

Dynamics of Form and the Meanings of Settlement Architecture in the Pasunga Village, Central Sumba, Indonesia

Amos Setiadi* & Aryanto Lewen

Department of Architecture, Universitas Atma Jaya Yogyakarta,
Indonesia

Corresponding author: amos.setiadi@uajy.ac.id

Abstract

Central Sumba is one of the regencies with cultural tourism potential supported by traditions, customs, and architecture. The Pasunga village community in Central Sumba has a tradition passed down through generations. Furthermore, tourism activities in this village affect the local settlement architecture concerning the provision of tourist facilities.

This study analyzes the dynamics of change and the potentials of sustaining settlement architecture in the Pasunga Village. The objective is to identify architectural elements that have changed and survived the influx of tourism activities.

The study used qualitative methods and offered a descriptive analysis. The results show that the changes to the settlement architecture in Pasunga occur both inside and the outside of the building. The outdoor spaces have additional supporting facilities for tourist activities. Changes inside the buildings occur in the front in order to create a modern appearance. However, the middle parts and the rear of the buildings are kept unchanged.

Keywords: village, traditional, dynamics, change, survival, Pasunga village.

Introduction

A tourist destination manages and creates a tourist attraction (Law of the Republic of Indonesia number 10 of 2009). Tourist objects and attractions consist of a) tourist objects and attractions as God's creations; and b) tourist objects and attractions as human creations (Arimbawa, 2010). The traditional village as a tourism village is related to environmental conservation, local community benefits (welfare), and socio-cultural aspects. The issue of architectural conservation in the traditional villages is essential because tourism activities in the traditional villages are an indication of globalization which encourages changes in the local economic, social, cultural, and architectural order. Localities in the traditional villages are gradually changing (dynamics) due to increased tourism activity—for example, the change process from an agricultural society to a non-agricultural society. The change occurs because the society is open more to global culture (Setyadi, 2007).

The change process is found in traditional villages and designated tourist destinations because the development of the tourism sector is relatively rapid. Life in the village, which was initially traditional, began to be marginalized by modern (global) life. Research conducted by Eldemery shows that globalization can eliminate local (ethnic) architectural identities, as in the contemporary Arab architecture (Eldemery, 2009). Another problem from the spatial aspect is the spatial polarization of tourist villages. Investment growth in the traditional villages also

encourages spatial transformations. It was found that the growth of private investment, location, transportation, natural resources, development policies, and superior human resources are the most critical factors that drive spatial transformation (Yan, 2018).

This research takes the case of the Pasunga village in Central Sumba, Indonesia, with the following considerations: a) The number of tourists has increased; b) Central Sumba has the potential and unique culture to become a tourist attraction; c) Kampung Pasunga is a traditional settlement that has a distinctive local culture and architecture, but the development of tourism activities has resulted in additional facilities for tourists and changes in the residential spaces.

The Research Problem

The number of visits to Pasunga during the traditional ceremonies has increased since the village was designated as a tourist destination. Domestic and foreign tourist activities require supporting facilities built by the government and the community independently. These facilities include parking lots for tourist vehicles, gazebos, souvenir kiosks, toilets, fences and gates. The addition of tourism support facilities also affects the Pasunga village layout form. Therefore, this study aims to examine the dynamics of the form and the architectural meanings of the settlements caused by the tourist activities in the Pasunga village.

Review of Literature

The potential of tourism in the Central Sumba Regency has good prospects (Ramone, 2015). The local culture of the people is based on the philosophy of *maringi* life, which means living harmoniously with the environment. Furthermore, kinship patterns underlie relations in every social activity. Community activities include weddings and burial ceremonies, cultivating rice fields, as well as building and repairing houses. Each traditional ceremony has a different process and symbol. In line with this, Susanti (2016) says that every culture has a different process based on the place.

In the *Marapu* tradition, the Central Sumba community understands that housing is a basic need. The traditional house is the main place where various social activities are performed. The house is the starting and ending place of their life cycle according to the central Sumba custom (Neonbasu, 2016). Its architecture includes traditional houses, megalithic tombstones, monuments and village layouts. The strong traditions among the indigenous village communities maintain sustainable settlement architecture. Furthermore, the building shape has an equestrian tradition that affects the Central Sumba community, leading to the creation of a stilt house. The height of the stage in the houses is adjusted to the horse's back or the equivalent of an adult's shoulder height. The shape of the stilt houses causes it to be known as a tropical earthquake-resistant building (Kusumawati, 2007).

