

Spatial production of a living sacred landscape in Sinai through Catholic-Malind Anim inculturation

Henry Soleman Raubaba^{1, 2*} , Suzanna Ratih Sari¹ , Wijayanti¹,
Agung Budi Sardjono¹ 

¹Department of Architecture, Faculty of Engineering, Universitas Diponegoro,
Prof. Soedarto Street, Tembalang, Semarang, Indonesia

²Department of Architecture, Faculty of Engineering, Universitas Musamus
Kamizaun Street, Merauke, Indonesia



ARTICLE INFO	ABSTRACT
<i>Article history:</i> Received April 20, 2026 Received in revised form May 25, 2026 Accepted July 18, 2026 Available online September 01, 2026 <i>Keywords:</i> Catholic-Malind Anim inculturation Community-based sacred space Living sacred landscape Ritual corridor Spatial production *Corresponding author: Henry Soleman Raubaba Department of Architecture, Faculty of Engineering, Universitas Musamus, Indonesia Email: henry_soleman@unmus.ac.id ORCID: https://orcid.org/0009-0003-2569-861X	<i>This research investigates the ways in which Catholic–Malind Anim inculturation contributes to the formation of a living sacred landscape in Sinai, South Papua. The study responds to the continuing lack of comprehensive understanding regarding the manner in which ritual movement, locally embedded material expressions, and communal engagement collectively generate sacred space as an evolving spatial system. Adopting a qualitative case-study approach with a spatial-ethnographic framework, the research explores the dynamic relationship between religious practice, cultural traditions, and spatial production. Data were obtained through participant observation, the examination of 15 in-depth interview records involving 17 informants, limited participatory mapping activities, and thematic-spatial analytical procedures. The results demonstrate that the sacred landscape of Sinai is constituted through a recurring ritual structure, processional pathways that connect village circulation networks, coastal territories, and riverine environments, as well as ritual focal points including gamav aha, gogo, and tiang kamb. Furthermore, inculturation practices are manifested through the incorporation of local language, symbolic representations, musical traditions, and indigenous material expressions into Catholic liturgical observances. These findings suggest that sacredness within Sinai is not derived exclusively from permanent or monumental religious artifacts; rather, it emerges through repetitive collective rituals and spatial inscriptions that are continuously maintained and reaffirmed by the local community. From an architectural perspective, the study interprets Sinai as a living sacred landscape whose spatial significance is produced and sustained through ongoing socio-cultural and religious practices. Moreover, the research positions inculturation as a spatial-production mechanism that strengthens spatial interconnectedness, reinforces cultural and ecological relationships, and enhances the legitimacy of community-based territorial identity.</i>

Introduction

The Sinai region, situated within Semangga District, Merauke Regency, South Papua, provides a compelling example of how religious space extends beyond the physical boundaries of permanent worship facilities. Rather than being confined solely to churches or designated sacred structures, religious space in this setting is continuously constituted through ritual movement, devotional focal points, communal gathering spaces, and the active engagement of the surrounding natural landscape in everyday expressions of faith. Within this cultural context, Catholic religious traditions intersect with the indigenous wisdom of the Malind Anim people, resulting in village pathways, traditional dwellings, coastal environments, river systems, and communal courtyards functioning not merely as passive settings for religious activities but as integral agents in the construction and experience of sacredness. From the perspectives of architecture and landscape studies, this phenomenon illustrates that the production of sacred space does not necessarily depend upon monumental architectural forms. Rather, sacred qualities may emerge through recurring social practices, symbolic systems, ritualized movement, and collective experiences that are

continuously reproduced across time (Tuan 1977; Lefebvre 1991; Tilley 1994). Within this framework, Sinai can be understood as a living sacred landscape, a sacred environment sustained through ritual cycles, the mobility of worshippers, and dynamic interactions among faith, culture, and the natural environment.

The designation “Sinai” itself embodies two significant dimensions that are fundamental to understanding the character of this region. At the local level, the term is derived from an acronym formed from Sirapu and Anasai, the two peripheral villages that establish the spatial orientation of the area. From a biblical perspective, the name evokes Mount Sinai, the sacred site where Moses received the Ten Commandments, thereby endowing the region with profound symbolic significance as a meaningful and spiritually resonant landscape for the local Catholic community (Raubaba et al. 2025). Consequently, Sinai operates not only as a geographical identifier but also as a cultural and religious signifier that merges collective local memory with the spiritual imagination of Catholic belief. This dual significance is particularly important because it frames the study area from the outset as a place already embedded with orientation, memory, and sacred associations rather than as a neutral geographic setting.

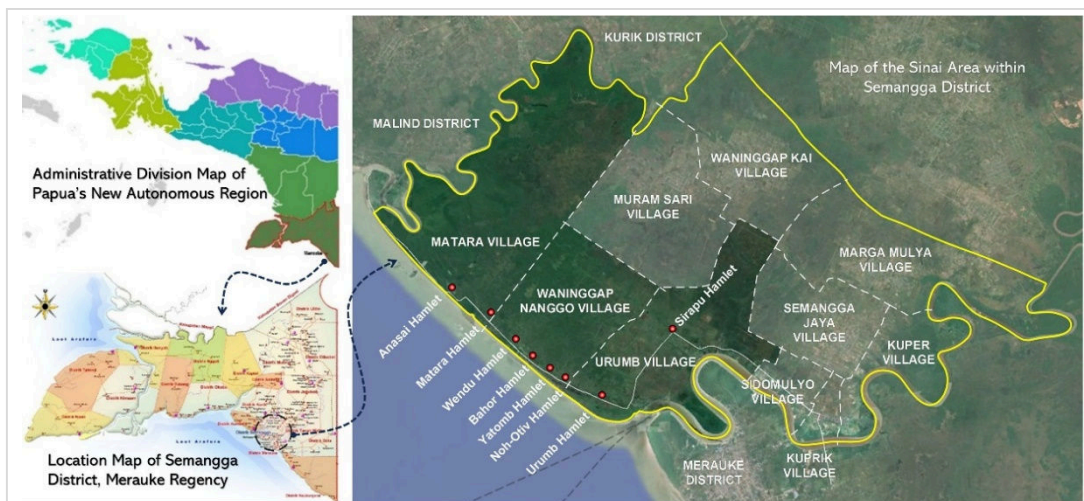


Figure 1. Location map of the Sinai area in South Papua showing villages and hamlets

Within Catholic theology and practice, the relationship between faith and local culture is inseparable from the process of inculturation. John Paul II (1999) emphasized that the encounter between Christianity and the diverse cultures of

Asia represents one of the central challenges of evangelization because the Gospel is always introduced into societies that possess established traditions, systems of meaning, and religious sensibilities. Consistent with this perspective,

Ballano (2020) argues that inculturation involves the integration of the Christian message into human culture through a process that requires a deep empirical understanding of local realities rather than superficial symbolic accommodation. Accordingly, inculturation encompasses far more than the translation of doctrinal teachings into culturally recognizable forms; it also concerns the ways in which faith is embodied, enacted, and interpreted within the lived experiences of a community. In the context of Sinai, the issue extends beyond the expression of Catholic symbolism through Malind Anim cultural forms. Equally important is the manner in which this encounter influences spatial practices, movement networks, stopping points, territorial demarcations, and the collective inscription of sacred meaning upon the landscape.

