

The impacts of the ecosophical wisdom of *Roma Toloh* of the Bajo-Wuring people on the marine ecosystem of Wuring, Sikka Regency, East Nusa Tenggara

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ARTICLE INFO	ABSTRACT
<i>Article history:</i> Received September 05, 2025 Received in revised form Oct. 25, 2025 Accepted January 06, 2026 Available online March 01, 2026 <i>Keywords:</i> Bajo-Wuring <i>Roma Toloh</i> Marine ecosystem *Corresponding author: Antonius Bastian Limahekin Ledalero Institute of Philosophy and Creative Technology, Ledalero, Maumere, Indonesia Email: ablimahekin.iftkl.2023@gmail.com ORCID: https://orcid.org/0000-0003-0886-5079	<i>This article constitutes a philosophical attempt to initiate an interdisciplinary conversation between philosophy and architecture by taking Roma Toloh of the Bajo-Wuring tribe as its central subject of inquiry. Roma Toloh embodies the local ecological wisdom of the Bajo-Wuring people in sustaining and nurturing their relationship with the sea. The study aims to identify the ecological values embodied in the architectural form of Roma Toloh and to explore its impacts on the marine ecosystem. Employing a qualitative research methodology, the study incorporated field observation and in-depth interviews. Informants were selected using purposive and snowball sampling techniques. The research findings indicate that the Bajo people residing in Wuring, Sikka Regency, Flores, possesses a conscious awareness to nurture the marine ecosystem, with the Roma Toloh serving as a potent symbol of their unity with the sea. However, this consciousness is not corresponding proportionally with the current environmental conditions surrounding their settlements. The increasing scarcity of traditional, natural building materials, coupled with the modernization of construction materials are exerting negative impacts on the Roma Toloh, the ecological wisdom it embodies, and the surrounding environment. The shift from traditional to modern building materials has contributed to the degradation of the residential environment and the erosion of the ecological values inherent in the Roma Toloh. The quality of the marine ecosystem has deteriorated as a result of the shifting. Collaborative efforts between local government, the Wuring community, and neighboring societal communities are thus imperative to ensure the preservation of the Bajo-Wuring cultural identity and the Wuring marine ecosystem.</i>

Introduction

A house or dwelling place constitutes a nexus where aesthetic sensibility and the inhabitants' worldview converge (Widodo 2019). Such a status renders the house not merely a physical

dwelling, but also a site or locus of interdisciplinary encounter between the fields of philosophy and architecture (Sudradjat 2020; Hatta and Sudrajat 2020). This status likewise applies to the residential houses of the Bajo-Wuring people in Sikka Regency.



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The Bajo people are a coastal community people whose livelihood depends primarily on the resources of the sea. Historically, they have inhabited maritime and coastal zones, exhibiting a pronounced affinity for the sea that distinguishes them from other, more land-based ethnic groups (Kobi and Hendra 2020). They are widely recognized as exceptional seafarers who traditionally used boats as their permanent dwellings. However, the forces of modernization and volatile geographical conditions have gradually altered their settlement patterns. Believed to have originated from the southern region of the Philippines, the Bajo people later chose to construct permanent houses along the coastline. These coastal dwellings are known as *Roma Toloh*. Designed in the form of stilt houses, *Roma Toloh* structures are built above relatively shallow waters, supported by wooden poles driven into the seabed. Settlements of the Bajo people can be found in several regions across the Indonesian archipelago, including Tomini Bay in Central Sulawesi; Bajau Village in the Sula Islands, North Maluku; the Wakatobi Islands in Southeast Sulawesi; Bungin Island in West Nusa Tenggara; and Wuring in East Nusa Tenggara (Azzahra and Dwi 2025; Poedjowibowo 2016).

These houses are supported by wooden pillars ranging from approximately two to four meters in height, depending on their specific location. Houses constructed on reclaimed terrain or upon landfilled typically feature shorter supporting pillars. Such land-based houses are typically used for storage purposes or serve as spaces for recreational and economic activities. In contrast, houses built directly above the sea usually stand on higher stilts. The wooden posts that support these houses also function as mooring points for boats (Gobang, Antariksa, and Nugroho 2017). In general, *Roma Toloh* structures are made from wooden planks and bamboo. Beyond their primary function as building materials, wood and bamboo also serve as essential means of transportation within the settlement area (Tambunan et al. 2022).

