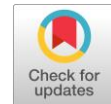


# Society residential pattern of Kaili Da'a in Dombu Village



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## ABSTRACT

Kaili Da'a, is one of the sub-ethnic Kaili in Central Sulawesi, especially those who live in an area at the foot of the Matantimali Hill in Dombu Village, West Marawola District. In addition to the shape of the house, the arrangement and configuration of residential elements which include community housing, the house of traditional leaders and the existence of bantaya and worship facilities in the form of a church building including different topography and orientation of community housing towards the house of the customary leader is a unique phenomenon to be explored and revealed. 5,53 MW. The objectives to be achieved in this study are to reveal the settlement patterns of the Kaili Da'a community in Dombu Village, identify the factors underlying settlement patterns, and reveal and describe the relationship between the socio-cultural (socio-cultural) factors of the community and settlement patterns. These objectives are studied through the Post Positivist method with a qualitative approach, in order to reveal the ethical and emotional empiric (not palpable), behind the sensual empiric (physical) of settlements as the focus of this research. The settlement pattern of the community or ethnic Kaili Da'a in Dombu Village is based on an orientation towards the east as part of the tradition and culture that has been passed down from generation to generation. Settlement arrangements and facing towards the east are the implementation of the cosmos concept which places nature (macrocosm) as part of human life and dwellings (settlements) as a microcosm (small nature); macrocosmic representation.

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## 1. Introduction

Doxiadis in Antara (2011) argues that a settlement is very much determined by its constituent components which include 1). Natural physical (natural); 2). Human (man); 3). Society; 4). Shell; and 5). Network. In general, the five components mentioned above cover their respective sub-components, namely climate, vegetation, animals and topography [1]. In line with Doxiadis [2], Rapoport (1969) [3] and Sumintardja (1996) [4] also expressed the same opinion on the argumentation of the relationship between settlements and culture, social strata and living arrangements of its inhabitants, even specifically analogizing settlement (architecture) as the content of civilization or culture. (container) the maker community as well as its users. Starting from the above opinion, the estuary of the statement of the two initiators is that culture and social systems are the frames of architectural products in the form of settlements in certain communities that are built and inhabited according to the patterns and structures adopted in their lives and daily lives [5], [6]. Settlements within the cultural framework and social traditions of the community are heavily influenced by nature (cosmos) and natural elements and their environment, both the physical (tangible) and non-physical (intangible)

environment, which are built from generation to generation so that they become a mimetic habit but remain in a dynamic frame according to the demands of time and era.

### 1.1. Characteristics of Kaili Da'a Sub-Ethnic Settlements

Kaili Da'a, is one of the sub-ethnic Kaili in Central Sulawesi, especially those who live in an area at the foot of the Matantimali Hill in Dombu Village, West Marawola District. According to Radit (2018) they have built housing since the Palu Valley was hit by the tsunami decades ago and are looking for a relatively safer residential location, slightly away from the valley. Before migrating from the hillside (Matantimali), the Kaili Da'a community lived in the valley area of Bangga Village.

The community structure of Dombu Village is organized organizationally and administratively as a formal governmental area, however in their daily lives there are still some activities that are still regulated informally. The non-formal activities referred to are related to the activities of the Kaili Da'a people, which have been passed down from generation to generation and traditionally to this day. Activities such as giving thanks for the harvest in the garden (movunja) are carried out together in Bantaya. Apart from being a place for organizing a movunja, the bantaya also functions as a place for holding joint deliberations or as a forum and space for resolving disputes to reach positive agreements among community members.

The settlement of the Kaili Da'a community in Dombu village consists of residential units with a variety of materials and materials as show in Fig. 1. A number of houses are built entirely of wood (non-permanent), some use concrete (brick) and wood (semi-permanent), or all of the materials are made of stone, cement and cast (permanent). Almost all non-permanent houses whose population reaches 50-55% of the total number of houses in this village face (orient) the house of the traditional leader, which is located north of the community housing. Topographically, the elevation (elevation) of the customary chief's house is higher than that of the community. The church building is placed in a location (tapak) that is higher than the site of the traditional leader. Traditional buildings (Bantaya) as a component of community settlements are located in the southern area of the residential area, through a layout arrangement based on topographical aspects.



Fig. 1. Settlements of the Kaili Da'a Community in Dombu Village, West Marawola District, Sigi Regency, Central Sulawesi

The configuration of community settlements or the Kaili Da'a ethnic sub-ethnic group in Dombu Village which is formed by the arrangement of the settlement components, namely the community houses which are mostly facing (oriented) towards the customary head's house or church building in the north, as well as the layout of the customary chief's house on the topography What is higher when compared to the site topography and house arrangements of the local community is the description of the uniqueness of the settlement as well as the specific composition and is different from the existing settlement arrangements in the Sigi Regency area in general.

### 1.2. Distinctiveness of the Kaili Da'a Sub-Ethnic Traditional Building

Apart from the unique arrangement, the configuration of the local community settlements is also equipped with a bantaya, a local architectural work (local wisdom) that functions and plays an important role in various ritual activities. Rituals that are held at various moments and activities are led by traditional leaders as a manifestation of the pattern and order as well as the norms that have been passed down from generation to generation as a tradition passed on by the ancestors of the community in Dombu Village. The non-formal activities referred to are related to the activities of the

Kaili Da'a people, which have been passed down from generation to generation and traditionally to this day. Activities such as giving thanks for the harvest in the garden (movunja) are carried out together in Bantaya as show in Fig. 2. Apart from being a place for organizing a movunja, bantaya also functions as a place for holding joint deliberations or as a forum and space for resolving disputes to reach a positive agreement among community members.



