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Characteristics of the Bajo Tribe Settlements in Lagasa Village, Muna County, Southeast Sulawesi-Indonesia Future Cities and Environment

**TECHNICAL ARTICLE** 

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HALIM D USMAN RIANSE D ISHAK KADIR D ENDRO SUKOTJO D

\*Author affiliations can be found in the back matter of this article

# ABSTRACT

This study aims to describe the characteristics of the Bajo tribe's habitation in Lagasa village, which is a fishing community located in the suburbs of the capital of Muna County. The settlement has received the assistance of the local government through a reclamation policy intervention. It also gives an overview of the policy's impact on the local community's social condition and settlement. Inductive data analysis techniques are used with descriptive qualitative approaches, such as naturalistic and phenomenological methods, to make sense of things that happen in the field through interviews, questionnaires, and observations. According to the results, houses are categorized into three categories based on their location: (1) houses on land; (2) houses on water; and (3) houses situated partially on land and partially in water. The dominant settlement pattern is the grid pattern, next to the cluster pattern and the linear pattern. In general, the spatial configuration, roofing shape, construction system, and material composition of the dwelling have all contributed to its physical condition. Internal factors, such as the level of education and economic capacity of households, influence the characteristics of settlements, while external factors are the policies of the local government. Policy intervention has led to changes in most of the physical conditions of the settlement environment and has caused the majority of the Bajo tribes in Lagasa Village to adapt to land dwellings. The proximity of the settlements to the downtown has also influenced the Bajo tribe's perception of houses.

#### CORRESPONDING AUTHOR: Halim

Student of Doctoral Program in Management Science Concentration in Engineering Management Halu Oleo University, Indonesia

halim\_ft@uho.ac.id

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# INTRODUCTION

It's no doubt that the Bajo tribe's status as a seafaring people, distinctive in many aspects of their existence, including the manner in which they established settlements, has long captivated the interest of scientific specialists from a variety of disciplines and been the subject of numerous works that have been presented in much international literature. Citing Maulidiyah et al. (2020) that fishing communities have their own uniqueness in their social life because the majority of them have similar livelihoods, so the scope of daily social activity tends to be the same.

The nomadic seafarers who travel have a distinct name. In eastern Indonesia, they are referred to as Bajo people or the Bajo tribe, whereas in the west, they are known as Sea people, Seafarers, or Sea communities. In Johor-Malaysia, the same ethnic group is referred to as both the Kuala people and the Seafarers. This group is referred to as the Bajau people, Indigenous communities, Sama-Bajau, and Bajau Laut in Sabah, Malaysia, Brunei Darussalam, and the Philippines (Saad 2009: 31).

For centuries, the Bajo people lived in what were territorially known as "closed communities," with their homes on the ocean, effectively isolating them from the inhabitants of land (Nimmo 1990). According to Zacot (2002), this is because, in addition to settling with dwellings in the sea that are not connected to the territory of other communities, the Bajo tribe has minimal need for the buttocks of other people. The Bajo people are content with the items they use to capture and cook fish.

The Bajo tribe has different characteristics from the other tribal communities in general. The Bajo people are known as sea travellers because they have always led a nomadic way of life (Suliyati 2017). What is called the Bajo Tribe cannot be separated from the sea and boats, they made the boat not only a means of catching fish and transportation, but also their dwelling place. Even their settlements were built deep into the open ocean, where they sought livelihood. Citing Poedjowibowo et al. (2016), in the lives of the Bajo people, there is a concept called "piddi tikkalo'na lamong 'nggai makale le goya", which means their lives cannot be separated from the whirlwind of the waves.

Nowadays, the majority of the Bajo tribes in Indonesia have chosen to become a fishing community that settles by building stilt houses, and generally, they occupy coastal areas on the side of the water, thus allowing their settlements to be oriented directly to the sea (Madlan et al. 2014). Coastal settlements are commonplace in a country that has the second-longest coastline in the world. Even history records the first and earliest settlements built on the coast before finally flourishing inland. Coastal settlements generally provide for marine livelihoods. They capture fish and other seafood that they sell on land (Obie 2018). The Bajo settlements in Muna County are dispersed across various small islands and coastal regions. These include the villages of Lagasa, Pasikuta, Tapitapi, Bontubontu, Tobea Besar, and several others. The majority of the Bajo lives in shallow water or along the coast. A stilt house was constructed at that location using materials sourced directly from the natural environment. The house serves as a symbol of the social and cultural values of the Bajo tribe, which regards it as a priceless heritage. Its design and construction incorporate the values of local wisdom, which are manifested in the way the space is inhabited, the utilization of the environment's potential, and the application of ingenuity in the building process. As required, the design also exemplifies craftsmanship and practicality of use.