Building dwellings above the sea and along the coast is by no means a decision free of risk. In 1992, a powerful earthquake triggered a massive tsunami in Flores, particularly in the Sikka region. The Bajo people inhabiting the coastal area of Wuring was severely affected by this disaster. The settlement suffered severe infrastructural damage, necessitating the evacuation of the Bajo people for their own safety. Although temporarily

relocated by the government, they ultimately chose to return and reoccupy the settlement they had previously built in Wuring. This decision stands as testament to the profound conservative values and cultural integrity of the Bajo people in safeguarding a tradition deeply rooted in their way of life. By returning to inhabit the *Roma Toloh*, the Bajo people consciously reaffirmed their commitment to live in the liminal space between land and sea. As a manifestation of local ecological wisdom, the *Roma Toloh* embodies the adaptive character of the Bajo people, who are capable of navigating both the maritime world as seafarers and the terrestrial realm as coastal dwellers.



Figure 1. Predominance of stilt-house structures in the Wuring fishing settlement, Sikka Regency, East Nusa Tenggara.

Source: Wilibrodus Putra Mones 2025

The decision of the Bajo people to reside above the sea has generated both supportive and opposing reactions among the wider public. The principal reason behind the opposition concerns the potential waste produced by human activities in such marine settlements. Such waste poses a significant risk of damaging the marine ecosystem and may give rise to slum-like conditions that become breeding grounds for diseases and pathogens. Another source of concern pertains to the safety of the Bajo-Wuring community itself. Given the inherently unpredictable nature of the ocean, natural disasters may occur at any time. Additionally, apprehensions exist regarding other potential behavioral practices within the Bajo-Wuring community that may exert a detrimental influence on the marine ecosystem.

Therefore, it is of considerable interest to further investigate the role of *Roma Toloh* in the daily life of this community, how it is designed and conditioned to support the marine ecosystem, and how this distinctive form of dwelling has become final bastion for the Bajo people in preserving their identity as seafarers and

fishermen. Beyond the force of tradition, there may be other underlying reasons why the Bajo-Wuring community continues to uphold the *Roma Toloh* amidst an era of rapid technological advancement. Nevertheless, despite the positive motivations that inspire the Bajo-Wuring people to preserve the *Roma Toloh*, the use of this architectural model may entail latent, hidden, or unintended negative consequences for the marine ecosystem. To uncover these motivations and examine their ecological repercussions, the present study is both relevant and necessary.

The Bajo-Wuring community possesses distinctive characteristics, particularly evident in their ownership of *Roma Toloh* – houses constructed above shallow seawaters and traditionally designed in harmony with the marine ecosystem. However, problems began to emerge when modern construction materials began to replace traditional ones, and when the architectural design of the *Roma Toloh* underwent alteration and modification. As a result of these changes, *Roma Toloh*, once a manifestation of local ecological wisdom, has experienced a degradation of its inherent ecological values, in some cases deteriorating into slum-like settlements. This issue is critically exacerbated due to the accumulation of waste from human activities, leading to pollution of the air, sea, and soil. Based on field observations, the researchers noted a significant gap between the community's cognitive awareness of the ecological value of *Roma Toloh* and the marine ecosystem on one hand, and their actual daily practices on the other. Therefore, environmentally sustainable solutions are urgently needed, such as the reintroduction of natural materials in the construction of *Roma Toloh*, the establishment of collaborative communication channels with local government authorities for integrated waste management, and community outreach and education programs aimed at raising awareness among the Bajo-Wuring people about the intrinsic relationship between *Roma Toloh* and the marine ecosystem.

Previous studies have been conducted on tradition of the *Roma Toloh*. Gobang, Antariksa, and Nugroho (2017), for instance, focused their research on the unique and distinctive and intriguing architectural form and pattern of the *Roma Toloh*. Their research posits that, beyond being a manifestation of local wisdom aligned with the concept of ecosophy, the *Roma Toloh* also exerts a significant influence on the community across various life domains, including

social, economic, and cultural spheres. The spatial organization of the *Roma Toloh* significantly shapes the daily activities of the local inhabitants. This occurs because the internal spatial organization of the *Roma Toloh* can shape the character of its inhabitants (Gobang, Antariksa, and Nugroho 2017). The research team concluded that socio-economic and cultural influences can, in turn, affect the residential models of the Bajo people and their associated activities.

