombok Regency, West Nusa Tenggara

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### ABSTRACT

*This study focuses on the traditional architecture of "geleng" found in the Bayan Traditional Village Area in North Lombok, West Nusa Tenggara. "Geleng" is a rice barn building that has an important role in supporting food security, especially in the context of traditional rituals that are highly dependent on the availability of rice and sticky rice. Although many traditional buildings have changed according to the times, the "geleng" building is still maintained with its unique shape even though there are slight modifications as a solution to adapt to current conditions. The existence of "geleng" in the Bayan Traditional Village is still maintained and used for its function as a rice barn. The distinctive architecture of the building and the placement of "geleng" in the residential area indicate that the existence of "geleng" is an important part that is inseparable from the traditional housing order of the Bayan Traditional Village community. The local wisdom of the existence of "geleng" in North Lombok has not been widely studied in terms of its function and role, specifically as a form of supporting food security through the preservation of traditional architecture. The purpose of this study was to identify and analyze the existence and role of "geleng" as an important element in community food security and the sustainability of the village's agricultural tradition. This study was conducted using a qualitative method with a descriptive approach through field observations, in-depth interviews with "geleng" owners and traditional elders, and documentation studies related to traditional architectural elements. The data collected were in the form of identification of the architectural concepts of the*

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*“geleng” building that can support a long-lasting rice storage system and the size categorizations of the rice bundles storage capacity used in calculating and estimating the adequacy of rice supplies for the local community needs within a certain period of time. The conclusions obtained showed that “geleng” buildings in the Bayan Traditional Village with various sizes, shapes, and numbers identified can still function well in maintaining the sustainability of local food security for about four years after two harvest periods.*

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## 1. INTRODUCTION

Bayan Traditional Village, located in North Lombok Regency, NTB, is known for its rich local traditions and architecture. Buildings such as "geleng" (traditional rice barn), "bale" (main building/residence which is also used for traditional rituals), and "berugak" (building with an open stage structure for gathering and also functions as a place for traditional rituals) are an important part of the cultural identity of the Bayan Traditional Village community. Among these traditional buildings, "geleng" plays an important role, not only as a place to store rice harvests but also in supporting traditional rituals and food security. As stated by (Iqbal, 2023), "geleng" is also a "bale lumbung" that functions to support sustainable food security amidst the social and cultural developments occurring in West Nusa Tenggara Province.

However, until now, there has been no study that specifically explores the existence of "geleng" in the Bayan Traditional Village as a traditional architectural element that contributes to the sustainability of local community food security. Modernization, land conversion, and the impact of the 2018 earthquake have also influenced the form and function of traditional Lombok buildings, including "geleng" (Labib, 2023). Therefore, the formulation of the problem of this study is: *How is the role and existence of "gelling" in supporting food security and the sustainability of agrarian traditions in the Bayan Traditional Village?* This study aims to fill this gap by analyzing the existence of "geleng" as an important element in community food security and the sustainability of the village's agrarian traditions.

This study is limited to the analysis of "geleng" as a traditional building that functions to maintain the sustainability of food security in the Bayan Traditional Village community. The main focus of the study is on the function and existence of the "geleng" form in the midst of the modernization era. This limitation aims to provide a deeper understanding of the role of "geleng" in the context of food security, as well as how its changes affect the sustainability of agriculture traditions.

As an intense cultural center, Bayan Traditional Village has a deep attachment to agricultural traditions. The existence of "geleng" as a traditional rice barn is very significant, both in supporting local community food security and as an important element in traditional rituals that strengthen cultural identity. As mentioned (Pesurnay, 2018), local wisdom in the form of traditional architecture, such as "geleng," functions as a balance between culture and nature that support each other in the social life of the community. The inherited agrarian tradition shows a close relationship between physical structures such as "geleng" and the socio-cultural life cycle of the community.