Numerous scholarly investigations have explored the interrelationships among sacred space, ritual practice, cultural identity, and local traditions, albeit from differing analytical perspectives. Research on sacred landscapes has demonstrated that rituals and sacred objects contribute significantly to the formation of place identity, social cohesion, and liminal experiences within culturally meaningful environments (Isnaeni et al. 2025; Yang, Liu, and Winterbottom 2023). Other studies have highlighted that architectural environments do not simply accommodate human activities but actively shape symbolic experiences, spatial hierarchies, and relationships among communities, traditions, and ecological settings (Flint Ashery and Stadler 2026; Vitasurya et al. 2026). Within the Indonesian context, the interaction between religious belief and local culture has been examined through investigations of church architecture and spatial organizations informed by indigenous values (Dwijendra 2019; Purbadi, MT, Djunaedi, and Sudaryono 2019). A particularly relevant example from eastern Indonesia is provided by Lake et al. (2020), whose research demonstrates that the public spaces of Lantoka undergo repeated transformations from profane environments into sacred settings during the *Semana Sancta* ritual, illustrating how ritual performance can generate sacred space within a Catholic cultural framework. Similarly, research conducted by Hematang in Makaling, South Papua, reveals that Malind settlement environments are structured not only through physical components but also through intangible dimensions, customary territorial boundaries, and

multifunctional spatial arrangements embedded in indigenous concepts such as *epe ndaet millah* and *otih ka kaleh wabla* (Hematang, Sastrosasmito, and Kurniawan 2025a; 2026). Nevertheless, these studies have not sufficiently explained how such indigenous spatial logics operate within a Catholic ritual network characterized by mobility, recurrence, and distribution across a living sacred landscape.

Against this background, the Sinai context assumes particular significance. Beyond demonstrating the symbolic integration of Catholicism and Malind Anim culture, the area reveals how village roads, coastal territories, river corridors, residential environments, and communal spaces are repeatedly transformed into sacred settings through processions, ritual pauses, spatial inscriptions, territorial regulations, and active community participation. Consequently, this article responds to a limitation within existing scholarship by examining Catholic–Malind Anim inculturation as a mechanism of spatial production operating within a living sacred landscape rather than merely as a form of symbolic adaptation expressed through architecture or liturgy. In response to this gap, the central research question guiding this study is as follows: How does Catholic–Malind Anim inculturation generate a living sacred landscape in Sinai through ritual structure, living ritual paths, ritual nodes, and inculturation practices?

In addressing this question, the study seeks to analyze the processes through which Catholic–Malind Anim inculturation contributes to the spatial production of a living sacred landscape in Sinai. More specifically, the research investigates how ritual structures, living ritual pathways, ritual nodes, and inculturated practices collectively configure an interconnected system of religious space throughout the Sinai region. By offering an architectural interpretation of Sinai as a living sacred landscape, this article conceptualizes Catholic–Malind Anim inculturation as a mechanism of spatial production. Furthermore, it contributes to broader architectural and landscape scholarship by demonstrating that the continuity and sustainability of religious space depend not solely upon physical form but also upon ritual persistence, communal legitimacy, and enduring cultural-ecological relationships that are continually reproduced and maintained by the community.

Methods

This research adopts a qualitative case-study approach grounded in a spatial-ethnographic perspective to investigate how ritual activities, collective experiences, and spatial arrangements contribute to the formation of the sacred landscape within the Sinai region. This methodological approach was selected because the study seeks to understand the interplay among cultural meanings, ritual performances, and everyday spatial practices, while acknowledging that the complete annual cycle of rituals could not be observed within a single period of fieldwork. Consequently, the research integrates direct field engagement, spatial interpretation, and triangulation across multiple data sources to develop a comprehensive understanding of the processes through which sacred landscape is spatially produced (Creswell and Poth 2016; Flint Ashery and Stadler 2026).

The investigation was conducted in the Sinai area of Semangga District, Merauke Regency, South Papua, with particular attention given to the settlement corridor and coastal landscape encompassing the villages of Urumb, Waninggap Nanggo, and Matara. This geographical focus was selected because the most intensive ritual activities occur within this zone, where a principal corridor physically and symbolically links villages, communal spaces, coastal environments, and river systems throughout the sequence of Catholic–Malind Anim ritual practices. The selection of the study site was further informed by preliminary findings that highlighted the significance of *gamav aha*, *gogo*, and processional pathways within the local ritual system (Raubaba et al. 2025). Accordingly, the scope of the research is confined to this specific area and is not intended to represent the broader spatial dynamics of Malind communities inhabiting other coastal regions.

Primary data were generated from 15 in-depth interview records involving a total of 17 participants, including two interviews conducted collectively. Informants were identified through purposive sampling based on their direct involvement in the organization, enactment, and interpretation of ritual space. Participants included priests, pastoral personnel, members of church councils, customary leaders, customary police (*adat* police), village administrators, Catholic youth representatives, elders, household

heads, and women. The number of interviews was determined according to the principle of data saturation, whereby additional interviews no longer yielded substantially new insights regarding categories of meaning, spatial configurations, or ritual functions (Miles, Huberman, and Saldana 2014; Hennink, Kaiser, and Marconi 2017).

Data collection proceeded in several stages according to opportunities for accessing major ritual events and observing significant spatial moments. The most intensive period of observation occurred during the Infant Jesus Procession on December 26, as this event enabled detailed examination of the movement of the sacred statue, the temporary transformation of domestic environments into sacred reception spaces, and the participation of community members along the village route. Supplementary observations were conducted during the Corpus Christi Procession throughout July and the Marian Procession throughout October, focusing specifically on ritual corridors, stopping points, symbolic-material components, and patterns of communal involvement. Ritual events such as the Kali Maro Festival, Dahun Anggai, and portions of other ceremonies that could not be directly observed were reconstructed through the triangulation of interview narratives, field notes, visual documentation, parish archival materials, and mapping exercises. This approach was adopted because ritual is understood in this study as a recurring performative practice through which spatial meanings are continually produced and reinforced (Grimes 2014).

Semi-structured, in-depth interviews were employed to investigate the meanings associated with route orientation, the functions of stopping spaces, territorial demarcation, symbolic-material elements including *mengga* (yellow coconut leaves), *kudla* (coconut-leaf fencing), and *tiang kamb* (forked ritual poles), as well as the relationships between ritual activity and coastal or riverine environments and broader interpretations of inculturation. Additional information was obtained through parish records, photographic documentation, and locally produced documents. To enhance the spatial dimension of the analysis, the study incorporated a limited participatory mapping process involving key informants. Printed satellite imagery derived from Google Earth served as the base map for mapping-oriented interviews, during which participants identified village boundaries, significant

locations, and ritual spaces. These spatial annotations were subsequently verified through selective field verification, while GPS coordinates were collected for selected public facilities and relevant *gamav aha* locations. The final representation of ritual routes was generated through the integration of manual annotations,

selected GPS data, direct observations, and explanatory accounts provided by informants (Brown and Kytä 2014; Corbett, Cochrane, and Zeid 2021; Yang, Liu, and Winterbottom 2023).

The overall research design and thematic-spatial analytical workflow are summarized in figure 2.