Lagasa village, one of the Bajo settlements in Muna County, is situated in close proximity to the county capital. The settlements, which currently have the greatest population and are the most dynamic and rapidly expanding, have a population of over three thousand. It is important to emphasize the settlement's presence not only because of its advantageous geographic location but also because of the local governments' policy intervention through a reclamation initiative, which has converted most of the substantial overwater settlement into on-land settlements. Therefore, under the current circumstances, it appears that the notion that "the life of the Bajo cannot be separated by the roar of the waves" is not always relevant. Hence, this research assumes significance in elucidating the progression of settlement characteristics associated with post-reclamation and revealing how the flexibility of the social values of the Bajo tribe in adapting to the evolution of the physical environment is highly likely to affect their way of life and perception.

# LITERATURE REVIEW

A settlement is a residential area governed by functional and human factors in addition to the social and economic cohesion of communities (Turner and Fitcher 1972). The residence is furnished with numerous amenities. According to Conyers and Hills (1984), such facilities may consist of economic and commercial facilities, social service facilities, and additional support services facilities.

Bajo tribal settlements are typically a cohesive community consisting of several owned units linked by family ties and connected to the coast by a network of tribal bridges. Due to its proximity, the kitchen can be divided between two households, effectively reducing the cost of building a new residence (Ismail and Ahmad 2015). The development of coastal housing among Sama-Bajau in Mindanao (Southern Philippines), Sabah (Malaysia), and Sulawesi (Indonesia) is accompanied by two primary activities that promote the development of Sama-Bajau housing and settlement: 1) acculturation through interethnic relations and marriage 2) through the use of government authority. In Sama-Bajau's quest for identity consolidation, coastal settlements, such as those in the basic state, progressively evolve into cohesive settlements with primary authority over the development of Samo-Bajau across social mobility (Ismail et al. 2015). The shift in the Bajo tribe's settlement pattern can be attributed to a number of factors, including the desire to reside on land in order to gain access to raw materials and engage in a variety of activities, including education and commerce (Arisaputri et al. 2020).

In the territory of the Bajo tribe's settlements, there is a concept known as the "sambuangan taguk pulih", which incorporates the meaning of a fixed sign that can no longer be removed as the boundary of the location where they will live in harmony with the sea. To remain in harmony with the cosmos, the Bajo tribes orient their settlements toward the ocean, preserving the marine space as a place of ancestry and its contents as the source of their existence (Syam et al. 2017). The orientation of the native houses of the Bajo tribe facing the sea corresponds to the water-based orientation as the eye space of their dwelling (Lahamendu et al. 2019).

The territories established in the settlements of the Bajo tribe are not independent of their historical value, the conditions of the marine environment as the primary orientation, or the demands for privacy, which are driven by economic considerations. A category of territories with distinct social characteristics and similar marine and economic cultural contexts can foster a strong sense of family by erasing the boundaries of space and time in daily interactions and activities. The 'gotong royong', which is characteristic of the social life of the Bajo tribe, needs to remain preserved and encouraged as a social capital in building housing and a better settlement environment (Sirajuddin 2020). Bajo tribal communities take pleasure in engaging in private activities together, knowingly or unknowingly invading privacy by breaching territorial boundaries (Syam et al. 2018). A defining characteristic of fishing communities is the proximity of their homes to the water, or, in other words, the proximity of their homes to their workplaces. The central components of fishing activities in a settlement are vessels and fishing grounds. A decent fishing village requires a number of facilities and infrastructure, including roads, drainage, potable water, electricity, open spaces, schools, places of worship, and fish auction centers (Aldi, R H M et al. 2019).

The Bajo tribe is always and everywhere proud of their maritime lifestyle. Due to the fact that they spend the majority of their time at sea, the Bajo are a community with extensive knowledge of marine life. Due to its ability to exist in harmony with the marine environment, the Bajo tribe feels a great deal of pride and self-assurance. The local knowledge they mastered contributes to the notion that they are immune to disease and possess supernatural and invincible powers. This is the reason why the Bajo tribe at first refused to establish itself on land. Living on land as a land society meant being subject to the laws and authorities established by people of a different race, which would certainly erode their pride as a strong sea tribe (Suliyati 2017).

The 1982 failure of the re-settlement program in the village of Torosiaje Sea in the province of Gorontalo is one indication of the close proximity of the Bajo tribe to the sea. The members of the Bajo tribe left the location of the land settlement one by one and returned to the sea when the government attempted to relocate them from the village to inhabit houses on land by providing a plot of land suitable for their crops (Saman 2014). Relocation efforts will be more significant if the history of subsistence, the hierarchy of indigenous communities, and the previous environment are taken into account (Weerasinghe and Shigemura 2008).