The arrangement of the buildings forms a unique pattern, adapting to security conditions, community social cohesiveness, available materials, and the technologies. This arrangement based on the traditions communicates messages, reflecting the relationship between residents and their ancestors. *Marapu* is the original belief system of the Central Sumba community that ancestral spirits still live with the Gods. People believe that they could communicate with ancestral spirits to ask for protection and blessings.

The *Marapu* worship tradition is performed in the traditional house known as *mata marapu/penakabokul*. The worship room is located in the front corner of the house opposite the entrance. The main pillar of the house is used as a medium for communicating with *Marapu*. According to Geria (2014), *marapu* is based on the worship of ancestral spirits as a link between the living and the Gods. *Marapu* adherents believe that certain Gods live around them and that the ancestral spirits still reside together. Other beliefs include traditional rituals such as stone grave ceremonies and the *Pasola*, meaning war games by riding and throwing javelins (Solihin, 2013).

The Sumba community's worldview is the legacy of their ancestors that came from the megalithic period. This is a stone used as one of the dominant media in people's lives and

beliefs. Stone is used as a burial place for the corpses placed on the tombstones resembling a *dolmen* or *menhir*. Furthermore, the tombstone is arranged upright with various shapes, sizes, and ornaments according to the family's social status. Stone is also used as a material for making *muricana* or village symbol statues and fence materials.

In realizing the worldview, the Central Sumba community creates symbols as a medium of communication to convey messages verbally through literature and spells and physically by building materials and shapes. The most popular verbal symbol often read during the traditional ceremonies is a poem about the origins of the people. People believe that the world is divided into three parts, a) the upper world is a place for Gods and ancestral spirits, b) the middle world is for human life, and c) the underworld is for animals to live. This belief is embodied in the structure of the traditional house, where a) the roof (*uma deta*) represents the upper world; b) the inside of the house (*uma bei*) symbolizes the place of life; and c) the part under the house (*kali kambunga*) is a place for the livestock.

The upper world is divided into seven layers manifested through seven bonds on the roof structure (*uma deta*). The world of human life is divided into six layers realized through the layout of the traditional house (*uma*), where (1) *uma dolo* is a place to store superior seeds and food ingredients; (2) *pedambaho* is an attic above the fire rack; (3) *pedalolo* is an attic where daily food is stored; (4) *katendeng* is a place to sit and sleep; (5) *tabolo* is a meeting hall, and (6) *katonga tana* is the footrest before entering the house.

A traditional village comprises several houses belonging to the same family group (*kabisu*) from the patriarchal line. The houses are arranged to form the letter U with one entrance (*bi'na bakul*). In front of the house are megalithic tombstones in the middle of the village (Department of Culture and Tourism, 2016). Settlements with megalithic traditions are always associated with stone tombs and *menhir*. This relates to the conception of religion as an ancestral inheritance that must be upheld (Handini, 2019). The community's treatment of the ancestors shows the connection and communication between the living inhabitants and the supernatural forces (Elissa, 2020).

The traditional village elements consist of fences, entrances, open areas, sacred spaces (*talora adung*), traditional houses, and tombstones. The open space is located in the middle of the village as a place for ritual activities (*talora adung*). Meanwhile, the back of the house is used as a cooking area. Livestock and food are placed under the house and above or in the attic, respectively. Residents receive guests on the front porch, which forms a stage (*baga*) (Kusumawati, 2007).

The upper part or attic is also a storage area for the sacred objects and a residence for the ancestral spirits. Ancestor worship activities through communication rituals with Marapu are performed in the attic, which also protects food from parasites. For the Central Sumba community, appreciating food ingredients means appreciating the giver of life. A fire pit under the attic reduces the moisture levels, while the heat and smoke help keep foodstuff from spoiling quickly. Moreover, wooden bracelets (*leli*) are attached to the house pillars in a circle to prevent rats from climbing into the food storage area above the attic.