Fig. 2. Bantaya in Kaili Da'a Community Settlements in Dombu Village, West Marawola District, Sigi District, Central Sulawesi Source: Author's Documentation, 2020

### 1.3. Research Problem

The culture of living in the Kaili Da'a ethnic sub-ethnic group in Dombu Village which is classified as rare (unique) in forming a settlement, the completeness component of the settlement, namely community houses oriented to the house of the customary chief or church building in the north, as well as the layout of the customary chief's house on the topography higher. This spatial phenomenon must be preserved from the development of a contemporary thinking society in the modern era.

### 1.4. Research Question

Based on the uniqueness of the Kaili Da'a sub-ethnic settlement in Dombu Village, the research question is "What is the settlement pattern of the Kaili Da'a community in Dombu Village, and what factors underlie the configuration of these settlements ?.

### 1.5. Research Objectives

The aim of this research is to explore the factors behind the formation of settlement patterns and to describe the relationship between the socio-cultural factors of the community and the settlement patterns of the Kaili Da'a sub-ethnic community of Dombu Village.

## 2. Method

Koentjaraningrat (1990) [7] classifies culture into three forms: starting from the cultural system (ideas, ideas); social system or or related to actions or activities as well as artifacts as physical products or artifacts. The settlement of the Kaili Da'a Community in Dombu Village, West Marawola District, Sigi Regency which includes houses (dwellings), bantayas, houses of traditional chiefs, are cultural products that are regulated in the local community structure starting from the planning and establishment process. Thus behind the settlement of the Kaili Da'a Community in Dombu Village which is physically visible and palpable (sensual empiric) there are also rules and norms at the logical level of the founders as collective agreement (ethical empiric), which may contain reversed meaning (value) which is visible senses. In order to explore and study these settlements, especially in the patterns or arrangements of the elements that make up the settlement, it is very important to reveal these aspects not only at the level of sensual empiricism but also at the level of ethical and even emic empiricism, or in science it is called a post-positivistic paradigm which recognizes the existence of multiple realities which can only be studied through a holistic approach. This paradigm differs from positivists who see reality as a single reality. Holistic in the sense of exploring not only one external (sensory) aspect, but also nonsensory aspects and even transcendental aspects. Therefore, the right paradigm to study the settlement pattern of the Kaili Da'a community in Dombu Village is a Post Positivistic paradigm with a qualitative approach. Research on the Kaili Da'a community settlement



in Dombu Village requires direct involvement of researchers as the main instrument which in qualitative terms is referred to as the unification of the knowers and those who know, where researchers can explore the Kaili Da'a sub-ethnic community with their socio-cultural activities as the background of the artifact products in the form of settlement patterns.

### 2.1. Literature Review

Rapoport (1969) [3], professor of the architecture department at the Swiss Federal Institute of Technology, concluded that architecture (settlement) is an expression of social, cultural and religious aspects while still considering the economic aspects of its inhabitants. In more detail about settlements, Prasetyanti in Antariksa (2011) interpreted that the elements forming settlement patterns included two categories. The first is the arrangement or configuration of the core elements that include houses, buildings, schools, offices including markets [8]. The second is a complementary configuration of the core components consisting of a road network, a yard (open space), as a source of livelihood for the residents. Based on this configuration, there are 6 (six) settlement patterns, namely: 1). Linear settlement pattern (elongated); 2). Parallel settlement pattern (linear two sides); 3). Cul de sac settlement pattern; 4). Centralized settlement patterns; 5). Curvalinier settlement patterns and 6). Centralized settlement pattern. Settlements have many distinctive forms according to the non-physical strengths that grow in the community, including in the form of a socio-cultural system, government, educational level and technology that will contribute to the physical environment [9]–[11]. According to Koentjaningrat (1985), housing and settlements (houses and their environment) as a form of physical culture (physical culture) are the result of a complex idea of a culture that is reflected in the pattern of social activities of the community. In line with the opinion of Rapoport, A. (1969) [3], that architecture is formed from community traditions (folk traditional), which is a building that directly reflects the community's culture, adopted values, habits and the desires of the community. Several studies on settlement patterns have been conducted previously, among others; Cultural Acculturation on Traditional Settlement Patterns in Gantarang Lalang Bata Village, Selayar Regency [12] which focuses on forms of cultural acculturation that affect the development of Gantarang Lalang Bata settlement patterns and finds that the Gantarang Lalang Bata settlement pattern forms associations between human elements and natural elements.