"Geleng" is an important symbol in the agrarian tradition of the Bayan Traditional Village. In addition to functioning as a place to store agricultural products, "geleng" also plays a role in various traditional ceremonies, such as harvest thanksgiving, which involves the entire village community and supporters of the need to store food needs in a series of traditional Maulid events. The existence of the "geleng" building can also reflect the values of togetherness, spirituality, and respect for nature, which are the core of local culture (Filipová, 2019). ). However, along with modernization, several "geleng" buildings have been found that have been modified using modern materials (usually the roof covering material, which is made of thatch and replaced with zinc material) in residential areas in rural areas. Other "geleng" buildings have been converted for non-agrarian purposes, such as a "geleng" building that is used as a gazebo and a mini library in the Bayan Traditional Village. This reflects the challenges faced by the Bayan Traditional Village community in maintaining the continuity of tradition amidst changing times. Spalding (2022) explains that modernism, which prioritizes efficiency, often clashes with traditions that emphasize spiritual values.

"Geleng" is a real example of how these two things interact, where modernization and tradition collaborate to maintain food security without sacrificing the essence of local culture.

This research is expected to answer the gap in understanding cultural traditions within the context of traditional architecture that has not explored in depth the role of "geleng" in the sustainability of food security of the Bayan Traditional Village community, as well as the impact of modernization and social change on the function of "geleng." Thus, this research not only contributes to the study of traditional architecture but also has the potential to provide further understanding of the sustainability of food security in the context of local culture that continues to develop.

## 2. LITERATURE REVIEW

In the 1984 era, West Nusa Tenggara Province was once one of the regions known as a supplier of food self-sufficiency through dryland rice commodities as one of the government's agricultural programs at that time (Iqbal, 2023). Moreover, one of the successes of food self-sufficiency that was established came from the existence of "bale lumbung" (Kusumowidagdo et al., 2019)(Iqbal, 2023) or "bale tani" (Wahyudi et al., 2022) or "geleng", which functioned as a place to store rice, in traditional villages of West Nusa Tenggara. Although "bale lumbung," "bale tani," or "geleng" have different forms, there is one thing that they have in common: the barn building is important in these traditional villages. Also, it functions as a symbol of agrarian culture. With the development of time, the agrarian culture in West Nusa Tenggara Province began to decline, along with the increasing development of other business sectors such as trade and tourism. However, the existence of barn buildings is still maintained and functions as food barns to support the needs of carrying out traditional rituals carried out in these tourist villages. With the development of time, the agrarian culture in West Nusa Tenggara Province began to decline, along with the increasing development of other business sectors such as trade and tourism. However, the existence of barn buildings is still maintained and functions as food barns to support the needs of carrying out traditional rituals carried out in these tourist villages.

Apart from the agricultural sector, West Nusa Tenggara Province is also famous for its tourism sector because it has a diverse culture, tradition, and natural wealth, making the tourism sector increase pretty rapidly and making it a tourist destination besides Bali Island, which is quite close to Lombok Island. The development of facilities and infrastructure in West Nusa Tenggara Province after the major earthquake in 2018 was carried out comprehensively and very quickly in various important sectors of people's lives so that it has indirectly also affected the sustainability of local traditional, social, and cultural values, including the existence of barns as barns for village community food security.

West Nusa Tenggara Province is divided into two islands, namely Lombok Island and Sumbawa Island. Areas that are famous for their agricultural and tourism potential are almost evenly distributed throughout the West Nusa Tenggara Province. This article discusses research that was conducted explicitly in Bayan Traditional Village, North Lombok Regency, West Nusa Tenggara Province. The icon of cultural tourism in the Bayan Traditional Village area is a complex of mosques and tombs: "Masjid Beleq" (which in Sasak means ancient mosque). This mosque was built approximately 300 years ago and is believed to be the first mosque built on Lombok Island. It still has a relationship with the spread of Islamic teachings originating from Java. The Bayan Traditional Village community is still loyal to maintaining the continuity of traditional ritual ceremonies and cultural traditions in their daily lives. One of the most famous and largest traditional ritual celebrations is the "Maulid Adat" celebration. The Maulid Adat celebration is held for 3 days and is very sacred, full of meaning, attractive, and unique. In addition to the Maulid Adat, other traditional ritual celebrations color the

traditions of the lives of the people in the Bayan Traditional Village area, which represent the time of birth, the time of going through a series of developments in childhood, adolescence, adulthood, and old age until death. All the rituals in Bayan Village are inseparable from the existence of "geleng" (rice barn in Bayan Traditional Village) as a food barn related to the existence of "Masjid Beleq" as the center of the ritual.