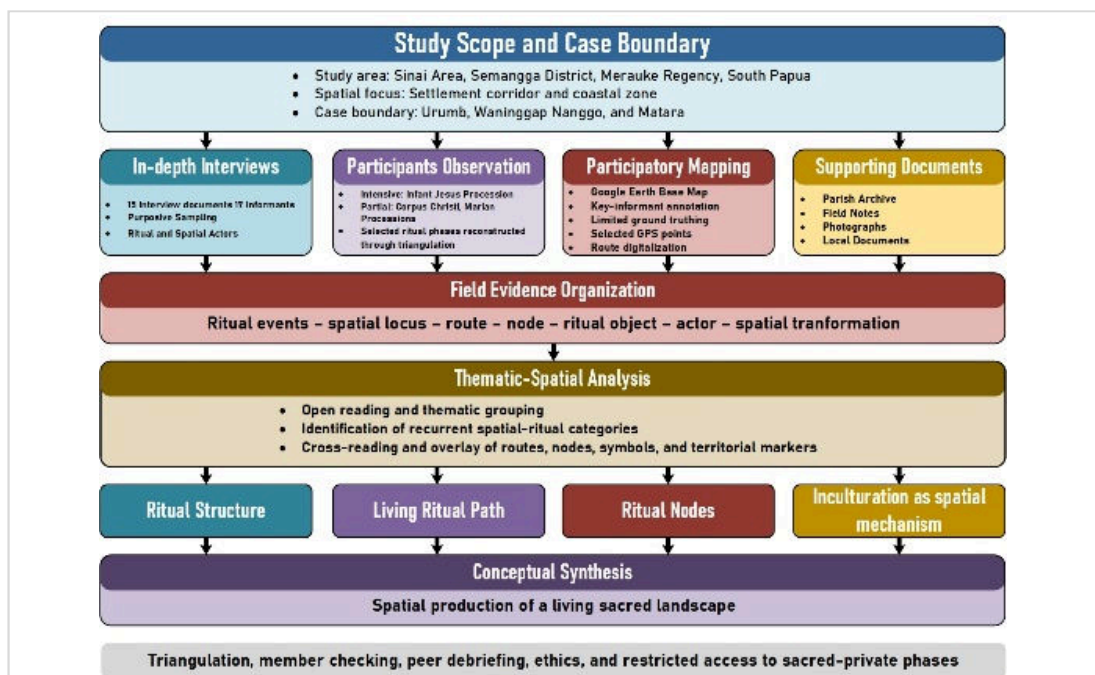


Figure 2. Research design and thematic-spatial analytical workflow of the Sinai study

The analytical process followed a phased thematic-spatial framework. Initially, all field materials were organized according to ritual events and associated spatial settings. The data were then subjected to open reading to identify preliminary categories, including departure points, route orientations, stopping nodes, ritual artifacts, participants, material markers, territorial boundaries, and transformations in spatial function. These categories were subsequently organized into four principal analytical domains: ritual structure, living ritual pathways, ritual nodes, and inculturation as a mechanism of spatial production. These domains were then examined through the integration of route documentation, digital cartography, GPS datasets, field observations, and informant narratives to explore how ritual practices generate spatial interconnectedness, territorial inscription, and the transformation of everyday environments into sacred settings (Braun and Clarke 2012; Nowell et al. 2017; Knigge and Cope 2006).

The credibility and trustworthiness of the findings were ensured through source and methodological triangulation, member-checking procedures involving key informants, and peer debriefing to evaluate the consistency and validity of interpretations (Lincoln and Guba 1985; Nowell et al. 2017). All stages of the research were conducted with the informed consent of participants and with authorization from customary authorities, church institutions, and local governmental bodies. Restricted access to internal and sacred phases of adat preparation was approached as an ethical consideration respecting community-defined sacred boundaries rather than merely as a methodological limitation (Israel and Hay 2006).

Results and discussion

Ritual system and spatial structure of Sinai

The findings indicate that religious activities within the Sinai region constitute a ritual system organized through both temporal and spatial dimensions. The five principal rituals, namely the Corpus Christi Procession, Dahun Anggai (Thanksgiving Offering Feast), the Kali Maro Festival, the Marian Procession, and the Infant Jesus Procession, demonstrate a relatively stable recurring configuration consisting of a point of origin, a processional route, a series of devotional

nodes, and a designated destination. This recurring structure suggests that sacredness within Sinai is not concentrated in a singular architectural object or religious building. Rather, sacred space emerges through collective movement that repeatedly links multiple locations into an integrated ritual landscape. From the perspective of sacred landscape theory, such a configuration demonstrates that sacred environments are produced through repetitive practices, social rhythms, and shared communal experiences rather than solely through the presence of monumental physical structures (Bell 1991; Hoondert and Post 2021; Liutikas 2025).

Table 1. Spatial-temporal structure of the principal rituals in Sinai

Ritual	Time	Spatial route/ setting	Key nodes/ elements	Main spatial role
Corpus Christi Procession	July	Yonggo - main village road - Karawes	monstrance, <i>gamav aha</i> , <i>gogo</i> , altar, <i>tiang kamb</i> , <i>mengga</i>	Main village axial corridor
Dahun Anggai	5 Sept	Sinai coastal area	<i>Tiang kamb</i> , <i>gogo</i> , <i>mengga</i>	Coastal thanksgiving setting
Kali Maro Festival	1-5 Oct.	Yonggo - Maro River - Tanjung Han estuary	Marian Statue, decorated boats, <i>gogo</i> , altar, <i>tiang kamb</i> , <i>mengga</i>	River-estuary ritual corridor
Marian Procession	6–31 Oct.	Tanjung Han estuary - Sinai coast - Doga	Marian Statue, <i>gogo</i> , altar, <i>tiang kamb</i> , <i>mengga</i> , <i>kudla</i>	Coastal devotional corridor
Infant Jesus Procession	26 Dec.	Three villages in Sinai - main village road - Ave Maria Garden	Infant Jesus Statue, <i>gamav aha</i> , altar, <i>gogo</i> , <i>tiang kamb</i> , <i>mengga</i>	Inter-village nativity route

As summarized in table 1, each ritual is characterized by a distinctive temporal schedule, spatial trajectory, symbolic components, and spatial function. The Corpus Christi Procession, for example, takes place throughout July and traverses the principal village corridor from Yonggo in Sirapu to Karawes in Anasai. Dahun Anggai is centered within the Sinai coastal landscape as a ritual of thanksgiving associated with agricultural harvests. The Kali Maro Festival and Marian Procession extend the ritual network toward riverine, estuarine, and shoreline environments, whereas the Infant Jesus Procession reconnects the three villages through the principal village corridor before culminating at Ave Maria Garden. Collectively, these observations demonstrate that ritual spaces are neither isolated nor randomly distributed; instead, they form an integrated and recurrent spatial system.

From an architectural standpoint, this finding is particularly significant because it reveals that the principal village road functions as more than a transportation corridor. Within the ritual

context, it operates as a sacred spatial axis linking villages, residences, communal gathering places, and devotional sites into a sequential processional experience. Field observations indicate that during the Corpus Christi Procession, the route originates at Yonggo in Sirapu Hamlet, serving as the eastern starting point, before proceeding along the village axis lined by residences and *gamav aha* nodes. Throughout this corridor, residential yards are meticulously cleaned and marked with *mengga*, signifying their readiness to receive blessings, while ritual fires are lit at *gamav aha* sites each afternoon. These practices transform the visual, sensory, and symbolic character of the route throughout the duration of the procession. Consequently, the ritual corridor is constituted not merely through movement but through a series of collective acts involving preparation, marking, and spatial activation.