Another study investigated the architectural characteristics of Bajo houses in Konawe Regency, where numerous stilt houses constructed from natural materials are still preserved. Furthermore, the study identified two basic models of stilt houses that continue to be maintained by the local indigenous community: the two-part stilt house and the three-part stilt house. These two architectural models function as symbolic representations of socio-cultural status within the local Bajo society. The two-part stilt house consists of a core living space and a kitchen, whereas the three-part stilt house includes a terrace or veranda, a core living space, and a kitchen. Within the local belief system, the core living space is regarded as a sacred and sanctified area (Nurjannah, Kadir, and Sjamsu 2024).

Meanwhile, Utina (2012) identified a significant correlation between the local wisdom practices of the Bajo community inhabiting *Roma Toloh* in Torosiaje Village, Gorontalo, and the preservation of the marine ecosystem. These practices include the preservation of mangrove forests, the traditional seafaring custom known as *mamia kadialo*, methods of processing marine catches, knowledge of maritime and coastal natural phenomena, settlement patterns, and resistance to the expansion of concrete bridge constructions. The researcher's findings indicate that these traditional values and practices effectively contribute to the conservation of natural resources and the sustainability of the community's economy. One evident outcome is the continued availability of marine biota, particularly reef fish species, which constitute the primary source of livelihood for the Bajo people of Torosiaje (Utina 2012). It can be cautiously inferred from this research that the *Roma Toloh* contributes indirectly to the preservation of the coastal marine ecosystem.

In contrast to the aforementioned studies, our research-based article seeks to explore and analyze the ecological values embedded in the

traditional construction of the *Roma Toloh*, or stilt houses, among the Bajo people in Wuring, Sikka Regency. Within the context of Sikka Regency, stilt houses are invariably identified with the indigenous Bajo people of Wuring. The *Roma Toloh* continues to be utilized by this community to the present day, albeit with significant modifications that impart a modernized appearance. This study aims, in part, to investigate whether the ecological values of this modernized *Roma Toloh* exert any discernible influence on the marine ecosystem within the Wuring settlement area. Since the *Roma Toloh* of the Bajo-Wuring people represents a point of intersection between aesthetic sensibility and the local wisdom of its inhabitants, this article also constitutes a philosophical endeavor to bring the disciplines of philosophy and architecture into a constructive dialogue. The research is guided by the hypothesis that the ecosophical values inherent in the *Roma Toloh* of the Bajo-Wuring community have been eroded in tandem with the modernization of its building materials, and that this erosion has subsequently impacted the quality of the Wuring marine ecosystem.

The novelty of this study lies in the philosophical perspective employed to examine its object of inquiry. Herein, the *Roma Toloh* is not merely apprehended in its functional capacity as a residential structure or dwelling, but also as a manifestation of the inhabitants' worldview (*Weltanschauung*). In other words, this study approaches the *Roma Toloh* as a philosophical text or, quoting (Rescher 2001), "philosophical data." This novel contribution can thus be positioned as a contemporary advancement upon previous studies concerning the *Roma Toloh*, which have predominantly emphasized its architectural and spatial dimensions (Gobang, Antariksa, and Nugroho 2017; Rizal 2022).

The outcomes of this research can be utilized by the local regional government and the Wuring community in designing the development plan for establishing Wuring as an ecological and ecosophical marine tourism destination. Furthermore, it can serve as a model, albeit a modest one, for scholars and practitioners of philosophy and architecture to further explore the possibilities for interdisciplinary research between these two disciplines, which, according to Bell and Zacka (2020), are in fact profoundly intertwined.



Figure 2. The use of ironwood (*kayu ulin*, *Eusiderodoxylon zwageri*) and bamboo as structural supports for stilt houses and interconnecting bridges in the original *Roma Toloh* construction of the Wuring settlement, East Nusa Tenggara

Source: Wilibrodus Putra Mones 2025

Methods

In the study that provided the basis for this article, the research team employed a qualitative research method. This method involves data collection within a natural setting with the intent of interpreting occurring phenomena, wherein the researcher functions as the primary instrument (Anggito and Setiawan 2018). Qualitative research can be conducted in several stages, namely problem identification, literature review, data collection, data analysis and interpretation, and reporting (Creswell 2008). The variables of this study are constituted by how the *Roma Toloh*, as a manifestation of the Bajo-Wuring people's local wisdom, influences the marine ecosystem. Meanwhile, its indicators are centered on the community's activities within the *Roma Toloh*, the community's understanding of the *Roma Toloh* and the complexity of the marine ecosystem, and the community's involvement in preserving the marine ecosystem.