The *halema* room is located on the right side of the house, functioning as a seat for guests during the traditional ceremonies. *Korong b'akul* is a parent's bedroom and a place to store valuables. Furthermore, *Korong ladu deta* is a boy's bedroom, while *Pinya Pa Otung (karab'uk)* is a men's stove (*tular moni*) and a women's stove (*tular bai*). *Korong lad'u wawa* is located at the back, serving as a bedroom for families and guests staying overnight. There is also *keri jialu*, a place to wash and store the kitchen utensils. Building materials are dominated by natural carved wooden pillars. The roof is made using reeds tied to bamboo and the walls are made of woven bamboo. The four main pillars are the core elements of Central Sumba architecture, while the main beam supports the attic.

The Pasunga village has megalithic tombstones with carvings typical of Central Sumba. *Umbu puda* is the famous tombstone, whose top has two chambers where *Umbu puda* and *Umbu kadeli* reside. In front of the tombstone, there is a 3-meter-high rectangular stone called *kadu watu (menhir)* with an *ora tau* ornament. Moreover, the megalithic tombstone has statues

of two humans standing side by side to symbolize brotherhood and harmony (Ramone, 2011). The socio-cultural aspect is the attraction of Pasunga (Arisanti, 2021). However, a lack of accommodation facilities forces tourists to stay in other villages, such as Waikabubak or Tambolaka (Octarino, 2018).

Discussion on the change and sustainability of traditional village architectural forms is important. This is because changes in the community's economic status and the way of life affect their settlement architecture (Hamid, 2014). The transformation in Vernacular architecture causes a loss of knowledge, culture, and original social values (Jagatramka, 2021). Therefore, documentation and analysis of settlement forms and transformations would help restructure and revise design guidelines (Daketi, 2022). Modernization has caused changes in people's lifestyles, specifically in developing countries. It is important to understand the direction of growth to map the pattern of change based on clues for future trends (Kotharkar, 2012).

According to Dayaratne (2008), the emerging hybridity should be mapped, theorized, and articulated to focus on the metamorphosis occurring in contemporary settlements and their architecture.

The Research Method

This study uses a qualitative method. The qualitative method used site surveys, mapping and interviews. The study was conducted in Pasunga, Anakalang Village, Katikutana Sub-district, Central Sumba Regency, East Nusa Tenggara Province, Indonesia. Data were collected using observations. Mapping is done in the form of depicting village layouts and residential layouts. Interviews were conducted with community leaders and house owners. Questions were asked about the activities carried out in their homes and villages and what changes they had made to their homes and villages. Other data were obtained through physical mapping of the environment, traditional houses, and community social activities.

Direct observations involved the physical scope of the village, as well as the shape of the houses and traditions. Interviews were conducted to obtain information about the history, customs, and meanings of traditional houses. Furthermore, document surveys were employed to reflect deductively on the observation results. Village mapping was also performed to describe changes in the settlement layout in the Pasunga village after tourism was introduced.

Findings and Analysis

Observations of the Transformations

Pasunga is located in the Anakalang Village, Katikutana Sub-District, Central Sumba Regency, East Nusa Tenggara Province, Indonesia. The community comprises the indigenous people of Central Sumba who have lived in the village for generations. The houses of the Central Sumba community is likened to the human body, in which each element has a function. Every element of the house shows how culture manifests in the daily life. Furthermore, the traditional house symbolizes the relationships between people, livestock and the Nature (*Marapu*). A collection of traditional buildings form a village characterized by a megalithic tombstone located in front of the houses. The tombstone functions as a form of communication between the house occupants and their ancestral spirits. This belief exists because a house and tombstone are places to live during life (*Uma Maruk*) and after death (*Uma Mati*) respectively.