The quantitative approach is used in order to find out statistical data on the factors or variables that affect the pattern of settlement distribution in the study area. It is successful in finding that socio-economic and environmental characteristics significantly influence settlement patterns in the study area. The research team consisting of Sri Rum Giyarsih and Syarifah Aini Dalimunthe (2013) [13], conducted research on the Factors Affecting the Quality of Post-Earthquake Settlements in Pleret District, Bantul Regency, which aims to understand the factors that affect the quality of post-earthquake settlements in the study area. and found that the socio-economic status of the population had a role in influencing changes in the quality of settlements in Wonokromo Village. A research that focuses on traditional aspects has been conducted by Ahmet Eyiice (2012) with the topic "Interdependence of Traditional House Form and Settlement Pattern" [14] which is oriented towards deterministic culture and nature. Through a qualitative analysis, this research has succeeded in finding the interference of traditional house forms in settlements which is influenced by the mass configuration and the relationship between inner and outer space. Another influential aspect is the mass structure of the buildings in the settlement as the object of this research. The topic of the aspect of belief (religion) in relation to settlement patterns was raised as a study [15], [16] which aims to formulate the settlement patterns formed in Petungsewu Village, which are associated with aspects of population characteristics and uniqueness of belief through analysis. descriptive-qualitative, mental maps and behavior mapping. The research, entitled "Settlement Patterns in Petungsewu Village, Dau District, Malang Regency", found that the settlement patterns formed were an amalgamation of cluster and linear patterns, which were formed as a result of the interconnection between the various components of the longitudinal space types, real estate, panepen and pawns at various scales. linear orientation towards the West-for Mount Panderman-Srandil and the direction of the Qibla, as well as the existing hierarchy of spaces that places the house of the aboge character, the shelter room, the hedge and the field as the most important spaces forming the village spatial pattern. The results of Burhanuddin's research (2017) [17] found that the setting of the traditional Kaili settlement space in Kampung Lere was formed based on cultural strength, social stratification and area history, namely the value of a place related to the activities in it. As well as the availability of supporting facilities /

infrastructure such as Gampiri (food storage) and Masigi (mosque) as one unit (core space) as well as a spiritual space for settlers (the Kaili tribe) who do not change easily, social life always colors their lives when carrying out activities.

### 3. Results and Discussion

#### 3.1. Overview of the Research Area

Dombu Village as an administrative research location is in West Marawola District which covers 12 (twelve) villages namely Dombu Village (sub-district capital), Panesibaja, Ongulero, Wiapore, Soi, Wugaga, Taipanggape, Wayu, Matantimali, Lewara, Lemosiranindi and Wawujai. These villages can be reached by four-wheeled vehicles, except for a few villages that can only be accessed by using a wheeled vehicle including Panesibaja, Wugaga, and Lewara Villages. Geographically, West Marawola District is located at the foot of the Mount Gawalise and Matantimali ranges, so the road conditions that must be traversed are quite uphill and steep. This reality is based on the elevation of the subdistrict which is at an altitude of 150-1,350 mdpl, where Matantimali Village is at the lowest asl, which is 150 mdpl while Dombu Village is at the highest level, which is 1,350 mdpl (BPS Kecamatan Marawola Barat in Figures 2017). Geographical conditions with a cool climate, especially in the village of Dombu and its surroundings, allow the community to cultivate both vegetables and fruits. Likewise with natural vegetation that represents mountainous nature, especially spruce and pine. According to BPS data for 2017, the area of Dombu Village is 10.12 km<sup>2</sup> with a population of 719 people consisting of 351 men and 368 women. They are Kaili Ethnic Protestant Christians who are facilitated by a church building for worship activities under the Salvation Army Church Organization (BK). In addition to the village head, the community leadership structure also includes traditional leaders, elders / community leaders or religious leaders, so that in running the formal government village officials are also informally accompanied by elders. This distinctive government structure is inseparable from the life order and traditions and customs of the Da'a Ethnic which are still consistent with the rules and internal norms passed down from their ancestors from generation to generation (interview with the Village Head of Dombu, 2020).

Traditionally the leadership system or informal government of the Da'a tribe is divided into three parts (groups), namely:

- Madika or king (yellow group) is the top leader who is accompanied by the commander and advisor
- Advisors to the king (white class) are Madika's advisory group, apart from having certain advantages they also have supernatural powers
- The commander or guard of the Raja / Madika (red group) is a group that comes from the common people who have the strength and courage (interview with community leaders / traditional leaders, 2020).

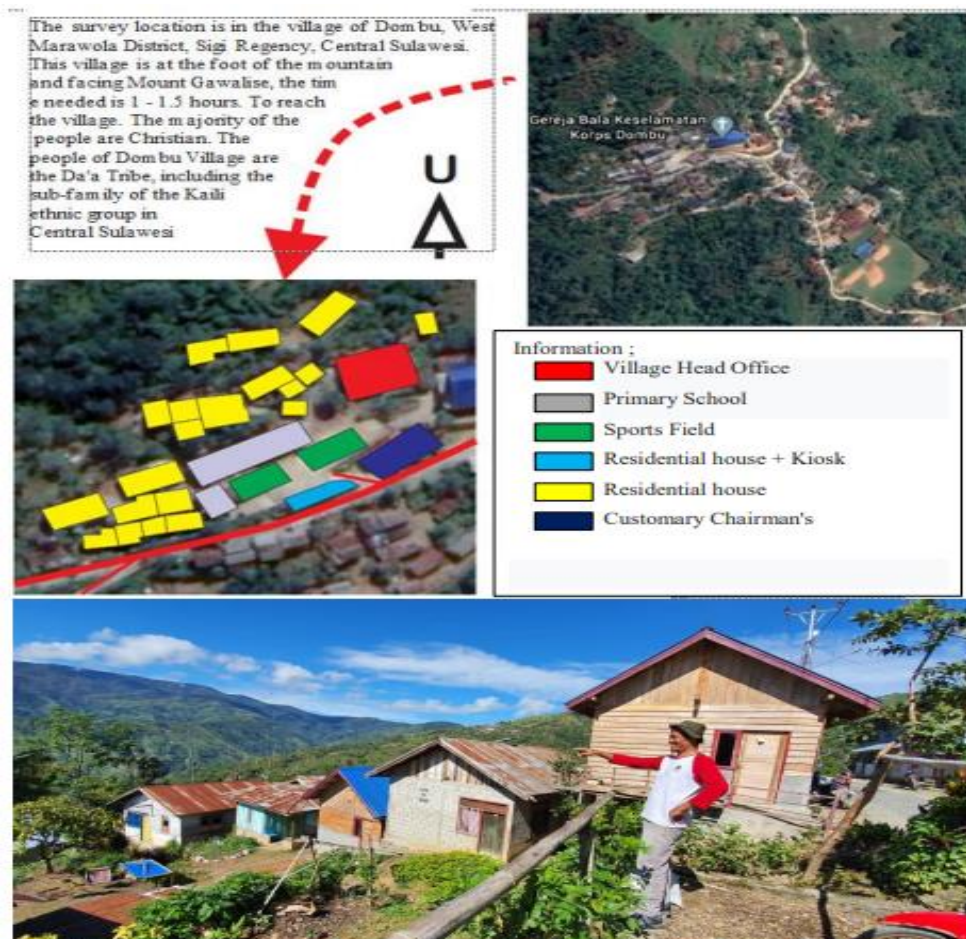
Thus the informal government system in the Da'a Ethnic life order is distributed based on the status or social strata prevailing in the community. The yellow group is the nobility as the highest strata, the middle group who has knowledge and status as well as ordinary people groups.