Problem identification, the first phase in the research, led to a decision to focus on the influence of the sustained preservation of the *Roma Toloh* on the marine ecosystem. Following this stage, the research team conducted a literature review focusing on previous studies relevant to the present research. Data collection was carried out primarily through interviews, with informants selected using both *purposive sampling* and *snowball* techniques. The research team interviewed key community figures from the Bajo-Wuring ethnic group who possess deep understanding of the cultural values underpinning the *Roma Toloh* and its influence on the marine

ecosystem. The snowball sampling technique was essential here to obtain accurate results regarding the rationale for the continued preservation and maintenance of the *Roma Toloh* in the modern era. To achieve this research objectives, in addition to interviews, the research team also engaged in participant observation of the daily life of the Bajo-Wuring people, particularly regarding their activities within the *Roma Toloh* and their interactions with the marine ecosystem. Meanwhile, secondary data sources were obtained from relevant books and academic journals.

Following data collection, the subsequent stages involved data analysis, interpretation, and reporting. To analyze the data, the research team employed several techniques, namely data reduction, data display, and conclusion drawing. The team summarized and processed the data obtained from the field. These data were meticulously selected to ensure alignment with the research objectives. The reduced data were then systematically presented in the form of descriptions, diagrams and charts, inter-categorical relationships, and similar formats. Through this process, the researchers were able to draw conclusions based on the meticulously and systematically conducted preceding stages. The final stage undertaken was the compilation of a report on the research findings into a coherent and comprehensive written work. This philosophically-oriented written work is intentionally not written from the perspective of the 'built environment.' Nonetheless, it remains a distinct possibility that the analysis and findings from this research process may closely interrelated and significantly intersect with outcomes potentially generated by research grounded in the disciplinary framework of 'built environment' studies (Salura and Clarissa 2025).

Results and discussion

Roma Toloh as Philosophical data

Conventionally, philosophy is often defined as a discipline that investigates, in a systematic manner, the most general aspects of the world and the human place within it, utilizing rational reflection as its primary instrument (cf. Blackburn 2008, 275; Rescher 2001, 4). The object of philosophy is the world in its broadest and most profound aspects. Its method is that of rational and critical reflection.

If philosophy indeed operates through abstract categories, as Simon Blackburn (2008: 275) asserts, can a genuine connection exist between this discipline and the *Roma Toloh*, which is a concrete object? The answer is affirmative for the following reason: the 'world,' which constitutes the object of philosophical inquiry, manifests itself as philosophical data in multifarious forms. These forms include, among others, "common knowledge, facts afforded by the science of the day, the lessons we derive from our dealings with the world in everyday life; the ambient conviction of one's cultural context; traditions, inherited lore, and ancestral wisdom" (Rescher 2001). This data serves as the raw material for doing philosophy.

Among the manifold forms of philosophical data, indigenous ancestral wisdom deserves particular attention, as it provides the key entry point for understanding the relationship between philosophy and the *Roma Toloh*. Local indigenous wisdom constitutes the accumulated body of knowledge, values, and practices lived by a community, forged through the refinement of that community's intergenerational experience. It frequently embodies the philosophy or worldview of the community. Within traditional societies, this local indigenous wisdom is often encoded within myths, legends, proverbs or aphorisms, sayings, dances, artifacts, and architectures. Among the Bajo people, this local indigenous wisdom is manifested, inter alia, in the *Roma Toloh* (Nurjannah, Kadir, and Sjamsu 2024). It is therein that one can discern and locate the philosophy or worldview of this people.

The *Roma Toloh* constitutes a compelling and significant body of data for the sub-discipline of philosophy known as ecosophy or environmental philosophy. This is because the stilt-house dwelling serves as a manifestation of a "green" local indigenous wisdom. Within it, one can discern the traditional worldview of the Bajo-Wuring people regarding their relationship with fellow humans and with the natural environment as a maritime community. From an ecosophical perspective, changes in the building materials used for constructing the *Roma Toloh* represent a significant and profound shift and transformation, for, as Guattari contends, modifications to the social and material environment inevitably impact the collective mentality of a people (cf. Guattari 2000, 27, cited in Sim 2013, 79). The following analyses seek to capture and examine the significances and implications of such a shift.