The Pasunga Village comprises a collection of buildings, including *Uma kamone*, a goat pen and *Uma bina A* located at the outer end of the village. *Uma bina B* is located at the far end before *Uma bina A*. *Uma kabulolo* is a house without a tower. *Uma padua* is in the middle and *Ana uma* is a small house. Furthermore, *Uma adung* is the main house. *Uma bakul* is big. *Uma binakabanga* is located at the back end of the village while *Uma labumudi* is under an orange tree, and *Uma galu* is a buffalo drum. The village also has *Uma Gudang*, a rice barn, and *Uma bina* located at the inner end of the village. There is *Uma bua*: a new house, *Uma kaitu*: a building for ritual ceremonies as well as *Uma majaga*, *Uma karoko*, *Uma kaba*, and a resident of *kabisu kaba*. Additionally, there is *Uma labupau* near a manga tree, *Uma leding* for

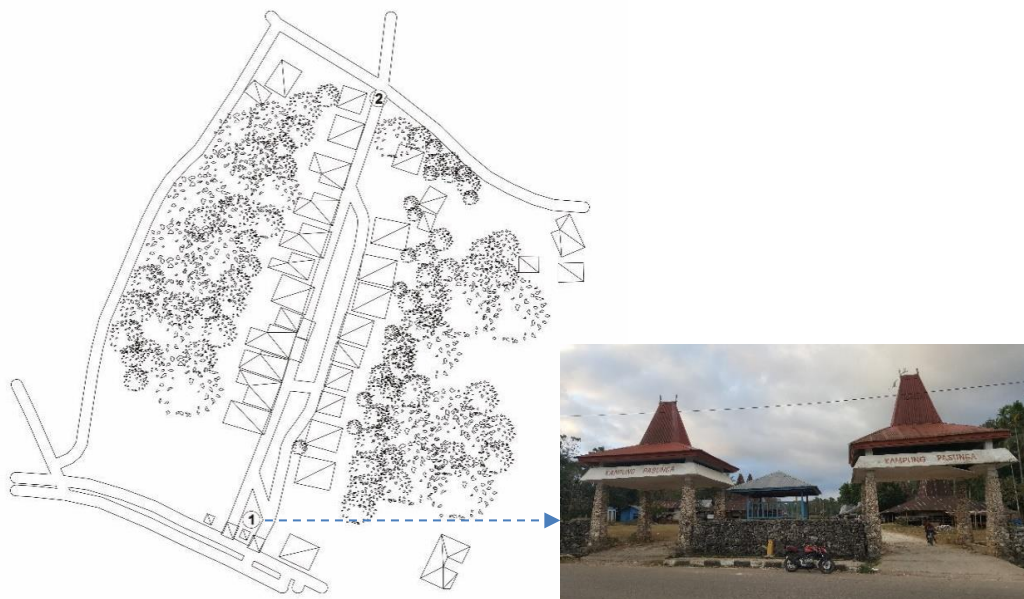
storing the water supply and *Uma labunaga*. Fig 1 shows the arrangement of the buildings in the Pasunga village.



Fig 1: Building Structure in the Pasunga Village

Source: Lewen, redrawn by Clara, 2022

The Pasunga Village community is adjusting to tourism activities developing in Central Sumba. These adjustments are seen in the construction of supporting facilities for tourism activities. The government has built a village gate at the front to adjust the position of the village, which is on the edge of the main road. However, the community uses the entrance that exit at the back of the village, as shown in the Fig. 2.



Notes: 1) entrance gate for tourists, 2) gate for entry and exit for the community

Fig 2: Accessibility conditions after the tourist gate construction

Source: Author, 2022

The spatial layout of the Pasunga Village has changed in response to the tourism developments. The changes include additional tourist vehicle parking areas, souvenirs, and culinary stalls, fences and village gates (Fig 3).



Fig 3: The condition after the construction of commercial facilities

Source: Author, 2022

Tourism support facilities are built at the front to ease tourist access. Meanwhile, the center which was originally a megalithic tombstone or sacred area (*talora adung*) has turned into a public area. It is an area for tourists to witness the traditional ceremonies, as illustrated in Fig. 4 and 5.