#### 3.2. Traditions and Culture of the Kaili Da'a Ethnic Community in Dombu Village

Dombu has a strategic status and position in the broad constellation of Ethnic Da'a members. This is proven through various activities that are constantly held and centered in Dombu Village both in traditional ceremonies which are held periodically and non-periodically in order to negotiate matters of an emergency nature in the context of wider and more special community problems. Dombu is believed to be the origin and origin of the Kaili Da'a ethnic group from the very beginning, so that some longstanding traditions and customs are still ongoing today. The tradition of thanksgiving after harvesting is carried out in two versions, namely the traditional version carried out in the area of the Bantaya location and the Samawi religious version (Protestant Christianity) which is held through worship rituals inside and outside the church building (yard). Likewise, the wedding procession is carried out according to custom (at the bride's residence or in the Bantaya), blessings in ecclesiastical institutions (church buildings) and civil registration. Givu (fines in the form of livestock) for

customary violations still strictly applies to people in Dombu Village, where decisions against customary violations are still carried out by custom through deliberations held in Bantaya as a representation of architectural artifacts from their ancestors before embracing the divine religion. Some of the traditional deliberation activities that are still carried out include discussing issues of murder, grief, marriage, rituals of thanksgiving for the harvest (movunja), ritual healing (mobilia). The custom molibu event is an activity that involves and gathers all elements and members of the Kaili Da'a tribe from within and from abroad, where in this activity the symbol of social status and the organizer of the activity is represented through the color of the clothes used. White clothes are worn by advisors to the implementation of Molibu activities, red clothes by prosecutors / customary police and yellow by decision or policy makers. The narrative of these facts and realities strengthens the argument that the traditions and procedures passed on by generations of the Kaili Da'a Tribe still exist and are implemented to this day.

Generational customs and traditions are also reflected in the order of the Da'a Ethnic settlements in Dombu. Several residential units have the same orientation and tend to be clustered in one cluster. Another phenomenon is that only a few housing units are not oriented towards the main road as in most residential houses, where the roadside footprint has strategic value so that the houses face the main road. Meanwhile, community houses in Dombu Village tend to be parallel or not perpendicular to the main road as one indication. Another indication is the location of the main door which is also not perpendicular to the direction of the main road but parallel. More complete information on the settlement of the Da'a tribe in Dombu as an object in this study can be seen in Fig. 3.



**Fig. 3.** Settlements of the Kaili Da'a Community in Dombu Village, West Marawola District (Segment 1)  
Sigi Regency, Central Sulawesi Source: Author's Documentation, 2020

Fig. 3 illustrates the configuration of residential settlements in segment 1. In addition to the house group, the village head office, primary school, open space in the form of a sports field are also found as a group of public facilities. The yellow color represents the existence of a people's house (Ethnis



Da'a); while the red line shows the main road as well as the main access to and from Dombu Village. Visually, the geometric shape of the buildings, both houses and public facilities, is located parallel to the main road and tends to be oriented towards the east. Several housing units whose main door is located in the east and the body of the house also extends to the east and west, including Mr. Andi's house (house number A4), primary school (building A6), house A7, and house A9; while house A2 extends east west even though the entrance is from the west as show in Fig. 4.