The material metamorphosis of the *Roma Toloh* of the Bajo-Wuring people

The *Roma Toloh* is a traditional stilt house of the Bajo people. It is traditionally crafted using the *kep* technique – joined with wooden pegs instead of iron nails to connect its structural elements. More fundamentally, the *Roma Toloh* is a dwelling which upper and lower parts are functionally defined by its location. When constructed on land, both sections can serve as living spaces. However, when erected over the sea, the upper level functions as the primary residence, while the space beneath is utilized for mooring boats (Sahalim 2025). The construction of a *Roma Toloh* involves customary rituals, particularly during the installation of the central pillar. This ritual requires offerings such as bananas, coconuts, palm sugar, and white cloth. These offerings symbolize sweetness and well-being, or the prosperity of the household. A separate ritual is conducted upon the completion of the building process, wherein the head carpenter formally leads the homeowner into the dwelling. This rite serves as a spiritual safeguard, ensuring that the homeowner is protected from various misfortunes (Sahalim 2025).

The *Roma Toloh*, or traditional stilt house, was once the predominant residential form for the Bajo community in Wuring, particularly in the pre-1992 tsunami tragedy in Sikka Regency. However, in the aftermath of the 1992 disaster, a significant portion of the population abandoned this local wisdom, leaving only a few such houses remaining. The building materials shifted from wood to cement and concrete, largely due to the increasing scarcity of ironwood. This shift in building materials has had several negative ecological impacts. The chemical components of cement and concrete have contributed to the degradation of marine ecosystems and biodiversity (Sahalim 2025). Furthermore, the installation of solid concrete pillars has resulted in the destruction of numerous coral reefs. Given these material choices, the contemporary *Roma Toloh* of the Bajo-Wuring can no longer be classified as a truly ecological structure. This is because a fundamental principle of sound and ecological building is to “[have] a building site that aligns with ecologically-characterized planning, [meaning] it maintains a synergy between the environment and the building, [and utilizes] locally sourced construction materials” (Sari and Bomo 2023).

The local community’s rationale for adopting concrete-pillar houses stems from the difficulty in procuring ironwood as the foundational material for constructing the *Roma Toloh*. Compounding this issue is a lack of governmental support in regulating and facilitating access to these primary materials from the Sulawesi archipelago. Consequently, the construction of stilt houses has been shifted to the use of concrete. The application of concrete is not limited to the pillars of the *Roma Toloh* but extends to its foundation. This concrete foundation necessitates land reclamation over the coastal seabed (Sahalim 2025). Such reclamation damages the Wuring marine ecosystem, as the coastal seabed serves as a critical habitat for marine species. This degradation is further exacerbated by the government’s use of concrete slabs and pavements in constructing harbors, markets, and roadways for motorized vehicles within the Bajo-Wuring settlement, the cleanliness of the beach – although, from a ‘built environment’ perspective, the construction of coastal roads may be intended to position the shoreline as the residential ‘front yard,’ thereby psychologically motivating residents to maintain the cleanliness of the beach (Susilo 2025).

Furthermore, concrete pillars constitute a building material that is susceptible to seismic activity and high waves unless engineered with precise civil calculations and appropriate waterfront infrastructure. Another critical distinction lies in the functional lifespan of the structures, which is inherently dependent on raw material quality. Empirical evidence suggests that concrete typically endures for 15 to 20 years, whereas ironwood can persist for over 30 years (Malin 2025). The durability of this wood type is corroborated by architectural practitioners, although it must be acknowledged that the structural failure of concrete pillars may also be attributable to inaccurate civil engineering and construction calculations, a consequence of the limited technical knowledge and skills of local residents (Susilo 2025). Therefore, based on the lived experience of the Bajo-Wuring community, (iron)wood is qualitatively superior to concrete, both in terms of its resistance to seawater and its ecological compatibility with the marine ecosystem. In addition to its durability, (iron)wood can also function as an attractant, encouraging fish to congregate near the shoreline and beneath the stilt houses. Specifically, the use of ironwood in the construction of the *Roma*

Toloh, according to the experiential knowledge of Bajo-Wuring fishers, is more effective in preserving the marine ecosystem and in enhancing and stabilizing fish catches compared to the use of concrete pillars (Malin 2025).



Figure 3. The shift in *Roma Toloh* construction systems post-1992 tsunami: the structure on the left retains the original wooden column construction, while the structure on the right utilizes a reinforced concrete column system

Source: Wilibrodus Putra Mones 2025

The local wisdom of the *Roma Toloh* and the modernization of building materials

A house, whether a residential dwelling or a traditional house, is a point of intersection between “the visible world” and “the invisible world” (Coulaud 1982, 188). It serves both functional and cosmological purposes. The worldview represented by a house and the purposes it serves are materially expressed through its architectural design and the very substance of its construction (Waterson 1990). This conceptual framework is fully applicable to the *Roma Toloh* of the Bajo-Wuring people.