Fig 4: A megalithic tombstone/sacred area

Source: Author, 2022

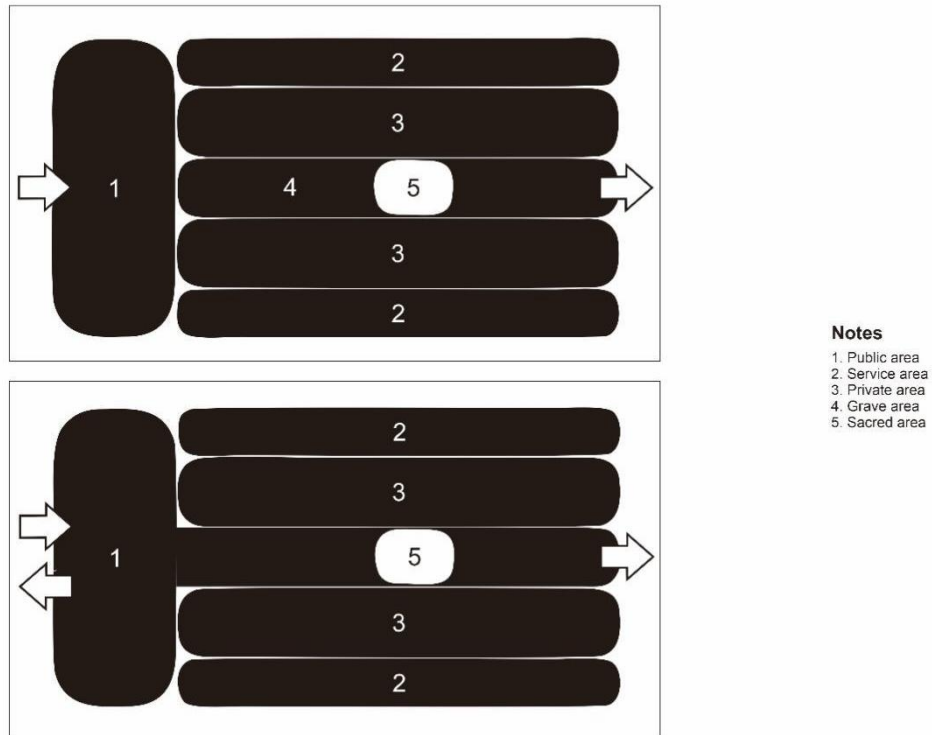


Fig 5: Survival of the sacral area (above: before, below: after)
Source: Author, 2022

Changes at the village scale occur in the form of the arrangement of buildings, whose layout was originally circular and faced each other. The shape of the buildings changes to a series and stretches from front to back, as depicted in the Fig. 6. However, tourism activities did not change the shape of the houses, except for the furnace. The furnace was located originally in the middle of the house but has been moved to the back. This is because the center of the house is used as a common room to gather for discussions about the customs. The details are shown in the Fig. 7.



Description: 1) fixed zone, 2) changing zone
Fig 6: Changes of the building layout
Source: Author, 2022



Fig 7: Conditions before (left) and after changing the spaces (right)

Source: Author, 2022

Building activities that originally used wood, bamboo and stone now use modern materials such as cement, concrete and zinc (Fig. 8). Changes to the buildings' exterior are seen on the terrace of the house (*helama*). The terrace was originally a living room but is currently used to receive tourists. Furthermore, new table and chair furniture have been added to welcome the tourists.



Fig 8: Conditions before (above) and after changing the materials (below)

Source: Author, 2022

Based on this discussion, the dynamics of change and sustainability include:

a) Changes in the village scope

The original building layout was circular and the houses faced each other, but the shape has changed to a row from the front to the back. The middle of the village initially had a *talora adung* made of sandalwood. However, there are additional tourist facilities, including parking areas, souvenirs, culinary stalls, fences, village gates and tourist circulation areas.

b) Changes to the building scope

The houses in the Pasunga village have undergone a functional change from *Marapu* customary beliefs as the original basis. It is currently affected by religion and the level of education of the community. Furthermore, the stove was initially in the middle of the house but has now been moved to the back. The middle section is used as a gathering space to discuss matters related to the customs. The interior of the house has been made originally using wood, bamboo, and stone. However, the construction now uses modern materials, such as cement, concrete, and zinc.

c) Changes to the building exterior

Changes in the shape of the buildings have occurred in the living rooms.

d) Resilience in the village scope

The megalithic tombstone is still maintained in the middle of the village as a form of communication with ancestral spirits.

e) Resilience in the building layout.