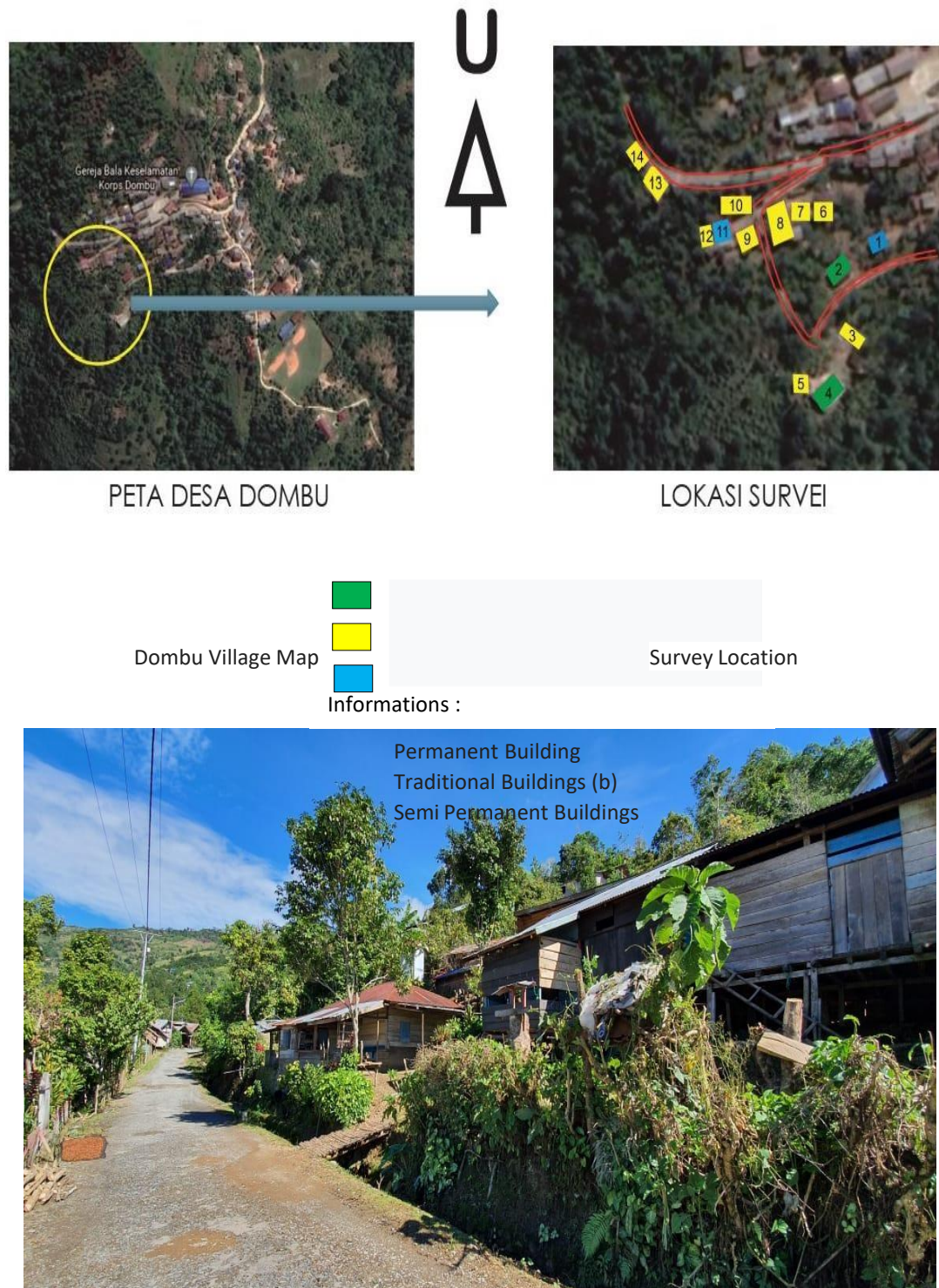


**Fig. 4.** Residential Configuration of Kaili Da'a Community in Dombu Village, West Marawola District (Segment 1) Sigi Regency, Central Sulawesi Source: Author's Documentation, 2020.

On the other hand, residential unit B1 is oriented to the southeast (bias  $45^\circ$  from the east cardinal direction). As for the houses B2, B3 and B4 respectively facing south and north, what is interesting is



that geometrically the residential buildings extend in an east-west direction. Segment two as as show in Fig. 5.