Traditional rituals related to rice or sticky rice always take stock of food storage from the harvest stored in the traditional "geleng" (for traditional ritual purposes) or the community's collective "geleng" (which is usually used to support the community's daily rice needs) in order to fulfill the concept of sustainable food security in the Bayan Traditional Village. Food security referred to in this study is the fulfillment of food needs for households that are sufficient in terms of quantity, quality, food safety, evenly distributed, and affordability (BKP, 2013) and also food security in the sense of food that meets food eligibility due to proper storage of food ingredients (Khoirunnisa & Wibowo, 2021) and the quality of diverse food raw materials (Pudianti et al., 2024).

Tradition can be seen as a complex collective value, both those that have survived from the past and those that have been recreated in modern times with specific intentions and purposes according to their context (Labib, 2023). Although traditions and traditional cultures are still very well preserved in the Bayan Traditional Village area, the community is more open to the conditions of the social strata consisting of various professions. With the condition that most of the area is agricultural land, most of the people used to work as farmers, but currently, apart from still farming and having rice fields or plantations, they also work as employees, teachers, government officials, medical officers, and others.

This study focuses on "geleng" as a support for food security in the Bayan Traditional Village community, North Lombok Regency. The traditional architecture of the *Sasak* Tribe in North Lombok Regency has a different form from the traditional architecture of the *Sasak* Tribe in Central Lombok Regency. In relation to research related to the architecture of this barn building, several other researchers have discussed it using various topics. The traditional barn is a form of vernacular architecture. This can be understood through natural factors—self, culture, and society—forming a circle of life in vernacular architecture, where everything is interconnected like a chain that does not stand alone. Solikhah & Freitas Bere (2021) Iqbal (2023) conducted a study discussing the role model of food security in the province of West Nusa Tenggara in the *Sade* Traditional Village. It concluded that the food security model carried out by the *Sasak* Tribe in Central Lombok Regency using a bale lumbung was identified as being able to maintain the durability and resistance of rice seeds for the next planting season.

Also, the need for rice is still met by storing it in the "bale lumbung." Labib (2023) in his research, focused more on emphasizing the potential value of neo-vernacular architecture in the traditional house "Bale Tani" in Lombok. Indarti et al. (2022) emphasized the revitalization and modernization of rice barns as an effort to increase food security for the people of *Patebon* Village, *Pasuruan* Regency, East Java. Nopianti (2016) conducted research in *Kasepuhan Sinarresmi, Banten Kidul* area, West Java, and emphasized the function of the communal barn called "Leuit Si Jimat," which is a shared traditional barn used to meet food security communally and with a system of solidarity of Indigenous peoples to avoid commercialization of traditional agricultural products in the area. Fitriya et al. (2010) discussed the characteristics of the arrangement of settlement patterns in the Bayan Traditional Village, which considers environmental and natural conditions as well as kinship patterns and "awig-awig."

In addition to the discussion related to the architecture of the barn building, (Astawa et al., 2018) also discussed the sustainability of a tourist village in Bali using a case study of a cultural

camp attended by foreign tourists, who concluded that empowering village communities greatly influences the sustainability of the survival of a tourist village. In addition to being a traditional and cultural tourist village, the concept of food security is also one of the factors analyzed in this study. Berry et al. (2015) provided a review of the development of the concept of sustainable food security, which has developed over the past few decades since the Rome Declaration in 1996 related to the availability, accessibility, and utilization of food. Meanwhile Kenton & Singha (2018) conducted a case study related to food security with the development of public areas planted with vegetables and fruits in two places with very different characters, namely in San Agustin, Caracas, Al Bireh, Venezuela, and Palestine. In both places, the researchers concluded that the slightest community involvement can affect the sustainability of a food security program, although many other factors can also greatly influence it. The social values that emerged after the two case study projects were implemented extensively influenced the sustainability of the planned food security. The Bayan Traditional Village area, with its various cultural and customary potentials, will have great opportunities in the future to develop into a tourist destination village that needs to maintain the sustainability of its traditional values (Vitasurya et al., 2024).