Interview data further support this interpretation. One young participant described the procession as a moment when “God ... will come to our house,” while another explained that coconut leaves are installed “as a marker”

indicating that the household is prepared to receive the statue of Christ. Such testimonies suggest that community members perceive the ritual route not as an ordinary circulation pathway but as a sacred route of visitation that symbolically links individual households within a collective system of spiritual reception. Accordingly, the village road cannot be understood as a neutral infrastructural element. Rather, it is transformed into a devotional axis through which sacred presence travels from one domestic space to another, blurring yet simultaneously organizing the boundaries between public, domestic, and ritual space.

Additional field evidence indicates that the ritual system of Sinai is structured through two complementary spatial logics. The first is an axial-terrestrial logic, characterized by the use of the principal village road as the backbone of ritual activity, particularly during the Corpus Christi and Infant Jesus Processions. Within the analytical framework of this study, the route

extending from Sirapu to Anasai represents more than a transportation pathway; according to customary leaders, it is associated with an ancestral trajectory aligned with the movement of the sun from sunrise to sunset. The second is a littoral-riverine logic, wherein coastal zones, estuarine environments, and the Kali Maro River become active components of ritual practice, as observed during Dahun Anggai, the Kali Maro Festival, and the Marian Procession. Through this spatial logic, ritual movement extends beyond village territory into waterways and coastal landscapes, transforming rivers and shorelines from passive ecological settings into integral components of a collectively traversed sacred field. This interpretation aligns with studies that conceptualize sacred landscapes as products of the interaction among ritual practices, place-based experiences, and human-environment relationships (Yang, Liu, and Winterbottom 2023; Herrmann-Pillath 2024).



Figure 3. Spatial structure and procession routes in Sinai

Figure illustrates that the ritual practices in Sinai do not occur as isolated religious events; rather, they establish an integrated network of ritual corridors across the landscape. The figure indicates that processional trajectories are not concentrated around a single bounded sacred locus. Instead, they generate a spiritual spine that interconnects the three villages, the coastal

territory, and a series of devotional destinations within a unified landscape framework. Within this perspective, the processional route can be interpreted as a component of a living spatial system. This interpretation corresponds with the findings of Vitasurya et al. (2026), who demonstrate that sacred pathways within the Bayan ritual tradition function not only as

connectors between significant places but also as mediators of symbolic transitions from profane realms to sacred domains. In Sinai, however, the spatial configuration is more expansive because it integrates not only traditional dwellings and ritual stations, but also village roadways, coastal environments, river systems, and communal gathering spaces into a single interconnected sacred landscape.

Consequently, the ritual system of Sinai may be conceptualized as a dynamic and continually reproduced spatial structure. Sacredness within this setting is neither fixed nor exclusively anchored in church buildings or liturgical objects. Rather, it emerges through the repetitive enactment of ritual practices, the organization of movement along designated routes, territorial inscriptions, and the relational connectivity of collectively inhabited places. Within this framework, ritual structure functions not only to organize the sequence of religious activities but also to generate spatial order. Simultaneously, the living ritual path demonstrates how village roads, coastal zones, and riverine environments operate as enduring axes of spiritual movement that are repeatedly activated by community participation. It is through these processes that the empirical foundations of a living sacred landscape in Sinai become evident.

Ritual Nodes and inculturation practices

Whereas the preceding subsection examined the processional route in Sinai as a living spatial structure, the present discussion demonstrates that this route becomes intelligible as a sacred landscape through the presence of specific ritual nodes that anchor, signify, and animate it. Put differently, the ritual corridor does not operate merely as a linear trajectory of movement; rather, it consists of a sequence of spatial points that transform ordinary environments into places imbued with sacred intensity. In this context, the architectural setting functions not simply as a container of activities but as a symbolic medium through which ritual significance and cultural identity are continuously sustained. This interpretation is significant because, without such nodal elements, the processional routes of Sinai would be perceived merely as ordinary circulation paths rather than as components of a living sacred spatial system.

Field evidence identifies at least four recurring categories of ritual nodes that appear across multiple religious celebrations in Sinai. The first

category comprises domestic-communal nodes represented by *gamav aha*, the traditional Malind Anim house. Within ritual contexts, *gamav aha* serves as a prayer station, a reception space for sacred statues, and a temporary venue for Catholic ceremonial activities. Under these circumstances, the house is no longer understood solely as a residential structure; instead, it becomes an intersection where domestic life, collective memory, and sacred presence converge. Field observations indicate that during processional periods, the surroundings of the *gamav aha* are prepared not only through visual interventions such as the installation of *mengga* and the cleaning of the compound but also through atmospheric practices, including the daily lighting of ritual fires each afternoon. As explained by a church council member, the fire “must indeed be lit every afternoon” before the arrival of the Blessed Sacrament or sacred statues because it constitutes an established expression of ritual reverence toward space. Accordingly, *gamav aha* functions as a spatial node that links dwelling, ritual practice, and communal readiness to welcome the sacred. This interpretation aligns with the findings of [Raubaba et al. \(2025\)](#), who demonstrate that *gamav aha* can experience both architectural adaptation and an expansion of symbolic meaning when incorporated into Catholic ritual settings.

The second category consists of transitional nodes represented by *gogo*, a temporary ritual shelter that functions both as an altar and as a pause point within the processional sequence. Unlike *gamav aha*, which is more strongly associated with domestic and communal functions, *gogo* operates as an intermediary space. It serves as a location for rest, processional reorganization, collective prayer, and the marking of thresholds between everyday environments and spaces undergoing sacralization. This role becomes particularly evident during coastal rituals. Throughout the Kali Maro Festival and the Marian Procession, *gogo* structures are strategically positioned at critical tidal locations, functioning as temporary stations along beaches and estuarine environments. Observational data indicate that these locations serve as places where sacred statues are rested, communal prayers are conducted, ritual fires are maintained, and traditional dances continue throughout the night. Consequently, *gogo* fulfills more than a practical logistical function. It becomes a spatial device that regulates the rhythm of ritual movement and

renders shifts in spatial status perceptible. In doing so, it demonstrates that ritual journeys unfold through sequences of intensified spatial experiences rather than through uninterrupted linear movement.

The third category encompasses eco-cultural marking nodes expressed through *tiang kamb*, *mengga*, and, in particular contexts, *kudla*. At a visual level, these elements function as ritual markers. More fundamentally, however, they operate as mediating devices that connect Catholic ceremonial practices, agricultural offerings, territorial demarcation, and environmental relationships. *Tiang kamb* introduces both the symbolic dimension of offering and the vertical expression of ritual elevation. A customary leader explained that agricultural produce “must not touch the ground,” because produce remaining in contact with the earth is considered not yet ritually offered. This statement reveals that *kamb* functions not simply as a suspended support structure but as a transformative device that alters the ontological status of produce from ordinary material to sacred offering. Meanwhile, *mengga* serves as a marker of spatial preparedness and ritual atmosphere across house compounds, village roads, and coastal processional corridors. In coastal ceremonies, *kudla* additionally functions as a boundary-making element that distinguishes sacred territory from profane space while simultaneously providing protection from strong sea winds. This dual function, combining symbolic demarcation with practical utility, corresponds with the findings of Hematang, Sastrosasmito, and Kurniawan (2025) who identify coastal Malind vernacular elements as spatial devices that integrate functional and spiritual dimensions. Within broader sacred landscape scholarship, this interpretation is also consistent with Yang, Liu, and Winterbottom (2023), who argue that material markers and locally embedded elements can intensify sacred experience while strengthening human attachment to place.