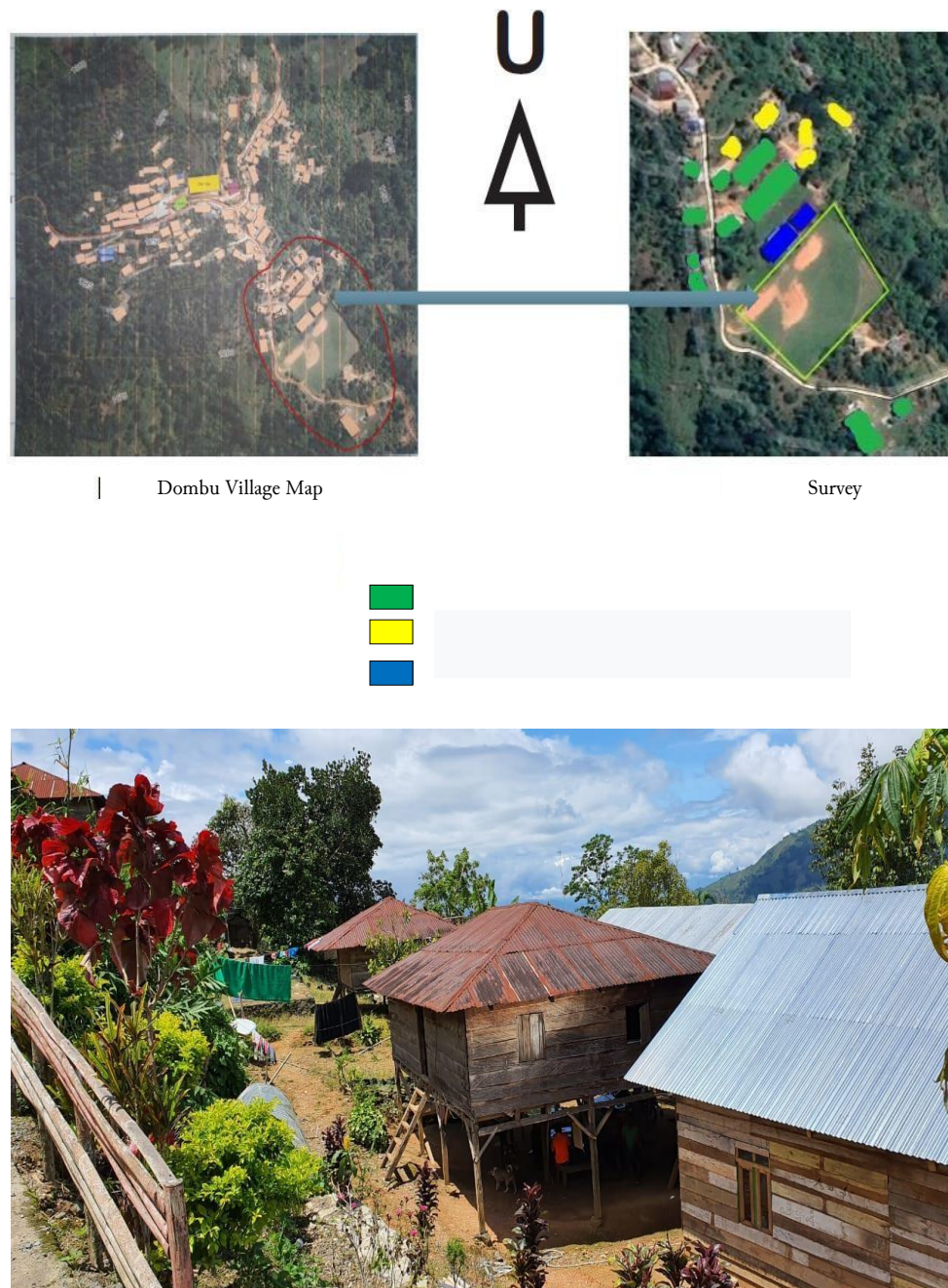


**Fig. 5.** Settlements of the Kaili Da'a Community in Dombu Village, West Marawola District (Segment 2) Sigi Regency, Central Sulawesi Source: Author's Documentation, 2020

The two segments of the Da'a Ethnic settlements in Dombu entirely cover the residences of local residents with a phenomenon that is not much different from the previous one segment from the perspective of hadap arrangement and occupancy groups. House number 1 which belongs to Mr. Ansef, a local farmer. Semi-permanent construction, the house faces east. In line with occupancy number one are houses 5, 10, 11, 12, while houses 4, 13 and house number 14 are oriented to the



northeast. The other houses generally face north including the bantaya and some of them to the south or southwest. The segment three as show in Fig. 6.



**Fig. 6.** Settlements of the Kaili Da'a Community in Dombu Village, West Marawola District (Segment 3)  
Sigi Regency, Central Sulawesi Source: Author's Documentation, 2020

### 3.3. Settlement Patterns of the Kaili Da'a Tribe

Based on the data and information obtained from the results of the field survey, segment 3 (three) is a group of houses or dwellings that are chronologically built in sequence 3 (three) after the occupancy segments 1 (one) and 2 (two). Residential segment 3 (three) includes 19 (nineteen) buildings. A total of 17 building units are used as residences for either non-permanent, semi-permanent or permanent construction, while the other 2 (two) building units are shared facilities. Visually and based on empirical facts, the orientation (orientation) of 17 residential units varies from north (1 unit), southeast (4 units), southwest (2 units), west (1 unit), and northeast (7 units). ). Thus, sequentially, the number of houses facing the northeast is more dominant, followed by southeast,

southwest and west. What is interesting is that the houses facing the northeast and southeast are still related to the east.

Architectural achievements are not only at a measurable level of taste through visualization of forms, but can further be interpreted through an appreciation that is affiliated with the cosmos and human religious appreciation [18]. This academic statement can be referred to to review and clarify the empirical facts about community settlements in Dombu, which are mostly not oriented towards the main road as is usual for houses in urban areas, but generally face east or do not deviate far from this direction, such as the northeast or southeast. East, northeast and southeast still appear to be a cluster in a gradient over the cardinal directions.

Extracting information through interviews with local traditional leaders, it was obtained information that the orientation of the local community houses was Mount Gawalise, as part of a wider local settlement environment, where the foot of the mountain functioned as the residence of the Kaili Da'a ethnic group. Through tracing and mapping, the results show that Mount Gawalise is located to the east of the settlement area.

In the context of cosmology [19] argue that in particular, houses and community settlement patterns in certain traditions are symbols of the universe. Mount Gawalise has a special meaning for the surrounding community, especially for the Kaili Da'a ethnic group who live at the foot of the mountain. Mount Gawalise becomes special as a representation of the universe. Mount Gawalise implies the meaning of a place and space which is responded attractively and emotionally by the surrounding community, especially the Kaili Da'a ethnic group.