Of the various topics related to traditional barn buildings and food security mentioned above, there has been no study that discusses the traditional barn building "geleng" located in Bayan Traditional Village physically and non-physically in more detail that can support a sustainable system in food security and its relationship to the culture and agrarian traditions of the local community. This study aims to analyze the role of "geleng" in accommodating the ability and durability of storing crops in the form of rice or sticky rice for the needs of traditional rituals and the daily needs of the local community.

### 3. METHODS

The method in this study uses a qualitative method with a descriptive approach through field observations, in-depth interviews, and documentation, which were conducted in the period of March 2023 and September–October 2024. The intended field observations include observations of the condition of objects and site areas through measurement documentation, photographing research objects, identifying local traditional architectural principles, and taking photos and videos using drones to obtain a mapping of the distribution of the location of the "geleng" objects studied and a more detailed scope of the area. Meanwhile, in-depth interviews were conducted with "geleng" owners whose "geleng" buildings were still functioning well with various conditions and types to obtain information on efforts to maintain the sustainability of the role of "geleng" in the future. Interviews were also conducted with traditional elders to explore information on local perspectives on historical factors related to "geleng," including the type of "geleng," the construction period, and the ritual of the customary construction process.

The research location is in the Bayan Traditional Village Area, which includes four hamlets, namely Bayan Timur Hamlet, Bayan Barat Hamlet, Karang Salah Hamlet, and Ujung Mekar Hamlet. Statistical data from Bayan Traditional Village in 2022 shows that the number of households (KK) in the four hamlets is 388 KK, with 1200 people. The number of "geleng" observed was 48 units, with variations in the size categories of large, medium, and small. The ownership status of the "geleng" is that some are privately owned, and some are customary "geleng" located in the sacred traditional house building complex.



Figure 1. The Bayan Traditional Village Area is located in North Lombok Regency, Lombok Island.  
(Source: googlemaps, 2024)

## 4. RESULTS AND DISCUSSION

### 4.1 Bayan Traditional Village Area after the 2018 Lombok Earthquake

After the major earthquake that hit Lombok and Sumbawa Islands in July and August 2018, the construction of facilities and infrastructure in West Nusa Tenggara Province has been carried out massively and comprehensively. In the current condition, more than 5 years after the disaster, we can find new roads, bridges, and large and small buildings that have been built well in almost all sub-districts and regencies in West Nusa Tenggara Province.

The condition of most of the residential buildings and buildings in the Bayan Traditional Village Area varies greatly (some are buildings with old structures, some are buildings that were built from scratch since the 2018 earthquake, and some are built with a combination of old and new structures). Most of the community is no longer working in the agricultural sector, and the influence of technological developments and modernization has been seen to affect the types of materials and construction of building structure systems in this area. Several building units still maintain their traditional structures and construction; usually, the building units that are preserved are still often used to conduct local traditional ritual processions.

In addition to the traditional building complex that is still used as a place for traditional and cultural rituals in each hamlet, the Bayan Traditional Village Area also has a "Mandala spring," whose water is used to irrigate "traditional rice fields," whose rice harvest is used for traditional rituals. This shows that rice fields have an important role in the natural and cultural ecosystem (Chang et al., 2024). Another aspect of the agricultural tradition is intangible cultural heritage, including production systems that are passed down from generation to generation, which are an attraction for tourists, thus creating a micro-economy in the area that has a positive impact on income and food security (Britwum & Demont, 2022). In addition to the traditional springs and rice fields, the Bayan Traditional Village Area also has traditional forests and gardens. Wood from traditional forests is usually used specifically to replace structural parts of one of the structural elements of traditional buildings, the results of which are also used for traditional rituals. Meanwhile, the results of the traditional rice fields and gardens will later be stored in the traditional "geleng" located in a part of the traditional house-building complex in each hamlet in the Bayan Traditional Village Area. In addition to those belonging to the customary, there are also "geleng" buildings that are privately owned to store agricultural products from privately owned rice fields. Although currently the number is still quite large, the area has decreased somewhat when compared to the conditions 10-20 years ago.