The fourth category consists of mobile liturgical nodes, including the statue of the Virgin Mary, the Infant Jesus statue, the Blessed Sacrament, temporary altars, candles, crosses, and other devotional artifacts that provide liturgical focal points throughout the processional journey. Owing to their mobility, these elements do not confine sacredness to a single location; rather, they transport and disseminate sacred presence

across an interconnected network of places. During the Kali Maro Festival, for instance, the large statue of the Virgin Mary is initially enthroned on land before being carried to riverine and coastal settings, accompanied by decorated boats, *kandara*, ritual fire, and customary escorts. In this context, the liturgical object serves not only as the center of devotion but also as a catalyst for spatial transformation across aquatic and shoreline environments. *Adat* police accompany the statue while simultaneously protecting its sacred radius from inappropriate intervention by participants. Consequently, ritual nodes in Sinai possess a distinctive characteristic: they are neither necessarily permanent nor exclusively architectural structures. Rather, they emerge through the interaction of devotional objects, ritual actions, and strategically designated stopping points. From this perspective, ritual nodes may be interpreted as forms of micro-architecture through which the sacred landscape becomes perceptible at the scales of pause, atmosphere, encounter, and embodied experience.

However, these ritual nodes do not function in a neutral or value-free manner. Field evidence indicates that all identified node clusters are actively shaped and energized through the practice of Catholic–Malind Anim inculturation. This inculturative process is evident in the use of the Malind language in prayers and songs, the incorporation of *kandara* musical accompaniment, the integration of agricultural produce as ritual offerings, and the deployment of local symbolic elements such as *tiang kamb* and *mengga*, alongside the presence of traditional attire and embodied gestures during processional activities. A church worker noted that the act of welcoming processions in customary dress and the Malind language is not merely performative, but constitutes “an inner contact with the Almighty.” Similarly, a church council member emphasized that “every spiritual activity here includes culture,” asserting that faith and culture do not operate separately but rather function “together” in a mutually reinforcing relationship. The parish priest further affirmed that this approach is explicitly grounded in inculturation that “enters into their culture.” Collectively, these statements demonstrate that inculturation in Sinai extends beyond symbolic translation; it constitutes a lived framework through which Catholic faith is articulated within the cultural logic of everyday life. In this regard, Ballano's (2020) argument remains pertinent, as it

underscores that inculturation requires embedding the Christian message within the empirical realities of local culture rather than relying on superficial symbolic adaptation.

At the spatial level, these inculturative dynamics operate through three interrelated processes. First, they incorporate indigenous material cultures and symbolic systems into ritual practice, enabling spaces such as traditional houses, domestic courtyards, village roads, and coastal zones to assume sacred functions without erasing their cultural specificity. Second, they structure ritual movement as a cyclical and repetitive spatial practice, ensuring that sacred experience is not confined to a singular fixed center but instead distributed across multiple routes and stopping points. Third, they reinforce relational ties between people and environment, whereby agricultural produce, coastal landscapes, river systems, and vegetation are not treated as passive backdrops but as constitutive elements of ritual meaning. Within coastal rituals, for instance, the statue of the Virgin Mary is oriented toward the sea as part of a theological-ecological intention to bless marine life and petition protection against coastal erosion, while *gogo* located in tidal zones operates as a hybrid land–water communal-transcendental space. In this context, [Howell's \(2016\)](#) interpretation is significant, as it frames the encounter between Catholicism and *adat* as an active cosmological dialogue, while [Widyawati, Lon, and Midun \(2025\)](#) emphasize that missionary practice and inculturation within the Indonesian Church contribute to the preservation of local language and cultural systems as integral to religious life. Accordingly, inculturation in Sinai is more accurately understood as a mechanism of spatial production rather than a mere process of symbolic adaptation.

Conversely, the findings also reveal that inculturation in Sinai is neither unrestricted nor unmediated. Field data demonstrate the deliberate maintenance of clear boundaries within ritual practice. Certain sacred spatial radii are protected by *adat* police, cultural elements are selectively incorporated into ritual proceedings, and specific internal ritual phases remain closed to public access. This indicates that the encounter between Catholicism and Malind Anim culture does not manifest as an unregulated synthesis, but rather as a structured process governed by authority, access control, and the negotiation of symbolic and territorial limits. Within this framework, inculturation not only produces cultural proximity between faith and tradition but also exposes ongoing negotiations concerning what may be included in ritual practice, who holds authority over sacred spatial regulation, and the extent to which local elements can be integrated without displacing the foundational structure of Catholic liturgy. This interpretation is reinforced by [Dwijendra \(2019\)](#), who demonstrates that vernacular inculturation can generate contextual architectural forms without eroding doctrinal structure, and by [Widyawati, Lon, and Midun \(2025\)](#), who conceptualize inculturation as a process of sustaining local culture within ecclesiastical life rather than eliminating religious identity. Thus, Catholic–Malind Anim practice in Sinai is best understood as a living contextual dialogue structured, selective, and continuously negotiated within both theological and customary frameworks. Within this interpretive frame, [figure 4](#) illustrates that Catholic elements, Malind Anim cultural components, local material systems, and ritual actions do not converge randomly; rather, they are interwoven through an inculturative spatial mechanism that produces sacred nodes within the Sinai landscape.