# **RESEARCH METHOD**

This research uses a qualitative approach by applying Husserl's descriptive phenomenology, which seeks to find the essence of the object of research. Qualitative researchers identify the phenomenon of an object through human experience (Manen 1990: 163). The basic objective of phenomenology is to reduce the individual experience of a phenomenon to a description of the universal essence of "adherence to the reality of something" (Manen 1990: 177). Phenomenology focuses on the digestion of a person's experience of a phenomenon (Creswell 2007: 95).

The purpose of this research is to reveal the characteristics of the Bajo settlements in the Lagasa village, including the physical conditions of the settlement environment, the physical condition of houses, and the basic infrastructure and supporting facilities, by employing observational, naturalistic, and phenomenological methods to uncover the phenomena that occur based on field observations, questionnaire, and in-depth interview.

As in naturalistic research, sample determination uses purposive sampling, which is a technique to determine a sample of research with some special considerations aimed at obtaining more representative data. Data or representative information about the settlements of the Bajo tribe in the village of Lagasa is collected through field observations, interviews, and the dissemination of questionnaires to respondents. Respondents were selected on the basis of previously established criteria: 1) Property owner; 2) Native tribe; 3) Married; 4) Working as a fisherman. Respondents were randomly selected based on the location of their homes, namely: houses in the reclamation area or on land, houses in the water area, and houses partly on land and partly in the water. In addition, historical and socio-cultural data were obtained through in-depth interviews with several informants on the criteria that have been established, namely: 1) Age 60 years and over; 2) Native Bajo tribe; 3) native of Lagasa village; 4) As a figure of the community.

# **DATA ANALYSIS**

This study makes use of inductive data analysis techniques. Lincoln and Guba (1985) define inductive data analysis as the analysis of field-specific data into units that are then categorized. In other words, inductive data analysis is the process of digesting field data.

Before analysis, there are two data processing steps that must be completed in phenomenological research: unification and categorization (Kadir 2015). Unification is the process of assigning a code to collected data; unprocessed data is transformed and unified systematically into units so that it can be accurately described based on the characteristics it contains (Guba 1990). In addition, Guba explains that categorization is a progressive unification procedure. This indicates that the data already inputted into subsequent units is organized into categories that provide descriptive or inferential information (to draw conclusions) about the context or settings from which the units were extracted. Based on similarities, this method separates units into provisional categories.

The data collection in the field for this study was accomplished via interviews, questionnaire, and observations. Data pertaining to social phenomena, the physical state of dwellings, the settlement facilities, and the housing environment itself were collected through observations. Further, questionnaires are used to gather data related to personal perceptions, expectations, and ownership. Concurrently, interviews were undertaken with prominent members of the Bajo community in order to acquire a comprehensive understanding of the tribe's history, culture, customs, and way of life.

Field-collected data is then processed and assembled into units during the analysis's implementation. In conducting categorization, one should always re-examine the organized categories to ensure that there is no overlap of information. The category's information must be internally homogeneous and externally heterogeneous.

# **RESULTS AND DISCUSSION**

#### A. OVERVIEW OF RESEARCH AREA

According to the local indigenous figure (Bapak Abidin), the village of Lagasa was established in 1953, and its inhabitants were Bajo tribal communities relocated through a re-settlement program from the island of Bontubontu to the coast of Laino, a region located close to the city center of Raha, the capital of Muna county. Due to urban spatial policy, the village was relocated to the littoral south of the port of Raha at the beginning of 1978, where its inhabitants continue to reside (Figure 1).

Based on data from the Central Statistics Agency (BPS) of Muna County (Duruka sub district in figures 2022), Lagasa village has a total area of 1.14 km<sup>2</sup>, or 9.90% of Duruka's total area of 11.52 km<sup>2</sup>. Lagasa village has the most inhabitants compared to six other villages, with 3,203 people, or 25.03 percent of the subdistrict's total population of 13,112 peoples in 2021, with a population density of 2,810 people per square kilometer. The population of Lagasa consisted of 1,586 men and 1,6173 women, with 739 household chiefs and an average of four individuals per household. 672 households (92.18%) are fishermen, while the remainder are civil servants, private employees, or business owners.

The strategic location of Lagasa village, as part of the urban area that allows the community to easily access the various facilities and information available in the city center, has the opportunity to develop both the physical development of the area as well as the economic aspects of the community. Meanwhile, on the other hand, the conditions could also be a threat to the sustainability of the local wisdom values of the Bajo tribes in the area.

# **B. PHYSICAL CHARACTERISTICS OF THE SETTLEMENT ENVIRONMENT**

The Bajo tribe has been a fishing community since the time of their ancestors, so their way of life cannot be separated from the ocean and boats. Their dwellings were constructed on shallow seas or coastlines, allowing them direct access to the ocean as their sole source of sustenance.