The local wisdom embodied by the *Roma Toloh* among the Bajo people generally illustrates their profound emotional affinity with the sea and the coastal environment (Utina 2012). This tradition encompasses a sustainable way of life, including eco-friendly architectural construction practices, environmentally sound fishing techniques, and customary systems that maintain ecological balance. However, modernization has brought significant transformations to these traditional practices. In the case of the *Roma Toloh* of the Bajo-Wuring people, such changes

are evident in development-led reclamation and shifts in socio-cultural practices. Development reclamation entails physical alterations to the coastal landscape, such as the construction of markets, harbors, and settlements using non-environmentally friendly materials. These transformations have led to sedimentation and disruption of the natural marine habitat. One major consequence has been the destruction of coral reefs, resulting in a decline of fish stocks within the local waters (Ramli 2025).

The primary reason behind this shift in material choice is the increasing scarcity of traditional building material (ironwood). It is not easy for the Bajo-Wuring community to import ironwood from Sulawesi, as the taxes imposed are prohibitively high by their economic standards. This scarcity has compelled them to modernize the materials used in constructing the *Roma Toloh*. The allure of modern lifestyles and technologies is often cited as a key factor driving change in the socio-cultural practices of traditional communities (Indra 2020; Widyati 2024; Nurafni et al. 2024). However, in the case of the *Roma Toloh* of the Bajo-Wuring people, modernization as a lifestyle choice does not appear to be the primary factor behind the shift toward modern materials. The Bajo-Wuring community continues to regard the traditional form of the *Roma Toloh* as a vital component of their collective identity. Interviewed informants affirmed that they would still prefer to use ironwood if the material were available and economically accessible (Dabu 2025; Arida 2025; Kartika 2025). Other informants, who had never used ironwood for constructing a *Roma Toloh*, stated that they opted for concrete and cement pillars instead, considering these to be stronger and more durable than are the types of non-ironwood available in the Sikka region (Asram 2025; Masminah 2025; Nurdin 2025).

Given the manifold advantages of ironwood over concrete outlined above, the tradition of utilizing the *Roma Toloh* constructed from ironwood constitutes a manifestation of Bajo local wisdom that warrants preservation for the sake of maintaining the integrity of the Wuring marine ecosystem. The preservation of this local knowledge is particularly critical in the contemporary era, wherein climate change presents a grave threat to the planet Earth and all its inhabitants. Protecting the marine ecosystem through the local wisdom of the *Roma Toloh* would contribute significantly not only to the

continuity of marine organisms but also to the crucial process of carbon sequestration required to mitigate global climate instability (Salayan, Wulandari, and Huda 2024). The elements within the marine ecosystem that play a critical role in carbon absorption are mangrove forests, seagrass meadows, and coral reefs. All these elements would be more effectively conserved if the authentic tradition of the *Roma Toloh* local wisdom is maintained.

Regrettably, the preservation of Bajo-Wuring local wisdom, as manifested in the traditional construction of the *Roma Toloh*, has not progressed in accordance with such expectations and ideals. The people of Bajo-Wuring increasingly prefer to build stilt houses using concrete as the primary construction material. Yet, as acknowledged by the local residents themselves, the use of concrete-based stilt structures has led to the accumulation of soil through sedimentation and coastal land expansion, which in turn has damaged coral reefs and seagrass meadows that were once abundant along the Wuring coastline (Ramli 2025). This shift from timber to concrete as a preferred building material illustrates how difficult it is to sustain ancestral wisdom amid the growing scarcity of traditional, nature-provided construction resources. The question of which option should be chosen under such circumstances thus becomes a matter of serious consideration. Should ironwood indeed become entirely unobtainable in the future, even if its price were made affordable through reduced taxation, it is our considered view that the most viable path forward would be to develop and/or adopt ecological architectural practices, focusing on minimizing the carbon footprint of modern materials to the greatest extent possible.

The ecosophical wisdom of the *Roma Toloh* of the Bajo-Wuring people

Local ecosophical wisdom refers to a body of indigenous knowledge that contains ecological concepts embedded within the quotidian life of a community and is deeply understood by its members. Ecosophy, in general, may be understood as a worldview and philosophy that prioritize ecological equilibrium. It conceptualizes the relationship between human beings and the natural environment as a complex web in which every element, though distinct, is profoundly interconnected. This relationship is so deeply intertwined that a shift in human mentality

cannot occur without a corresponding modification of the social and material milieu, and vice versa; Conversely, any change in human mentality will, in turn, transform the social and material environment. As stated by Guattari, who coined the term ecosophy, “Without modifications to the social and material environment, there can be no change in mentalities” (Guattari 2000, 27, quoted in Sim 2013, 79). For Arne Naess, the awareness of this interdependence between the three ecologies – social, material, and mentalities – reaches its apex when it becomes an ecological wisdom, manifested in actions that maintain the harmony or balance of the universe (Naess 2008). It is unsurprising, therefore, that he treats ecosophy and ecological wisdom.