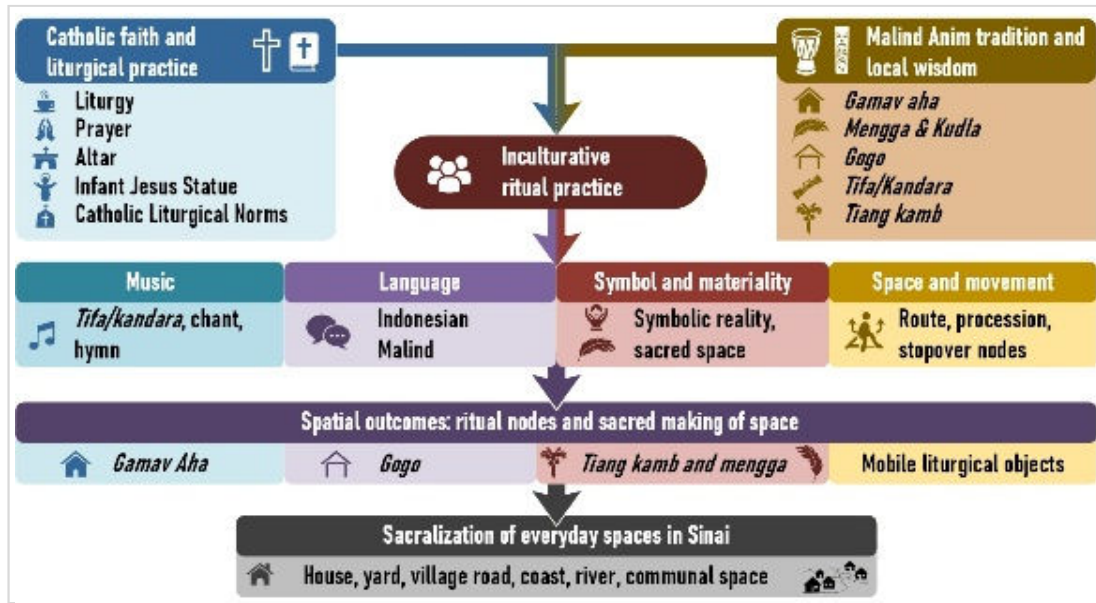


Figure 4. Spatial mechanism of Catholic-Malind Anim inculturation in Sinai

Overall, the findings of this subsection demonstrate that ritual nodes in Sinai emerge from the convergence of local material culture, devotional objects, and repeated communal practices. Elements such as *gamav aha*, *gogo*, *tiang kamb*, *mengga*, *kudla*, temporary altars, statues, language, music, and offerings should not be understood as isolated components; instead, they operate collectively as spatial devices that demarcate, sustain, and activate sacred space. Accordingly, Catholic–Malind Anim inculturation in Sinai is more precisely interpreted as a spatial production mechanism that renders the ritual corridor intelligible as a living sacred landscape.

Synthesis of the *Living Sacred Landscape* Model and its implications

Based on the synthesis of findings from the preceding subsections, this study demonstrates that Sinai can be conceptualized as a living sacred landscape continuously produced through the interrelation of ritual rhythms, processional pathways, sacred nodes, and inculturation practices. This conceptualization does not emerge as an abstract theoretical construct detached from empirical reality; rather, it is grounded in recurring field patterns, including the regularity of the ritual calendar, the consistency of the Sirapu–Anasai route, the relatively stable configuration of ritual nodes, and the widespread presence of Catholic–Malind Anim inculturative expressions

across multiple ceremonial contexts. In this sense, Sinai does not function as a collection of discrete sacred sites but as an integrated spatial system continuously activated through collective practice. This reading aligns with scholarship that understands sacred landscapes as products of interrelations among ritual practice, collective experience, and spatial meaning-making rather than as outcomes of isolated architectural or material objects (Bell 1991; Hoondert and Post 2021; Liutikas 2025).

Empirically, the repetition of five principal rituals indicates a structured ritual system, as each ceremony consistently includes a point of departure, a processional trajectory, devotional nodes, and a designated endpoint. Village roads, coastal zones, estuaries, and riverine environments that are repeatedly activated as sacred routes reflect a living ritual geography, articulated through both axial-terrestrial and littoral-riverine spatial logics. The presence of *gamav aha*, *gogo*, *tiang kamb*, *mengga*, *kudla*, temporary altars, and mobile devotional objects indicates the existence of ritual nodes that anchor, mark, and localize sacred presence at multiple spatial scales. Meanwhile, the use of the Malind language, *kandara* music, agricultural offerings, customary attire, spatial marking practices, and choreographed ritual movement demonstrates inculturation as a spatial mechanism through which Catholic faith is embedded within locally inhabited environments. These four dimensions

are therefore not externally imposed analytical categories but emerge from systematic interpretation of recurring empirical patterns observed through interviews, mapping, observation, and spatial documentation.

Conceptually, the Sinai model consists of four interdependent components. The first is ritual structure, referring to cyclical temporal patterns that organize religious time. The second is the living ritual path, referring to processional corridors connecting villages, communal spaces, coastal environments, rivers, and devotional points within repetitive movement cycles. The third is ritual nodes, referring to localized points of sacred intensity articulated through *gamav aha*,

gogo, *tiang kamb*, *mengga*, *kudla*, temporary altars, statues, and mobile devotional objects. The fourth is inculturation as a spatial mechanism, referring to the process through which Catholicism and Malind Anim culture interact, allowing materiality, symbolism, language, music, and embodied movement to operate within ritual practice without displacing the structural foundation of Catholic liturgy. Together, these components demonstrate that spatial production in Sinai is generated through continuous social, symbolic, and experiential practices, with inculturation functioning as a mechanism of spatial formation (Lefebvre 1991).

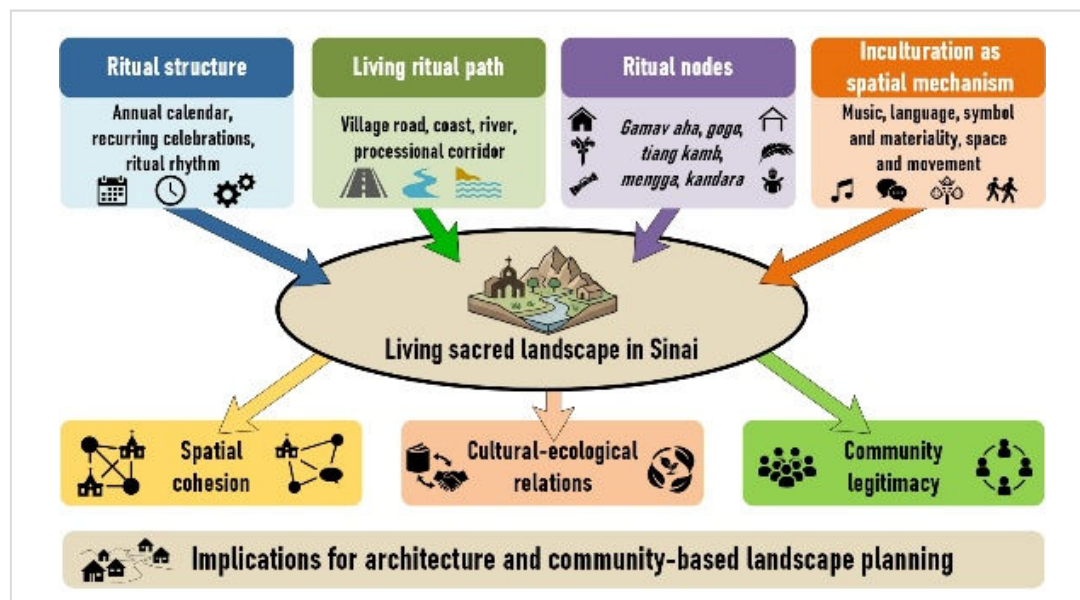


Figure 5. Conceptual model of the Sinai living sacred landscape

Figure 5 summarizes these four core components and illustrates their interrelationships, including ritual rhythms, processional networks, sacred nodes, inculturative processes, and resulting socio-spatial outcomes within Sinai.

At the empirical level, this model produces three principal outcomes. The first is spatial cohesion, referring to the integration of villages and places into a continuous spiritual-social corridor structured by processional movement and ritual nodes. The second is cultural-ecological relationality, referring to the strong interdependence between religious practice and the natural environment particularly coastal zones, rivers, agricultural production, and local

ecological markers such that human-environment relations extend beyond utilitarian functions. The third is community legitimacy, referring to social acceptance that enables rituals to persist across generations and remain collectively owned by religious communities, customary authorities, and local residents. These outcomes indicate that the sustainability of sacred landscapes in Sinai is simultaneously spiritual, social, and ecological. This pattern aligns with perspectives that emphasize continuity of practice, human environment relations, and community participation as fundamental to the endurance of living sacred spaces rather than reliance on monumental built interventions (Yang, Liu, and

Winterbottom 2023; Herrmann-Pillath 2024; Shinde and Olsen 2022).