The deep meaning of the existence of Mount Gawalise is manifested through culture, especially in settlement structures as a physical form of culture. The physical form of the Kaili Da'a community culture is an architectural work that has been passed down from generation to generation as an agreement, an unwritten commitment which then acts as a communally adhered norm. Cultural activities that have been described above are part and second value in the cultural context which are then covered and accommodated in a space and place or in the form of a building; including housing, bantara and other cultural facilities in the life order of the Kaili Da'a people as initiators, owners and users.

The residential group in the form of clusters recorded in the Kaili Da'a community settlements is not an arrangement regulated through laws or regulations related to the development and development of housing / settlements which are generally enforced throughout the Territory of the Republic of Indonesia, but are born and organized through commitment that is not written or collective agreement that applies normatively in their internal groups. Local settlement patterns do not follow the main road (linear) as access and connection between sub-regions, but in groups (clusters). It was the groups of residential buildings that formed new infrastructure, especially neighborhood roads, which were generally perpendicular to the main roads built by the local government.

Classifies the kinship system into three categories [20], namely (a) relatives of blood relations; (b) relatives of the result of marriage, and (c) relatives of the offspring. Referring to the results of the review with traditional leaders and the Head of Dombu Village, the residential group that gave birth to community settlement patterns in Dombu is based on a kinship system, which in this case is the nuclear family (family) and first generation children and grandchildren as land owners, in which the house pattern is regulated from north to south, facing each other on the east and west. Thus the order of the Da'a Ethnic settlement patterns in Dombu is formed by factors of relatives or blood relations, categories 1 (one) and 3 (three) from the results of the Levi Strauss categorization.

#### 4. Conclusion

The settlement pattern of the community or ethnic Kaili Da'a in Dombu Village is based on an orientation towards the east as part of the tradition and culture that has been passed down from generation to generation. Settlement arrangements and facing towards the east are the implementation of the cosmos concept which places nature (macrocosm) as part of human life and dwellings (settlements) as a microcosm (small nature); macrocosmic representation. The concept of life which has implications for the order and pattern of settlements is a necessity that has traditionally been passed from generation to generation. Culture and kinship traditions that are well preserved to this day also

underlie settlement patterns that tend to be clustered (cluster). The occupancy groups are based on kinship factors in the context of heredity or blood relations. Factors Shaping Kaili Da'a Settlement Patterns in Dombu Village, West Marawola District, Sigi District, Central Sulawesi as show in Fig. 7.

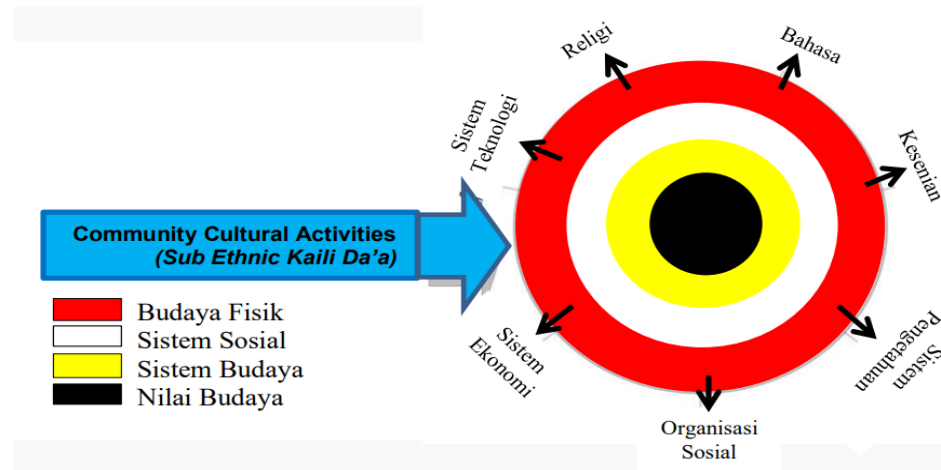


Fig. 7. Factors Shaping Kaili Da'a Settlement Patterns in Dombu Village, West Marawola District, Sigi District, Central Sulawesi Source; Author's Analysis, 2020

### Declarations

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### References

- [1] J. Panthi, S. Aryal, P. Dahal, P. Bhandari, N. Y. Krakauer, and V. P. Pandey, "Livelihood vulnerability approach to assessing climate change impacts on mixed agro-livestock smallholders around the Gandaki River Basin in Nepal," *Reg. Environ. Chang.*, vol. 16, no. 4, pp. 1121–1132, Apr. 2016, doi: [10.1007/s10113-015-0833-y](https://doi.org/10.1007/s10113-015-0833-y).
- [2] C. A. Doxiadis, "Ekistics, the science of human settlements," *Discuss. Ekistics Nature, Man, Shells, Soc. Networks. Summ. Athens Ekistics Mon. 1963-1971*, vol. 33, no. 197, pp. 237–247, 1972. [Online]. Available at: <https://www.jstor.org/stable/43621696>.
- [3] R. D. Jones, "Folk Architecture: House Form And Culture . Amos Rapoport.," *Science (80-. )*, vol. 167, no. 3916, pp. 274–275, Jan. 1970, doi: [10.1126/science.167.3916.274](https://doi.org/10.1126/science.167.3916.274).
- [4] D. Sumintardja, *Compendium of architectural history*. Yayasan Lembaga Penyelidikan Masalah Bangunan, p. 217, 1981. [Online]. Available at: <https://opac.perpusnas.go.id/DetailOpac.aspx?id=894828>.
- [5] A. Ashadi, "Positioning Architecture In Culture," *Dimens. (Journal Archit. Built Environ.)*, vol. 47, no. 1, pp. 27–34, Jun. 2021, doi: [10.9744/dimensi.47.1.27-34](https://doi.org/10.9744/dimensi.47.1.27-34).
- [6] G. G. Abdel-Azim and K. A.-A. Osman, "The importance of cultural dimensions in the design process of the vernacular societies," *Ain Shams Eng. J.*, vol. 9, no. 4, pp. 2755–2765, Dec. 2018, doi: [10.1016/j.asej.2017.09.005](https://doi.org/10.1016/j.asej.2017.09.005).
- [7] Koentjaraningrat, *Introduction to anthropology*, 3rd ed. Jakarta: Rineka Cipta, p. 389, 1990. [Online]. Available at: <https://opac.perpusnas.go.id/DetailOpac.aspx?id=566808>.
- [8] S. Brege, L. Stehn, and T. Nord, "Business models in industrialized building of multi-storey houses," *Constr. Manag. Econ.*, vol. 32, no. 1–2, pp. 208–226, Feb. 2014, doi: [10.1080/01446193.2013.840734](https://doi.org/10.1080/01446193.2013.840734).