The house still functions as a private area with a sacred value, specifically at the top or the attic. The building's horizontal and vertical layout is still maintained. The horizontal space consists of *helama* (living room), *koru* (bedroom), *karabuk* (kitchen), and *baga kera jelu* (side terrace). The division of space is still in line with the main function of a household and social activities. Similarly, the vertical division of space is consistent with the hierarchy of spatial characteristics and life levels. There is a cattle pen and a front terrace (*helama*) at the bottom and in the middle, respectively as well as side terraces (*baga apes jelu*). A kitchen (*kerabuk*) and a bedroom (*koru*) are located above the terrace, while the upper part is still maintained as an attic, and a food and heritage storage. Circulation in the house is also still maintained.

f) Resilience to the building exterior.

The building elements being maintained are wooden pillars. Furthermore, the floors and walls made of wood or bamboo have been maintained.

Conclusion

Kampung Pasunga has a tradition passed down from generation to generation and has become a rule in the activities of the people of the Pasunga village. The changes and the persistence of atmospheric architecture in the Pasunga village are evidence of the dynamics of the form and meaning of atmospheric architecture in the Pasunga village. The conclusion is as follows:

1. Conclusion of village scale change dynamics:

- a) The building structure was initially circular, and the houses faced each other. However, now it has changed to a different form; a linear series.
- b) In the center of the village, there was originally a *talora adung* made of sandalwood, but at this time, it has changed.
- c) Another form of change is the addition of tourist facility buildings, namely: parking areas, souvenirs, culinary stalls, fences, village gates, and tourist circulation routes.

2. Conclusion of the dynamics of changes in the scale of the building.

- a) Changes in the meaning of residential houses are based initially on the *Marapu* traditional beliefs, because they were influenced by religion and the level of education of the community.
- b) Changing the stove's location in the residential house, which was initially in the middle of the house, is now moved to the back.
- c) The center of the house is used as a gathering room.

- d) Materials for the residential houses used local materials such as wood, bamboo, and stone. Currently, some are undergoing changes using modern materials (cement, concrete, zinc).
- e) Changes to the exterior of the building occur in the facade of the living room.

3. Resilience at the village scale.

The megalithic stone tomb in the middle of the village is maintained because it symbolizes communication with the ancestors.

4. Sustainability at the residential scale.

- a) Residential houses still have sacred values, especially at the top.
- b) Most of the spatial layout of the residential units is still maintained. The division of space horizontally consists of *helama* (living room), *koru* (bedroom), *karabuk* (kitchen), and *baga kera jelu* (side terrace). Space division is still by its primary function (household and social activities). The vertical division of space is still by the hierarchy of spatial characteristics and the levels of life. At the bottom is a cattle pen, and in the middle, there is a front terrace (*helama*) and side terraces (*Baga apes jelu*). Above the terrace is a kitchen (*kerabuk*) and bedroom (*koru*). At the same time, the upper part is maintained as an attic, food, and heritage storage. Circulation in the house is also still held.
- c) Resilience in the exterior form of the residential units, namely poles, floors, and walls are made of wood or bamboo.

Recommendations for Practitioners

The Pasunga village has a distinctive residential architecture that supports cultural tourism, necessitating its preservation. Tourism activities have caused changes to the scope of the village and the buildings. However, their meanings are still retained, specifically the sacred character in the middle of the village and the building's attic. This means that architectural practitioners should maintain the sacred meanings in the spatial arrangements of the Pasunga village and the building lofts as core settlement elements.

Recommendations for Further Studies

This analysis requires further studies because tourism is only one of the factors affecting the architectural dynamics of the settlements in the Pasunga village. The inevitable technological advances of globalization would impact the architecture of the village. Therefore, future studies should analyze the use of modern materials in buildings in the Pasunga village before the local materials become extinct.

References

- Arimbawa, W. (2010) Perpektif Ruang sebagai Entitas Budaya Lokal Orientasi Simbolik Ruang Masyarakat Tradisional Desa Adat, *Local Wisdom Jurnal Ilmiah Online*, 1, pp. 1–9
- Arisanti, N., Rema, N., Suarbhawa, G. M., & Hidayah, A. R. (2021) The Main Issues in Archaeological Resources Management Based on Indigenous Community in Central Sumba District, *Proceedings of the 9th Asbam International Conference, ASBAM 2021, Advances in Social Science, Education and Humanities Research*, Vol. 660, Atlantis Press.
- Daketi, S. & Srikonda, Ramesh (2022) House Forms, and Transformations: The case of rural Andhra Pradesh, India, *ISVS e-journal*, 9 (3), pp. 155-164.
- Dayaratne, R. (2008) “Vernacular in Transition: The Traditional and the Hybrid Architecture of Bahrain”, in *Proceedings of the 4th International Seminar on Vernacular Settlements*, pp. 1-10
- Dinas Kebudayaan dan Pariwisata Kabupaten Sumba Tengah. (2016) *Sumba Tengah an Enchanting Place to Go*. Sumba Tengah: Pemerintah Kabupaten