#### 4.2 “Geleng” as a Food Security Barn

When the majority of the population of Bayan Traditional Village still worked in the agricultural sector, each family had at least one “geleng” unit. Meanwhile, in the current condition, there are only a few families who still have rice fields and work as farmers who still have “geleng” units. According to an interview conducted with one of the residents in Bayan Timur Hamlet, before the 2018 earthquake, the location of the “geleng” was usually in a reasonably open yard outside the family’s yard. Still, currently, the location of the “geleng” tends to be placed close to the owner’s yard, considering safety and practicality factors. Usually, the location of the “geleng” is placed at the front or back of the house; it is not allowed to be placed on the southern part of the house because it is believed to bring disasters such as lousy prejudice or disease disasters to the owner.

The Bayan Traditional Village community uses “geleng” to store agricultural products in the form of rice and sticky rice, which can also function as a food security system as a food reserve to anticipate the lean season or when other disasters occur that cause difficulties in the availability of food. “Geleng” can maintain the quality of rice for longer, even up to 4-5 years. Although the color of the rice skin will change over time, its quality can still be maintained.

The type of superior-quality rice planted in the famous Bayan Traditional Village is the “bulu” rice type. This bulu rice is a local variety of rice with superior quality to other types, which are usually planted in traditional rice fields and used for traditional ritual purposes. Different types of rice are traditionally dryland rice, general grain rice, and sticky rice, which are generally planted and traded by farmers. Each “geleng” has a different capacity for storage, according to the size of each “geleng.” The capacity to store rice in a “geleng” can reach up to 300 bundles, 500 bundles, 700 bundles, or even 1000 bundles of rice or glutinous rice.

Physically, the “geleng” building, which is built using a stage structure construction, is divided into three parts as follows: (1) the head of the building, which consists of the roof of the building and access to the inside of the barn in the form of a door with a shape like a maintenance hole in modern buildings; (2) the body of the building, which consists of the frame, walls, and upper floor of the “geleng.” (3) the foot of the building, which consists of 4 large wooden support pillars, which have “jelempeng” as a traditional element to prevent rats from climbing into the barn; a platform which is usually used for sitting or resting or a place to temporarily store the harvest before or after being stored in the “geleng”; and a river stone foundation supporting the wooden pillars as a moisture protector so that the wooden pillars do not quickly rot due to the influence of groundwater. The elements of a “geleng” can be seen in Figure 2, which explains the parts of the building and its constituent materials.

Although in general, rice barn buildings in Sasak culture are often referred to as “geleng,” according to tradition in the Bayan Traditional Village Area, the buildings for barns for the community’s agricultural harvest are divided into six types as follows:

- 1) *Alang* is the highest level among other types of rice barns, usually owned by a sub-district head or regent with a high economic level. Its shape is similar to a “geleng” rice barn with a stage structure, with the difference being the presence of six relatively large supporting pillars. Currently, this *alang* is no longer found in the Bayan Traditional Village Area.
- 2) *Geleng* has four supporting pillars in the form of wooden columns; each supporting pillar is made from a whole large tree (usually from a jackfruit tree) in a cylindrical shape with “jelempeng” ornamentation (traditional anti-rat element) with an “amben” stage structure at the bottom that can be used for storage or other activities and usually owned by nobles (citizens with the title “Raden” or “Denda”). This type of “geleng” is the most widely identified in the Bayan Traditional Village Area.

- 3) *Sambi* is a barn building that has four supporting pillars with smaller dimensions when compared to the supporting pillars on a "geleng" with an "amben" stage structure at the bottom.
- 4) *Pundutan* has four supporting pillars that are smaller in dimension when compared to the supports on the "geleng," and the shape of the supporting pillars is not cylindrical but square. There is no "amben" stage structure underneath.
- 5) *Lumbung* has a maximum capacity of only 50 bundles of rice with circular walls and four supporting pillars on the outside. The shape of this "lumbung" is very open and makes it easy for pests to enter the "lumbung" freely. Such conditions mean that the existence of "barns" is no longer found in the Bayan Traditional Village.
- 6) *Monjeng* has the smallest rice storage capacity among the others, with only about 10–15 bundles of rice. Its shape is similar to the structure of "sambi/pundutan," but with smaller dimensions and without a roof, with the function of temporary storage before the harvest is put into "geleng/sambi" or used for consumption in small quantities. Usually placed on the outside front/veranda of the main house/"inan bale."