Initially, the settlement of the Bajo tribe in Lagasa village was a littoral area separated by the embankment, which functioned as the primary thoroughfare connecting the settlement to and from Lagasa village. Historically, all the Bajo tribal houses in the region were characterized as stilt houses. At the end of 2008, the Muna district government, through the Public Works Department project, had reclaimed more than half of the settlement area. The observation result indicates that more than 80% of the houses originally classified as stilt houses in the shallow waters immediately became land houses.

It's obvious that these conditions will present a new challenge for the Bajo tribe in this location, with a new obstacle that will require them to adapt to their existence on land. There was a shift in the orientation of accessibility, which was formerly based on the sea and boats; now, some of them conduct their activities as fishermen who reside on land, although their homes are still immediately adjacent to the water. In other words, the Bajo tribe in Lagasa village, whose houses were constructed on reclaimed land, has adapted to life on land, but they are still the Bajo tribe, whose existence cannot be separated from the sea and the boat.



Figure 1 A location map of the Bajo tribe settlement in Lagasa village. Source: Public Works and Spatial Plan Agency (Dinas PUR) of Muna County (2021).

The area of the settlement of the Bajo tribe in Lagasa village is spatially divided into two zones based on the physical conditions of the environment: a land area formed as a result of reclamation and a tidal area whose original conditions have been preserved. The footbridge connecting the houses in the coastal area to the local road in the group of houses on the reclamation area leads to the main road, which also serves as the sea and residential area's dividing line.

Moreover, the accessibility of the fishing boat from the residential area to the sea and vice versa through the space beneath the bridge on the main road, which consists of three entrances, is simultaneously a water exit portal into residential areas. There are parking spaces for boats and fishing boats in the residential area's decline (Figure 2).

### **C. THE SETTLEMENT PATTERNS**

The initial formation of the Bajo tribal settlement in the village of Lagasa followed a cluster-linear pattern. It is so named because the houses are built confronting each other in a linear fashion, oriented toward the footbridge that leads to the sea, and are not a continuously

structured mass system but rather groups of houses that still share an affinity. These groups typically consist of fathers, sons, siblings, and brothers of spouses and wives. The distance between house clusters is arranged in such a manner that a space is created for each cluster's housing development area. Each new household will construct its dwelling to the left, right, or behind the existing structure. And so forth, until the voids awoke. Thus, the linear pattern becomes more rigid, while the cluster pattern is concealed. As the number of households increases, the same-style housing development continues to expand in this region. Some previously formed linear patterns are folded into a network that is connected by a circulation pathway to form a grid pattern, with the circulation direction connected to the sea-facing main road.

Currently, the Bajo tribe's settlement territory in Lagasa village is spatially divided into two zones: the land zone and the tidal zone. Although the physical conditions of the land have undergone significant changes, the settlement pattern has remained the same, i.e., it generally develops in a grid pattern, as the houses constructed on the reclaimed land remain in the same location as before. Apparently, in other portions of the

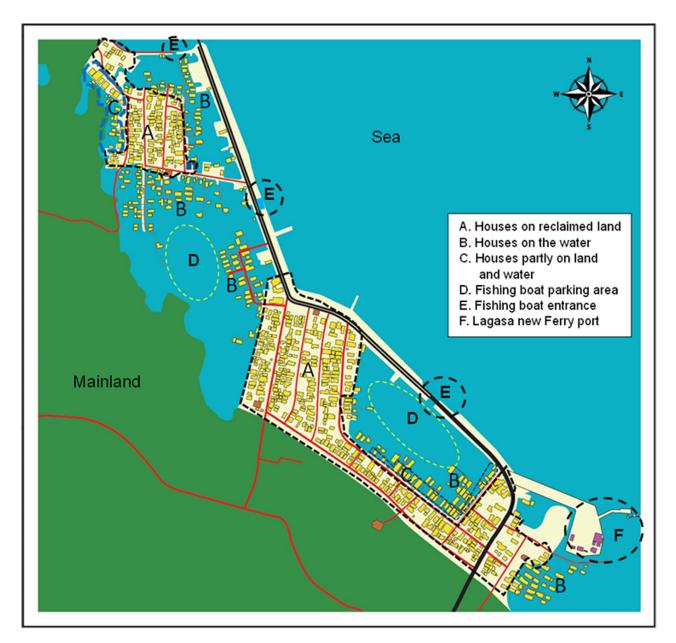


Figure 2 Zoning map of settlement space function. Source: Author's analysis, adapted from map of drone view (2023).