From an architectural perspective, this model implies that religious space must be understood as a system rather than a singular object. In Sinai, while the church building remains significant, it does not function as the exclusive center of sacredness. Processional routes, traditional dwellings, open communal areas, coastal landscapes, and river systems collectively form a broader spatial order of religiosity. Consequently, architectural interpretation of sacred landscapes cannot be limited to formal typology or physical form alone; it must also account for spatial rhythms, movement patterns, territorial marking, and cultural relationships that activate space. This perspective aligns with studies that emphasize cultural practice, heritage systems, and spatial connectivity as foundations for sustainable spatial formation (Suprapti et al. 2019; Vitasurya et al. 2026).

This model further demonstrates that inculturation can be understood as a contextual spatial strategy. Existing studies on Catholic inculturation in Indonesia suggest that this process moves toward coexistence and plural forms without slipping into syncretism that obscures doctrinal foundations. In Sinai, this is evident in the way Malind Anim cultural elements do not replace Catholic ritual structure but instead intensify its experiential, relational, and contextual presence. Thus, the living sacred landscape model not only expands discourse on sacred space but also demonstrates how religion–culture interaction can produce a distinctive and sustainable system of spatial production relevant to community-based architectural thinking (Howell 2016; Dwijendra 2019; Widyawati, Lon, and Midun 2025).

Overall, this synthesis confirms that Sinai operates as a living sacred landscape through four interrelated mechanisms: ritual rhythms structuring temporal order, living ritual paths structuring spatial order, ritual nodes localizing sacred presence, and Catholic–Malind Anim inculturation sustaining social legitimacy and value transmission. Supported by continuous collective practice, this model contributes to architectural and landscape scholarship by demonstrating that sacred space is produced through dynamic, contextual, and community-based spatial processes.

Conclusions

This study demonstrates that the Sinai area in South Papua can be understood as a living sacred landscape shaped through the interplay of ritual rhythms, processional routes, sacred nodes, and Catholic–Malind Anim inculturation. Sacredness in Sinai is not anchored in a single building or object but is continuously generated through collective practices that connect village roads, traditional houses, communal spaces, coastal environments, and river systems into an integrated spatial-religious network.

The findings identify four core components of this landscape: ritual structure, living ritual path, ritual nodes, and inculturation as a spatial mechanism. Together, these components demonstrate that religious space in Sinai is continuously produced and reinterpreted through processions, spatial marking, local material culture, language, music, and communal participation. Within this framework, inculturation operates not merely as symbolic adaptation but as a spatial production mechanism that enables Catholic faith to be contextually embedded within Malind Anim cultural life.

The primary contribution of this article is the development of a conceptual model of the living sacred landscape that positions sacred space as the outcome of community-based spatial production rooted in cultural-ecological relations. This model extends architectural and landscape discourse by demonstrating that the sustainability of religious space depends not only on physical form or infrastructure but also on ritual continuity, community legitimacy, and human-environment relationality.

This study also acknowledges several limitations. Not all annual ritual cycles could be fully observed within a single fieldwork period, and certain ritual phases were reconstructed through triangulation of interviews, mapping, documentation, and field notes. Furthermore, the study is limited to the Sinai area and does not claim to represent broader spatial dynamics of Malind communities in other coastal regions. Therefore, comparative studies in other ritual landscapes of South Papua are necessary to further test, refine, or extend the proposed model.

Thus, the findings from Sinai provide a conceptual foundation for more context-sensitive approaches to architecture and landscape planning in regions where ritual traditions, living

cultural systems, and collective human–environment relations remain strongly embedded.

Acknowledgments

The authors express sincere gratitude to all informants and community participants in the Sinai area, Semangga District, Merauke Regency, particularly religious leaders, Malind Anim customary elders, and local residents, for their generous sharing of knowledge, experiences, and cultural values. This study was supported by the Ministry of Finance of the Republic of Indonesia through the LPDP Scholarship Grant, Award Number 202407210105469.

References

- Ballano, Vivencio. 2020. “Inculturation, Anthropology, and the Empirical Dimension of Evangelization.” *Religions* 11 (2): 101. <https://doi.org/10.3390/rel11020101>.
- Bell, Catherine. 1991. *Ritual Theory, Ritual Practice*. New York: Oxford University Press.
- Braun, Virginia, and Victoria Clarke. 2012. “Thematic Analysis: A Practical Guide.” In *APA Handbook of Research Methods in Psychology, Vol 2: Research Designs: Quantitative, Qualitative, Neuropsychological, and Biological.*, 57–71. Washington: American Psychological Association. <https://doi.org/10.1037/13620-004>.
- Brown, Greg, and Marketta Kyttä. 2014. “Key Issues and Research Priorities for Public Participation GIS (PPGIS): A Synthesis Based on Empirical Research.” *Applied Geography* 46 (January):122–36. <https://doi.org/10.1016/j.apgeog.2013.11.004>.
- Corbett, Jon, Logan Cochrane, and Yasmine Zeid. 2021. “Participatory Digital Mapping as a Research Method.” In *The SAGE Handbook of Participatory Research and Inquiry*, 544–60. 1 Oliver’s Yard, 55 City Road London EC1Y 1SP: SAGE Publications Ltd. <https://doi.org/10.4135/9781529769432.n39>.
- Creswell, John W., and Cheryl N. Poth. 2016. *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. 4th ed. Sage Publication.
- Dwijendra, Ngakan Ketut Acwin. 2019. “Vernacular Inculturation on the Architecture of the Church in Bali, Indonesia (Case Study: Pniel Blimbingsari Christian Church, Jembrana, Bali).” *Journal of Social and Political Sciences* 2 (3). <https://doi.org/10.31014/aior.1991.02.03.101>.
- Flint Ashery, Shlomit, and Nurit Stadler. 2026. “The Physical Geometries of Sacred Spaces: Methodological Challenges in Applying Practice-Based Approaches to Study Sacred Shrines.” *Archnet-IJAR: International Journal of Architectural Research* 20 (3): 724–40. <https://doi.org/10.1108/ARCH-09-2024-0415>.
- Grimes, Ronald L. 2014. *The Craft of Ritual Studies*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780195301427.001.0001>.
- Hematang, Yashinta Irma Pratami, Sudaryono Sastrosasmito, and Harry Kurniawan. 2025a. “Konsep Epe Ndaet Millah: Unsur-Unsur Ruang Permukiman Kampung Makaling, Papua Selatan.” *Nature: National Academic Journal of Architecture* 12 (1): 1–18. <https://doi.org/10.24252/nature.v12i1a1>.
- Hematang, Yashinta Irma Pratami, Sudaryono Sastrosasmito, and Harry Kurniawan. 2025b. “The Transcendental Values of Melanesian Vernacular House Elements: Case Study Rumah Malind Aha in Makaling Village, South Papua.” *Journal of Sustainable Architecture and Civil Engineering* 37 (1): 62–75. <https://doi.org/10.5755/j01.sace.37.1.38492>.
- Hematang, Yashinta Irma Pratami, Sudaryono Sastrosasmito, and Harry Kurniawan. 2026. “Otih Ka Kaleh Wabla: The Intentionality of Consciousness within Multi-Functional Spatial Configurations in Makaling.” *ARTEKS: Jurnal Teknik Arsitektur* 11 (1): 83–90. <https://doi.org/10.30822/arteks.v11i1.4448>.
- Hennink, Monique M., Bonnie N. Kaiser, and Vincent C. Marconi. 2017. “Code Saturation Versus Meaning Saturation.” *Qualitative Health Research* 27 (4): 591–608. <https://doi.org/10.1177/1049732316665344>.
- Herrmann-Pillath, Carsten. 2024. “Rituals as Nature-Based Governance of Reciprocity between People and Nature.” *Open Research Europe* 4 (April):66.