- Ellisa, E. & Azharia, G. (2020) The Ritual of KaSa'o and the Expression of Hospitality at the Traditional Village of Tololela, Flores, Indonesia, ISVS e-journal, 7 (2), pp. 47-58
- Eldemery, I. M. (2009) Globalization Challenges In Architecture, Journal of Architectural and Planning Research, 26 (4), pp. 343–354.
- Geria, I. M. (2014) Kearifan Ekologis Kampung Megalitik Rindi Praiyawang, Sumba Timur. Forum Arkeologi, 27 (2), pp. 89–98.
- Handini, R. (2019) The Pattern of Settlement of Anakalang Traditional Village: The Sustainability of Megalithic Culture in Central Sumba, Kalpataru, Majalah Arkeologi, 28 (2), pp. 33-44
- Hamid, G. M., & Eltahir, M. M. (2014) Transformation of Vernacular Housing by the Displaced: Greater Khartoum, Sudan, ISVS e-journal, 3 (1), pp. 30-41.
- Jagatramka, R., Kumar, A. & Pipralia, S. (2021) Transformations of Vernacular Architecture of India: Problems and Prospects, ISVS e-journal, 8 (1), pp. 23-32.
- Kotharkar, R., & Deshpande, R. (2012) A Comparative Study of Transformations in the Traditional House Form: The Case of Nagpur Region, India, ISVS e-journal, Vol. 2, no. 2, pp. 17-33
- Kusumawati, L. (2007) *Jejak Megalitik Arsitektur Tradisional Sumba*. Yogyakarta: Graha Ilmu.
- Neonbasu, G. (2016) *Akar Kehidupan Masyarakat Sumba (dalam cita rasa Marapu)*. Jakarta: Lapopp Press.
- Octarino, C. N, Wololi, R.Y., & Wicaksono, A. A. (2018) International Service Learning Program in Tourism Village Development Case Studies: Kampung Kabondok and Kampung Pasunga, Central Sumba, Indonesia, SHS Web of Conferences 59, 01007, APRCSL 2017
- Ramone, P. R. (2015) *Revitalisasi Desa Adat & Dampak Sosial Budaya Di Pulau Sumba*. Jakarta: Direktorat Kepercayaan Terhadap Tuhan YME dan Tradisi.
- Ramone, R. (2011) *Sumba Forgotten Island*. Netherlands: Bert Post, Noorden.
- Setyadi, Y. B. (2007) Pariwisata dan perubahan nilai-nilai sosial budaya berdasarkan lingkungan tradisi pada masyarakat Bali, Jurnal Penelitian Humaniora, 8 (2), pp. 97–109
- Solihin, L. (2013) Mengantar Arwah Jenazah ke Parai Marapu: Upacara Kubur Batu Pada Masyarakat Umalulu, Sumba Timur. Patanjala. Jurnal Penelitian Sejarah dan Budaya, 5 (2), pp. 232–247.
- Susanti, H., Wibowo, A., & Wilujeng, R. T. T. (2016) An Analysis Used In Belis Tradition in Anakalang, Middle Sumba. Jurnal Ilmiah Bahasa dan Sastra, 2 (2), pp. 108–117.
- UURI (2009) Undang-Undang Republik Indonesia Nomor 10 Tahun 2009 Tentang Kepariwisata Indonesia. Jakarta: Sekretariat Negara RI.
- Yan, S., & Chen, C. (2018) The Spatial Transformation of Traditional Rural Villages Driven by Private Investment in China's Developed Areas: The Case of Daxi Village, Anji County, Journal of Regional and City Planning, 29 (2), pp. 156–168