Figure 2. Elements of the "geleng" building with its materials.  
(Source: Author's survey in 2024)

Based on the survey conducted in the field, several units have changed the material to maintain the sustainability of the "geleng" building, especially in the roof covering. Most have been replaced by using zinc roof coverings, but some still use thatched roofs. The body of the building/walls is still maintained using local materials in the form of local wooden frames and covering materials in the form of "bedeg" or woven bamboo to keep the humidity of the agricultural commodities stored in it. Meanwhile, the wood material used in making this "geleng" building for its main structure mainly uses wood from jackfruit trees, which is supported by the use of suren wood and "kelanjuh" wood materials as well as materials from bamboo and alang-alang. The use of jackfruit wood and suren wood materials is not allowed for use in the "amben" structure because it is believed that jackfruit wood and suren wood are wood with the highest caste in the Bayan tradition, so they should not be stepped on or stepped over by just anyone.

The difference in size and the size of the "geleng" also indicates the social status of its owner. The larger the size of the "geleng," the more bundles of rice and sticky rice can be stored; this indicates the larger the rice field owned by the owner of the "gelling." To make or build one unit of the "geleng" building usually costs around 25-50 million rupiah. With a cost of 50 million rupiahs, it will be enough to make 1 unit of "geleng," which can accommodate a storage capacity of up to 1000 bundles of rice. The time required to build 1 unit of "geleng" is usually less than 1 month, and the construction process is carried out by cooperation between residents, especially by the families of the relatives concerned. Some exceptional craftsmen make the "geleng" barns and will make the barn elements separately, which will be assembled later. Before building the "geleng" unit, there is a traditional ritual that needs to be carried out by the family of the owner of the geleng. The ritual is called "membanggar," which aims to eliminate harmful things so that the "geleng" can bring fortune to the family that builds it. This ritual is done by planting a type of money hole (a type of old coin that has a hole in the middle) and betel lime before starting to erect the "geleng."



Figure 3. Details of the structural elements of the "geleng" building in Bayan Traditional Village  
(Source: Author's survey in 2024)

To build one unit of "geleng" building usually costs around 25-50 million rupiah. With a cost of 50 million rupiahs, it will be enough to make 1 unit of "geleng," which can accommodate a storage capacity of up to 1000 bundles of rice. The time needed to build 1 unit of "geleng" is usually less than 1 month, and the construction process is carried out by cooperation between residents, especially by the families of the relatives concerned. Some special craftsmen make "geleng" barns and will make the barn elements separately, which will be assembled by cooperation later. Before building a "geleng" unit, there is a traditional ritual that needs to be carried out by the family of the owner of the geleng. The ritual is called "membanggar," which aims to eliminate harmful things so that the "geleng" can bring fortune to the family that builds it. Before beginning to construct the "geleng," this rite is performed by planting betel lime and a money hole, which is a kind of old coin with a hole in the middle.




As an effort to maintain the sustainability of the geleng building, the Bayan Traditional Village community periodically replaces the geleng roof material, which still uses thatched roofs every 5–6 years. In addition to thatched roofs, other replacement maintenance is also carried out on the roof frame. In a survey conducted in March 2023, one geleng unit was found to have been converted into a mini library belonging to one of the administrators of the Bayan Village's *Pokdarwis* (Tourism Committee), who lives in *Ujung Mekar* Hamlet. Although the owner still has quite a large area of rice fields, the existing harvest is stored in the "geleng" belonging to his other brothers and sisters who are in East Bayan Hamlet.