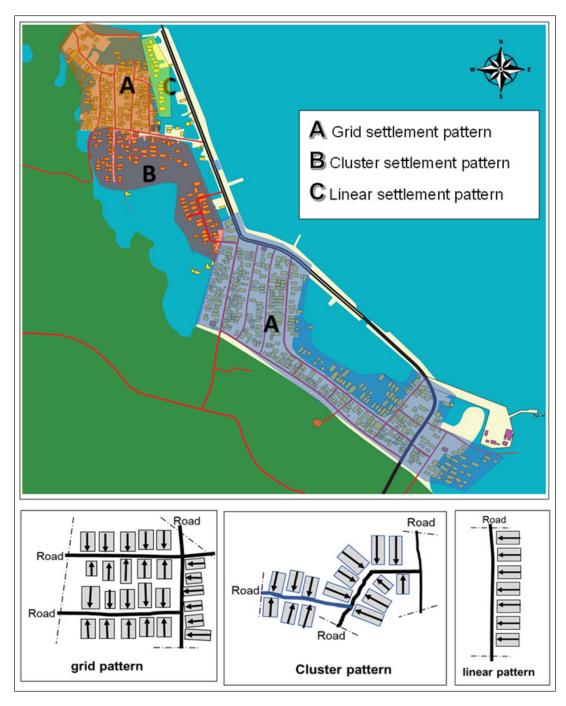
settlement area, particularly the tidal area, some clusters of houses constructed after the reclamation developed linear and cluster patterns (Figure 3).

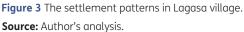
Growing domestic groups in the watershed area (groups B and C) are connected to previously constructed housing groups. The orientation of the road terminates at the connecting line between the cluster of dwellings and the main road. The circulation relationship between the two groups of houses that always ends at the main road is essentially a statement that the activity of the Bajo tribe in Lagasa Village today is not only oriented at sea but also has a connection to the community's landbased activity.

Bajo tribal houses in the village of Lagasa are divided into three groups based on their location: (1) houses on land, which are staging houses that remain in the advertising area or permanent houses built newly on the reclamation land; (2) houses on the water, which are stilt houses located in the tidal area; and (3) houses partially on the land and partially in the water, which are stilt houses that face the land road. Some of the spaces on the main level are typically living rooms and terraces, while other houses construct shops where they sell trees' daily needs. An overview of the three groups of houses can be described as follows:

#### Houses on Land

The group of houses on land can be broadly classified into two categories: firstly, there are pre-existing stage houses whose sites have been reclaimed and turned into a low stilt house measuring between 1–1.20 meters in height. With the exception of the front terrace addition, the houses have not undergone substantial development with regard to spatial planning. The





implementation of contemporary construction systems and the utilization of building materials such as glass windows and zinc roofs have undergone substantial advancements. The second type consists of permanent homes constructed on the location of stage houses. The configuration of the cluster of dwellings remains unchanged, consisting of a lengthy square shape. However, the spatial patterns discovered and the construction materials employed have both evolved (Figure 6). In contrast, the roof shape, which is typically a gable shape, does not undergo significant alteration. In terms of mass structure patterns, houses on land develop in a grid pattern.

#### Houses on Water

Groups of houses on the water are existing houses that are not reached by reclamation activities. As a group of houses that are in the water area, they are generally oriented to the sea, and the main footbridge of the group is also connected to land accessibility. Groups of houses on the water generally develop in cluster patterns and partly in linear patterns. In terms of shape and spatial patterns, the houses on the water seem to be unchanged from their traditional shapes. On the other hand, however, developments have been found in some other components, such as the expansion of space, variations in the shape of the roof, such as a shield, and the combination of the shapes of the shield with the gable shape, as well as the development of building materials such as zinc roofs and glass windows and the use of modern construction systems.

#### Houses Partially on The Land and Partially on The Water

Unique to this group is the third, whose dwellings are situated in two distinct zones. Originally situated as stage houses connected by a footbridge across a waterway, the houses underwent reclamation to convert portions of the street and the areas where some houses were situated into land roads. Similar to the mass structure of the group house on the land, this group house has a grid-shaped mass structure pattern. Multiple family chiefs built a kiosk in the foreground and added the terrace as part of the space development. Modern construction systems and the utilization of building materials such as window glass and zinc roofs were also implemented in this group of houses. In general, however, the roof shape does not develop.

#### **D. HOUSES PHYSICAL CONDITIONS**

Originally, the Bajo tribal houses in the village of Lagasa were all stilt houses with a square-long shape (as a core house) comprised of two plots with an average width of 5 meters and a length of 7 meters, supported by nine wooden pillars. In larger versions, the core house is composed of three plots with an average width of 7 meters and a length of 9 meters, supported by 12 wooden columns. In addition to the main house, there are smaller buildings that function as kitchens and are positioned perpendicular to the main house. Between the two buildings, there is a distance of 1–1.5 meters, which serves as a connection room (Figure 4). The distance from the sea level to the floor is modified based on the height of the waves during the year's

peak storms. In the traditional Bajo culture, a home is always constructed with an emphasis on harmony with nature. In the past, Bajo tribal homes in Lagasa village were constructed according to their own vision, without the intervention and influence of urban development as it is today. The traditional connotation of home in the Bajo tribe is unrelated to the concept of economic investment.