- [9] N. Z. Harun, N. Jaffar, and M. Mansor, "The Contributions Of Public Space To The Social Sustainability Of Traditional Settlements," *Plan. MALAYSIA*, vol. 19, no. 5, pp. 192–205, Dec. 2021, doi: [10.21837/pm.v19i19.1071](https://doi.org/10.21837/pm.v19i19.1071).
- [10] B. O. Y. Marpaung, "Socio-Cultural Impacts in the Formation of Urban Village," *IOP Conf. Ser. Mater. Sci. Eng.*, vol. 180, no. 1, p. 012083, Mar. 2017, doi: [10.1088/1757-899X/180/1/012083](https://doi.org/10.1088/1757-899X/180/1/012083).
- [11] V. T. Woy, R. R. Tobing, and U. Siahaan, "Adaptation local ethnic and inherited ethnic on settlements architecture in Mopugad village, north Sulawesi," *Int. J. Eng. Res. Technol.*, vol. 11, no. 6, pp. 963–986, 2018, [Online]. Available at: [https://d1wqtxts1xzle7.cloudfront.net/82600353/ijertv11n6\\_10-](https://d1wqtxts1xzle7.cloudfront.net/82600353/ijertv11n6_10-).
- [12] W. Sahabuddin and F. Surur, "Cultural Acculturation in Traditional Settlement Patterns in Gantarang Lalang Bata Village, Selayar Islands Regency," *TATALOKA*, vol. 20, no. 4, pp. 373–383, Nov. 2018, doi: [10.14710/TATALOKA.20.4.373-383](https://doi.org/10.14710/TATALOKA.20.4.373-383).
- [13] F.-F. Yang *et al.*, "Factors that Influence the Quality of Post-Earthquake Settlements in Pleret District, Bantul Regency," *TATALOKA*, vol. 15, no. 1, pp. 28–38, Feb. 2013, doi: [10.14710/TATALOKA.15.1.28-38](https://doi.org/10.14710/TATALOKA.15.1.28-38).
- [14] A. Eyüce, "Interdependence of Traditional House Form and Settlement Pattern," *Intercult. Underst.*, vol. 2, pp. 17–24, Mar. 2012. [Online]. Available at: <https://cir.nii.ac.jp/crid/1390853649890285312>.
- [15] E. B. S, A. Antariksa, and S. Surjono, "Settlement Pattern in Petungsewu Village, Dau District, Malang Regency," *J. Tata Kota dan Drh.*, vol. 4, no. 2, pp. 101–110, 2012. Available at: <https://tatakota.ub.ac.id/index.php/tatakota/article/view/143>.
- [16] F. Bowie, "Anthropology of Religion," in *The Wiley Blackwell Companion to the Study of Religion*, Wiley, 2021, pp. 1–24, doi: [10.1002/9781119092797.ch1](https://doi.org/10.1002/9781119092797.ch1).
- [17] Burhanuddin, B. Setioko, and A. Suprpti, "Banua oge (souraja) as the basis of the establishment of the settlement/living space setting of 'to-kaili' tribe," *Int. J. Dev. Res.*, vol. 7, p. 12, 2017, 2023. [Online]. Available at: <https://www.journalijdr.com/banua-oge-souraja-basis-establishment-settlementliving-space-setting--kaili-tribe>.
- [18] Y. Mangunwijaya, *An Introduction to the Cultural Science of Architectural Forms, Its Philosophical Joints and Practical Examples*. Jakarta: Gramedia, p. 469, 2009. [Online]. Available at: <https://gpu.id/book/82627/pengantar-ke-ilmu-budaya-bentuk-arsitektur-sendi-sendi-filsafatnya-beserta-contoh-contoh-praktis>.
- [19] R. Dayaratne, "Environment- behavior research and the practice of architecture: paradigms and paradoxes," *Built-Environment Sri Lanka*, vol. 3, no. 1, p. 38, Feb. 2006, doi: [10.4038/BESL.V3I1.7640](https://doi.org/10.4038/BESL.V3I1.7640).
- [20] E. H. Balai *et al.*, "The Kinship System of Kluet Etnics In South Aceh," *Widyariset*, vol. 14, no. 1, pp. 123–131, Apr. 2011. [Online]. Available at: <https://widyariset.pusbindiklat.lipi.go.id/index.php/widyariset/article/view/398>.