#### 4.3 Tradition and Food Security

Out of the 42 "geleng" units identified, there are 18 "geleng" units located in Bayan Timur Hamlet, 14 "geleng" units located in Bayan Barat Hamlet, 8 "gelling" units located in Karangsalah, and 2 "geleng" units located in Ujung Mekar Hamlet. These "geleng" units are categorized based on the size of their dimensions. "Geleng," with a storage capacity of more than 500 bundles of rice (usually measuring approximately 3 meters long and 2.5 meters wide), is categorized as a large "geleng," with a total of 9 units. "Geleng" units with a storage capacity of around 500 bundles of rice (with a size of approximately 2.25 meters long and 2.25 meters wide) are included in the medium category with a total of 23 units, while "geleng" units with a storage capacity of around 300 bundles of rice (with a size of approximately 2 meters long x 1.5 meters) are categorized as small "geleng" with a total of 10 units. The

number of "geleng" corresponds to the size of the rice fields owned by residents who are still farming. The identification and number of "geleng" in the Bayan Traditional Village can be seen in Table 1.

Table 1. Identification of the size and number of "geleng" in Bayan Traditional Village

		East Bayan	Karang Salah	West Bayan	Ujung Mekar	Total
Large size	 <i>Geleng</i> 3m x 2,5 m	7	1	0	1	9
Medium Size	 <i>Pundutan</i> 2,25m x 2,25m	8	2	12	1	23
Small size	 <i>Pundutan</i> 2m x 1,5m	3	5	2	0	10
<b>Total</b>		<b>18</b>	<b>8</b>	<b>14</b>	<b>2</b>	<b>42</b>

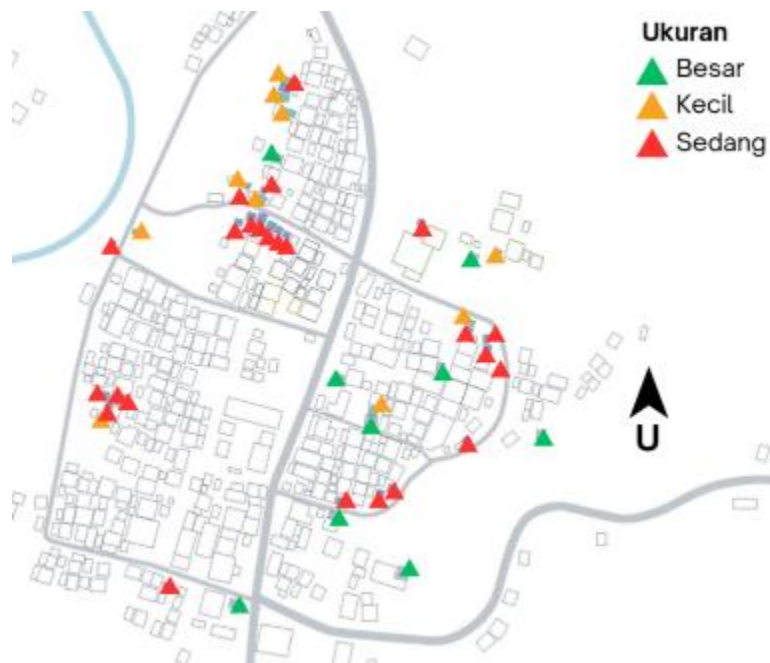


Figure 4 . Map of the distribution of "geleng" in Bayan Traditional Village based on its size  
(Source: Author’s survey in 2024)

The total storage of food materials in the form of rice and glutinous rice that can be accommodated from these 42 "geleng" units is approximately 212,500 bundles of rice, or approximately 212.5 tons of rice in 1 harvest period (1 bundle of rice is equivalent to 10 kilograms of rice/glutinous rice). The projection of this calculation can be seen in Table 2. Suppose the needs of the residents of the Bayan Traditional Village totaling 1200 people (statistical data of the Bayan Traditional Village as of 2022) with the consumption level needs per person based on food consumption statistics data from the Ministry of Food in 2022 is 0.2 kilograms of rice per person per day for two harvest periods in 1 year (425 tons). In that case,

the harvest in one year can meet consumption needs for approximately 4 years after the second harvest period by combining local hairy rice and dryland rice. The existence of "geleng" can meet the needs of residents both for rice and glutinous rice for traditional ritual ceremonies and daily consumption. This is in accordance with the concept of food security as stated by (BKP, (2013), (Khoirunnisa & Wibowo (2021) ,Pudianti et al., 2024).