In its development today, the house's dimensions, layout, and roof shape, as well as the building materials employed, are highly variable and dynamic. The presence of house expansions such as the addition of bedrooms, the enlargement of the living room, or the addition of a front terrace to older homes has had the greatest impact on the change in shape. Various forms of expansion of houses located on water and houses partly on land and partly on water are shown in Figures 5 and 6 below.

Figure 5 shows that the extension of the original house version of the three plot houses located in the water area and the houses partially on the water and partially on the land is generally only an addition to the front terrace. This is because the space needed by the inhabitants has been filled with the amount of space that was previously available.

The following are the various types of development of the original stilt houses in two plot versions located in the water area and houses partially on water and partially on land, shown in Figure 6, as follows.

From Figure 6, we can see that the type of development of the stage houses consisting of two plots is more dynamic compared to the development of houses with the original version of three plots in the same location. Another thing that needs to be pointed out is that the development orientation of the two types of homes tends to be the same, i.e., on the front, and the pattern of the original spatial arrangement is unchanged.

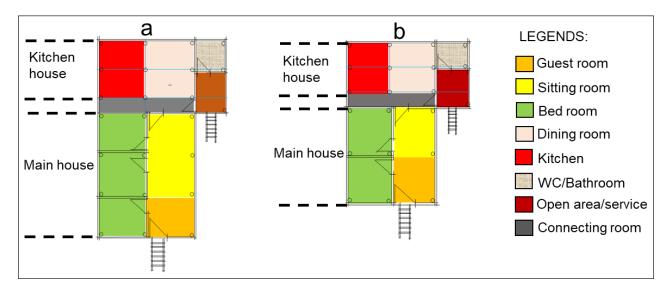


Figure 4 Spatial pattern of the original Bajo tribe house in Lagasa village: (a) main house consisting of three plots; (b) main house consisting of two plots.

Source: Author's analysis (2023).

In contrast, specifically for the majority of houses built later, the change is due to a shift in the homeowner's perception of a home's origin. The Bajo tribe in Lagasa village no longer views the residence merely as a necessity but as a symbol of their social and economic standing. This paradigm shift ultimately resulted in alterations to the architectural aspects of the majority of houses today (Figure 7).

The arrangement of space in the majority of Bajo tribal houses in Lagasa village today varies considerably, particularly for those permanent houses constructed on reclaimed land. The reality shown is that the living room is no longer in a linear relationship with the family room but that there are boundaries between the two spaces that serve to reinforce territoriality in terms of space function. Various pattern changes in the layout of the Bajo tribal houses built on the reclamation land are presented in Figure 8.

Figure 8 shows the pattern of permanent housing for the Bajo tribe located in the growing reclamation area, which is very diverse and dynamic when compared to the original housing pattern shown in Figure 4. The development can be seen mainly in the layout of the living room, which is generally no longer a linear configuration with the family room and dining room, but its layout shows consideration of the privacy value of the space. Similar things were also found in the toilet/ bathroom placement placed on the inside of the building.

In general, the houses of the Bajo tribe in Lagasa village no longer contain materials derived from nature. Additionally, no longer use traditional construction methods reliant on rattan. On some components, such

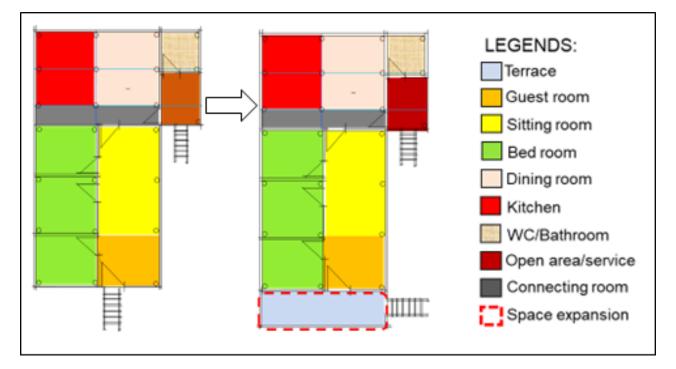


Figure 5 Expansion type of three-plot houses version located in the water area and houses partially on water and partially on land. Source: Author's analysis (2023).