The principal dimensions emphasized within ecosophy are the intellectual, spiritual, emotional, and practical, or action-oriented, domains (Naess 2008). The intellectual domain pertains to an attitude of studying, understanding, interpreting, and respecting nature. The spiritual domain concerns the belief in a creative force inherent in nature, which consequently necessitates its care. The emotional domain is intrinsically linked to ethics and morality. Meanwhile, action or praxis domain refers to the tangible, concrete implementation of measures aimed at realizing harmony between human beings and the natural world. These four dimensions collectively aim to foster a high quality of life for both nature and humankind across successive generations.

Through close observation of the *Roma Toloh* of the Bajo-Wuring people and an extraction of its symbolic meaning, several key tenets of ecosophical wisdom, in our analysis, can be discerned. The first is the principle of eco-friendliness. This is evident in the very architectural design of the *Roma Toloh*. The use of natural materials such as ironwood, bamboo, and timber planks in its construction constitutes an environmentally benign approach, as these materials are not only resilient to seawater but also provide a compatible substrate for coral reefs and small fish habitats. Furthermore, the use of such natural materials contributes additional sources of nourishment for smaller marine organisms. The marine fibers and algae that colonize the surfaces of these natural materials serve as a food source for small marine biota.

Notwithstanding this analysis, a counter-argument can be raised against the claim of the *Roma Toloh*'s eco-friendly nature. It could be

contended that the *Roma Toloh* also possesses an aspect that is not environmentally friendly, as its construction involves the felling of large quantities of ironwood and other hardwoods. This is indeed a valid objection. Therefore, for the eco-friendly value of the *Roma Toloh* to be considered comprehensive, it must be ensured that any timber harvesting adheres to sustainable forestry principles. This necessitates felling cycles that respect the growth intervals of these tree species and the implementation of consistent reforestation programs using indigenous species.

Second, the *Roma Toloh* embodies social and spiritual values. This is manifested in the very structure of the building itself. The *Roma Toloh* is designed with a tripartite spatial division, comprising a family room, a guest room, and a rear room or chamber. This spatial division carries profound meaning. Arranged according to the cardinal directions, the division of these rooms possesses both spiritual and social meaning as well as social functions. Such configuration reflects a holistic unity among human beings, between humans and nature, and between the Bajo inhabitants of the house and their ancestors. Within the structure and design of the *Roma Toloh*, the spatial philosophy of the Bajo people is crystallized.

Third, the *Roma Toloh* also stands as a manifestation of the principle of sustainability. Sustainability for all-natural elements, both human and non-human, represents the ultimate goal underpinning all core principles of ecosophy (McLaughlin 1995). The *Roma Toloh* embodies an ideal of enduring harmony between the structure and nature on one hand, and a reciprocal relationship between human beings and the created natural world on the other. This principle of sustainability is evidenced by the construction of the *Roma Toloh* from foundational natural materials and the way the Bajo-Wuring people accommodate the presence and life of marine biota through this specific choice of building materials. This harmony holds significant value amidst epochal changes driven by modernization, as it posits that nature should not merely be exploited, but must also be nurtured and safeguarded.

Fourth, within the wisdom embodied in the *Roma Toloh* of the Bajo-Wuring people lies ecosophical values, or what may be termed *value resemblance*. In other words, there is a significant conceptual intersection or congruence between the wisdom values inherent in the *Roma Toloh*

and those of ecosophy. This congruence is rooted in the recognition of the fundamental equivalence between nature and humanity in many respects. Such equivalence arises from their profound interdependence, which takes the form of a symbiotic and mutualistic relationship. Furthermore, both the wisdom of the *Roma Toloh* and ecosophical values emphasize the responsibility and obligation to preserve the harmony between human beings and nature. As the component of nature possessing the most advanced capacity to steward this harmony, human beings must assume this responsibility with the utmost seriousness. The sincere acceptance and diligent execution of this ecological responsibility is, ultimately, a fundamental strategy for human survival itself.