Table 2. The number of unhusked rice commodities accommodated by "geleng" in Bayan Traditional Village

Geleng Size	Geleng Amount	Rice storage capacity (bunch)	Amount of stored rice (bunches)	Amount of rice (1 bunch of rice ~ 10 kilograms)	In ton
Large	9	750	6750	67.500	67.5
Medium	23	500	11500	115.000	115
Small	10	300	3000	30.000	30
Total				212.500	212.5

For the people of Bayan Traditional Village, the harvest stored in the "geleng" can be taken at any time and for any purpose. Still, the need for traditional rituals remains the main priority in the use of rice stocks from the "geleng." In taking the rice harvest from the "geleng," there are the following rules: (1) You may not take everything that is in the barn/empty it (except for building maintenance); (2) for traditional rituals related to death processions, the number of bundles of rice taken must be odd; (3) for personal consumption and other life ceremonies, including the traditional Maulid procession, the number of bundles of rice taken must be an even number.

The "geleng" building is a rice barn in the Sasak culture of North Lombok; it has different door access from the "geleng" in the Sasak culture of Central Lombok. This difference lies in the door to enter the "geleng" building. In the "geleng," located in the Bayan Traditional Village, the access door is a hole like a maintenance hole in modern buildings, which is intended so that access to the barn is not too easy. This is indeed designed to make the owner prioritize the rice supply outside the "geleng" building so that the stock of rice harvest stored in the "geleng" can be used for the following periods. Moreover, even if it is needed for daily needs or customary needs, taking it cannot be too much, as mentioned in the unwritten customary rules that have been discussed previously.

Iqbal (2023) in his research, mentioned the harvest storage system that pays attention to the balance between the biological characteristics of the harvest and the environmental conditions of its storage by paying attention to the temperature, humidity, and seeds. It is realized by using natural materials to make this "geleng" building. The use of bamboo bed material that has many small holes (not completely closed) as walls on the "geleng" can balance the humidity between rice seeds and the air and water conditions around it. The shape of the "geleng" roof that can protect the woven bamboo walls also supports maintaining thermal stability to obtain ideal temperature conditions so that the stored harvest seeds can last quite a long time with quality that is still well maintained. The shape of the "jelepeng" construction on the supporting column pillars of the "geleng" building is also a form of local wisdom in preserving the condition of the harvest so that it cannot be reached by pests such as rats.

## 5. CONCLUSIONS

The Bayan Traditional Village community, until now, continues to maintain its traditions and culture through traditional rituals that describe their daily lives from birth to death, which are also harmonized with the environment and nature around their homes. Through the

preservation of these traditions and cultures, in the Bayan Traditional Village Area, there are many buildings with traditional architecture that are still maintained in their original form and integrity for the implementation of traditional ceremonies. The existence of the "geleng" rice barn building, which is one of the architectural elements of traditional buildings in the Bayan Traditional Village Area, still has an important role, so its existence is still highly respected, and its preservation is considered an effort to maintain local traditions and culture.

The development of technology and the condition of society's social structure have influenced changes in the agrarian culture of the Bayan Traditional Village. This phenomenon is evident from the decreasing number of residents who work as farmers. Such conditions also caused the number of "geleng" building units identified in the Bayan Traditional Village to decrease from the existing number compared to the conditions around 20 years ago, where every two to four families still had at least one "geleng" unit.

The existence of "geleng" buildings in the Bayan Traditional Village is identified with various sizes and shapes, indicating that with the number of "geleng" buildings in the Bayan Traditional Village Area, they can still function well to store rice/sticky rice commodities from the harvest to be used in maintaining the sustainability of local community food security. With two harvest seasons in one year, through the availability of the number of "geleng" buildings that are still functioning well in the Bayan Traditional Village Area, it is estimated that they can still meet the food needs of the local community for up to 4 years to come.

Tradition involves the continuity of the past in the present rather than simply showing the fact that the present comes from the past (Sztompka, 2017). The lesson that can be learned from this study is the importance of maintaining traditional architecture as part of food security strategies and cultural identity, which shows that local wisdom can provide sustainable solutions to challenges in the future.

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