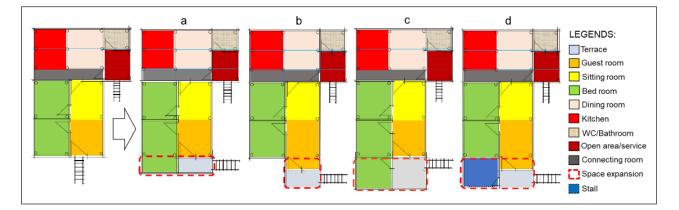
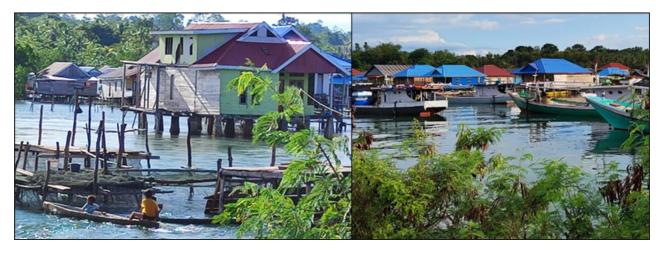
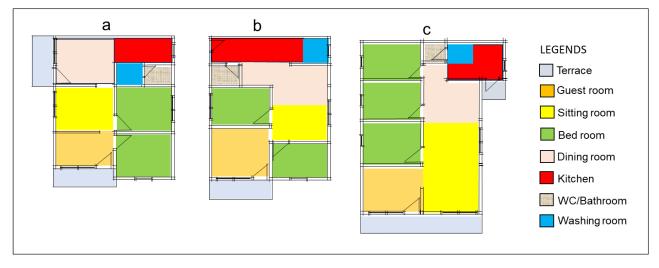


Figure 6 Expansion type diversity of two-plot houses version located in the water area and houses partially on water and partially on land. Source: Author's analysis (2023).



Figur 7 Various types of roof shapes on the Bajo tribe houses in Lagasa village. Source: Author's documentation (2023).



**Figure 8** Diversity of spatial patterns of Bajo tribal houses in the reclamation area. **Source:** Author's analysis (2023).

as pillars, walls, and roofing, modern construction techniques have been used with manufactured materials. Some homes feature substantial concrete rear columns. Bars and nails are also utilized in the construction of all homes.

Next is the use of floor materials, walls, window coverings, and roofs, and it was discovered that all stilt houses have wooden floors. While boards, calcy boards, and multiplex boards are used for walls. Especially for houses erected on the ground, bricks are typically used for the walls, and ceramics are used for the floors. Others are temporary structures with timber frames, stone foundations, and substandard concrete floors coated with cement paste. Typically, window covers are composed of boards and glass. The width of the apertures is increased to between 50 and 60 cm and the height to between 70 and 90 cm. Generally, nipa leaves are used for the roofs of Bajo dwellings, which are still original in almost every region of Indonesia. Currently, however, the roofs of all Bajo homes in Lagasa village are made from zinc material.

In other sections, it is necessary to note that the majority of houses in the Bajo tribal settlement in Lagasa village, particularly in the group of homes in the territory of the tidal area, lack a suitable toilet, whether individual or communal. In the tidal area, family restrooms are typically located in the backyard, outside the kitchen house, without a roof, and with board walls measuring between 1 and 1.5 meters in height. These toilets are typically shared by several connected residences, one of which still contains a family. However, the condition of the group of homes in the reclaimed area is superior. Typically, toilets are located in the rear of the home and constructed with permanent materials.

# E. BASIC INFRASTRUCTURES AND SUPPORTING FACILITIES

The existence of fundamental infrastructure and support facilities is essential to the long-term viability of a settlement area as a form of government service to the community in order to ensure its well-being. In other words, the presence of adequate settlement



Figure 9 Conditions of main access roads and local roads in the residential area. Source: Author's documentation (2023).

infrastructure will produce a healthy and comfortable living environment.

Bajo tribal settlements in Lagasa Village that are part of the urban area have opportunities for more adequate infrastructure development funding, such as improving the condition of residential roads. In addition, there is a ferry terminal in Lagasa village that connects the city of Raha with several villages in the opposite region. The existence of the port has impacted the condition of the collector road that traverses the village of Lagasa and serves as the primary exit from the ferry port area.

In other areas, the conditions of residential local roads remain inadequate. The connector roads on the houses in the reclamation area are still ground roads, and in the tidal area there is an unworthy timber bridge with a simple design that was constructed by the community (Figure 9).

Some insufficient facilities, including drainage systems, housing systems, and domestic waste systems, appear to be a significant issue. During the rainy season, some roadways in the reclamation area become flooded due to the lack of a drainage system in the surrounding homes. Inadequate housing and sewage disposal systems also contribute to the current housing environment's low quality.

Inadequately managed waste management systems, the absence of temporary refuse disposal sites in the settlement area, and the continued lack of public awareness regarding the significance of environmental hygiene all contribute to the widespread spread of garbage in residential areas. At the time of the rash, water accumulates on the side of the local road in the residential group of the reclamation area, where trash from a group of houses in the rush area has been disposed of and inundated by rush water. This condition can be found in certain areas of settlement, particularly along the border of the road that separates groups of homes in the recessed area from groups of homes on the land within the area.