It must be acknowledged, however, that other aspects of the Bajo-Wuring settlement's reality stand in stark contradiction to the ecosophical ideals described above. Empirical field observation readily reveals a residential environment characterized by severe congestion, cluttered with waste, and pervaded by unpleasant odors. The waste does not originate solely from the local inhabitants but also from surrounding coastal areas, carried in by ocean currents due to the inward-slanting contour of the Wuring shoreline (Memang 2025). The repercussions are directly felt by the Bajo-Wuring fishers, manifesting as a marked reduction in catch yields and the necessity to undertake longer fishing voyages to secure an adequate harvest (Mansyur 2025).

This discrepancy between the ecosophical wisdom of the *Roma Toloh* and the empirical reality substantiates at least two critical propositions. First, traditional wisdom values, even when manifested in accompanying material symbols and rites, do not automatically engender ecosophical behavior. For such behavior to materialize, a deliberate process of internalizing these local wisdom values, fostering a conscientization regarding their importance, and instituting repetitive practices of habituation from an early age is requisite. Without these three dimensions, traditional wisdom values, including the ecosophical wisdom of the *Roma Toloh*, risk becoming a frozen, merely nostalgic heritage, devoid of transformative power. Second, even if these three conditions are met, there is no absolute guarantee that the community in question will be free from the ecological challenges it faces. This is because the sources of such problems may lie

elsewhere, while the affected community merely bearing the burden of externalities (such as waste) produced by others. An effective solution to an ecological problem almost invariably necessitates collective commitment and cooperative action within a broader interlinked network.

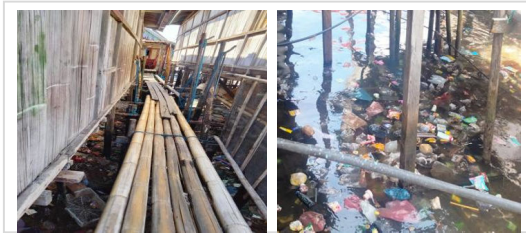


Figure 4. Accumulation of debris beneath the *Roma Toloh* in Wuring.

Source: Wilibrodus Putra Mones 2025

Conclusions

As a legacy of the local wisdom of the Bajo-Wuring community, the *Roma Toloh* embodies a harmony between human beings and the marine ecosystem. The use of natural materials such as ironwood and bamboo not only rendered it ecologically friendly but also encoded core values of unity with nature, adaptation to the maritime environment, and communal cooperation. However, the currents of modernization, which have precipitated a shift in building materials from wood to cement and concrete, have instigated a series of detrimental consequences, including the degradation of the marine ecosystem. This material transition has also eroded the intrinsic local wisdom values of the *Roma Toloh*, resulting in environmental deterioration and posing potential public health problems. Thus, amidst the relentless flow of rapid modernization, the *Roma Toloh* faces a profound dual challenge: to ensure its physical preservation and to continue serving as a source of ethical and spiritual inspiration for its contemporary inhabitants.

To preserve the *Roma Toloh* as a sustainable and environmentally friendly manifestation of local wisdom, a concerted effort from the Wuring community, governmental bodies, and other relevant stakeholders is required. Such concerted effort is to touch upon the following three things. First, the preservation of natural building materials, such as ironwood and bamboo, must be revitalized through targeted conservation

programs and facilitated access to these traditional construction resources. Second, education and outreach initiatives on the critical importance of this local wisdom for marine ecosystem integrity must be strengthened, enabling the community to understand the negative impacts of artificial building materials. Third, the development of environmentally friendly technologies should be promoted to support the sustainability of the *Roma Toloh* without causing ecological harm. Finally, the fourth, a system must be established to ensure that neighboring communities around Wuring fulfill their ecological responsibilities, thereby preventing their waste externalities from inundating the Bajo-Wuring settlement.

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Author(s) contribution

Antonius Bastian Limahekin refined the research proposal, directed and supervised the field research, verified the accuracy of the research findings and report, revised the final article prior to journal submission, and revised the article based on the reviewer’s feedback prior to publication.

Bernardus Subang Hayong evaluated the draft of research proposal and provided critical

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Onisimus Paul Hasler Sakan drafted the initial research proposal, conducted field observation and interviews, composed the preliminary article, and served as the team leader of field research.

Marianus Dedi Aunsuni drafted the initial research proposal, conducted field observation and interviews, and composed the preliminary article.

Petrus Fonsensus Loran Oke drafted the initial research proposal, conducted field observation and interviews, and composed the preliminary article.

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Benediktus Boli provided substantive feedback for article improvement prior to journal submission.