- <https://doi.org/10.12688/openreseurope.17206.1>.
- Hoondert, Martin, and Paul Post. 2021. "Introduction to Special Issue: Exploring Ritual Fields Today." *Religions* 12 (3): 210. <https://doi.org/10.3390/rel12030210>.
- Howell, Signe. 2016. "Battle of Cosmologies: The Catholic Church, Adat, and 'Inculturation' among Northern Lio, Indonesia." *Social Analysis* 60 (4): 21–39. <https://doi.org/10.3167/sa.2016.600402>.
- Isnaeni, Hendrajaya, Salsa Muafiroh, Zafira Rahmatul Ummah, Sam Turner, Stelios Lekakis, Joko Adianto, Rizki Hermawan, Nurachman Iriyanto, Muhamad Iko Kersapati, and Mohamad Atqa. 2025. "Sacred Places, Ritual and Identity: Shaping the Liminal Landscape of Banda Neira, Maluku Islands." *Land* 14 (5): 1109. <https://doi.org/10.3390/land14051109>.
- Israel, Mark, and Iain Hay. 2006. *Research Ethics for Social Scientists*. London: SAGE Publications, Ltd. <https://doi.org/10.4135/9781849209779>.
- John Paul II, Pope. 1999. "Ecclesia in Asia: Post Synodal Apostolic Exhortation on Jesus Christ the Saviour and His Mission of Love and Service in Asia." Vatican City: Libreria Editrice Vaticana.
- Knigge, LaDona, and Meghan Cope. 2006. "Grounded Visualization: Integrating the Analysis of Qualitative and Quantitative Data through Grounded Theory and Visualization." *Environment and Planning A: Economy and Space* 38 (11): 2021–37. <https://doi.org/10.1068/a37327>.
- Lake, Reginaldo Christophori, Yohanes Basuki Dwisusanto, Yohanes Djarot Purbadi, and Fransiscus Xaverius Eddy Arinto. 2020. "Fenomena The Sacred Public Space Berdasarkan Teori Lefebvre 'The Production Of Space' Studi Kasus: Ruang Publik Kota Larantuka Sebagai Citra Kota Reinha Rosari." *Jurnal Arsitektur ARCADE* 4 (2): 85. <https://doi.org/10.31848/arcade.v4i2.452>.
- Lefebvre, Henri. 1991. *The Production of Space*. Oxford: Blackwell.
- Lincoln, Yvonna S., and Egon G. Guba. 1985. *Naturalistic Inquiry*. Beverly Hills: Sage.
- Liutikas, Darius. 2025. "Religious Geography and Sacred Landscape: An Introduction to the Research Area." In *Geographies of Religious Spaces and Sacred Landscapes*, 1–20. Edward Elgar Publishing.
- <https://doi.org/10.4337/9781035343829.00005>.
- Miles, Matthew B., A. Michael Huberman, and Johnny Saldana. 2014. *Qualitative Data Analysis: A Methods Sourcebook*. 3rd ed. Thousand Oaks: Sage Publication.
- Nowell, Lorelli S., Jill M. Norris, Deborah E. White, and Nancy J. Moules. 2017. "Thematic Analysis." *International Journal of Qualitative Methods* 16 (1): 1–13. <https://doi.org/10.1177/1609406917733847>.
- Purbadi, MT, Ir. Yohanes Djarot, Achmad Djunaedi, and Sudaryono Sudaryono. 2019. "Kearifan Kaenbaun Sebagai Dasar Konseptual Pada Tata Spasial Arsitektur Permukiman Suku Dawan Di Desa Kaenbaun (The Kaenbaun Wisdom as a Conceptual Basis of the Spatial Design of Settlement Architecture of Dawanese in Kaenbaun Village)." *ARTEKS Jurnal Teknik Arsitektur* 3 (2): 215–38. <https://doi.org/10.30822/artk.v3i2.211>.
- Raubaba, Henry Soleman, Suzanna Ratih Sari, Wijayanti Wijayanti, and Agung Budi Sardjono. 2025. "Revitalizing the Traditional Gamav Aha House: Design Adaptation and Sacred Meaning in Catholic Ritual Contexts in the Sinai Region, South Papua." *Nature: National Academic Journal of Architecture* 12 (1): 121–36. <https://doi.org/10.24252/nature.v12i1a9>.
- Shinde, Kiran A., and Daniel H. Olsen. 2022. "Reframing the Intersections of Pilgrimage, Religious Tourism, and Sustainability." *Sustainability* 15 (1): 461. <https://doi.org/10.3390/su15010461>.
- Suprpti, Atiek, Agung Budi Sardjono, Indriastjario Indriastjario, and Edward E. Pandelaki. 2019. "The Spatial Concepts Of Cultural Heritage Village Toward A Tourism Development; A Case Study Of Kadilangu Demak Indonesia." *JOURNAL OF ARCHITECTURE AND URBANISM* 43 (1): 36–46. <https://doi.org/10.3846/jau.2019.6057>.
- Tilley, Christopher. 1994. *A Phenomenology of Landscape: Places, Paths and Monuments*. Oxford: Berg Publishers.
- Tuan, Yi-Fu. 1977. *Space and Place: The Perspective of Experience*. Minneapolis: University of Minnesota Press.
- Vitasurya, Vincentia Reni, Gregorius Agung Setyonugroho, Anna Pudianti, Lucia Asdra Rudwiarti, Wakita Yoshihisa, and Hideo Shiraishi. 2026. "Architectural Settings as

Ritual Spaces in Bayan: Harmony of Cultural Traditions and Spatial Experience.” *ARTEKS : Jurnal Teknik Arsitektur* 11 (1): 73–82. <https://doi.org/10.30822/arteks.v11i1.4446>.

Widyawati, Fransiska, Yohanes S. Lon, and Hendrikus Midun. 2025. “Mission and Inculturation: Preserving Local Language and Culture in the Indonesian Church.” *HTS Teologiese Studies / Theological Studies* 81 (1): 1–10. <https://doi.org/10.4102/hts.v81i1.10516>.

Yang, Shiqi, Juanjuan Liu, and Daniel Winterbottom. 2023. “Analysis of the Dong Bao Ye as Sacred Landscape and Its Putative Therapeutic Mechanisms.” *Health & Place* 83 (September):103102.

<https://doi.org/10.1016/j.healthplace.2023.103102>.

Author(s) contribution

Henry Soleman Raubaba contributed to conceptualization, methodology, investigation, data analysis, visualization, drafting, and manuscript revision.

Suzanna Ratih Sari contributed to conceptualization, literature review, data analysis, manuscript preparation, and validation.

Wijayanti contributed to methodology, supervision, and validation.

Agung Budi Sardjono contributed to methodology, supervision, and validation.