In general, fishing communities are equipped with fundamental infrastructure and adequate support facilities to facilitate all of their daily activities, particularly those related to their occupation as fishermen. A significant factor is the presence of a fishing area. In addition to being a fishing settlement with the highest population in the Muna district, Bajo tribal settlements in the village of Lagasa are also a settlement area directly bordering the downtown zone, which has not yet had a fishing auction spot. The only fishing auction is located in Laino, approximately 3 km from the village of Lagasa. The existence of these facilities must be sufficient to aid the fishermen, including the Bajo tribe in Lagasa. They stated, however, that it was not evident because the location was too distant from their settlement.

Similarly, the availability of important support facilities, such as green open spaces, pedestrian ways, children's playgrounds, sports facilities, and various other facilities, is integral to the existence of a settlement environment that meets the needs of residents and protects public rights. The cluster of homes on the reclaimed land must be outfitted with various support facilities, but these are not yet available.

In this study, it was found that the underlying problem facing us today, which is related to the acquisition of various support facilities as described above, is the nonavailability of the land provided. The groups of houses located in the reclamation area currently do not have open spaces because, basically, all the sites where the houses were built are existing sites of previous houses on the water. As has been explained, the settlement of the Bajo tribe, as a house on the water, basically does not know the term open space. Because their settlement territories do not have massive boundaries like settlements built on land. So that their open spaces are the sea.

## CONCLUSION

On the basis of research and discussion, it was determined that the characteristics of the Bajo tribal settlement in Lagasa village have evolved over a period of more than four decades. The following is a description of the settlement's characteristics:

- 1. The settlement area of the Bajo tribe in Lagasa village is divided into two zones based on physical conditions: the land zone, which is the reclamation area, and the tidal zone, which is the original area of this settlement. This location serves as a parking spot for boats and fishing boats, as well as a site for the construction of new dwelling units.
- 2. The houses of the Bajo tribe in Lagasa village were divided into three groups as a result of the reclamation program: (1) houses on the ground, which are stable stilt houses and permanent houses built in the reclamation area; (2) houses in the tidal area, which are stilt houses consisting of old houses and houses constructed subsequently; and (3) houses partially on the land and partially on the water, in the form of stilt houses oriented to the land road.
- 3. The grid pattern predominates the settlement pattern of the Bajo tribe in Lagasa village, particularly in the group A dwellings located in the reclamation land area. In tidal areas, group B households tend to grow irregularly, whereas group C develop linearly, confronting the footbridges of local housing roads in land and sea-oriented areas.
- 4. The size of the house, the pattern of the space, and the shape of the roof vary greatly; this depends heavily on the economic capacity of the household. The most dynamic development of spatial patterns among the three existing house groups occurred in the group of houses on land built with permanent construction. The most common thing is found in the use of building materials such as zinc roofs and glass windows. The other thing is construction systems, where all houses are built by adopting modern construction systems.

The findings also indicate that internal and external factors influence the characteristics of the Bajo tribal settlement in Lagasa village. The most important internal factor is the increased knowledge and economic capabilities of the people, which have led to a shift in their perception of the actuality of a house. while external factors are the policies of the local government. Government policy intervention in the form of a reclamation project has affected the changes in the characteristics of settlements in the Lagasa village. Besides, it has also influenced the social life of most Bajo tribes in the region as seafarers who are able to adapt to the conditions of life on land and remain stable as fishermen. Besides, the location of the settlements, which are suburban areas allowing the public access to various information, also affects the perception of the Bajo tribe of houses.

#### LIMITATIONS

This study only generally describes the factors that influence the development of the characteristics of the settlements and changes in the perception of the Bajo tribe in Lagasa village regarding the value of houses. Also, the study only revealed two internal factors that affect the development of the houses in the area, namely the level of knowledge and the economy of households, so it is not possible to conclude specifically about the most dominant factor that influences the characteristics of settlement and the change in perceptions of the community.

### **IDEAS FOR FUTURE RESEARCH**

It is suggested that more research be done in the future to look at a wider range of factors, including religious and socio-cultural ones, that affect how settlements change over time and how the Bajo people think about the value of their homes. This will help find the factors that are most important. A comparative study of the Bajo tribal settlements in other locations within Muna County is also possible to explain to what extent geographical factors influence the development of the settlement and the perception of the local community.

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# **COMPETING INTERESTS**

The authors have no competing interests to declare.

# **AUTHOR AFFILIATIONS**

#### Halim (D) orcid.org/0009-0001-0713-789X

Student of Doctoral Program in Management Science Concentration in Engineering Management Halu Oleo University, Indonesia

Usman Rianse cricid.org/0000-0002-2167-5723 Management Science Concentration in Engineering Management Halu Oleo University, Indonesia Ishak Kadir cricid.org/0000-0001-9382-6431 Management Science Concentration in Engineering Management Halu Oleo University, Indonesia Endro Sukotjo cricid.org/0000-0002-8485-282X Management Science Concentration in Engineering Management Halu Oleo University, Indonesia

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