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PUBLIC PERCEPTION OF SUSTAINABLE ISLAND REGIONAL DEVELOPMENT: A CASE STUDY ON RAIJUA ISLAND

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Abstract

Background This study examines the perceptions of the Raijua Island community regarding the challenges of sustainable development in a small and remote island context, focusing on community participation and local wisdom as socio-cultural capital.

Methods This study used a qualitative case study approach to understand the Raijua Island community's perceptions and practices regarding sustainable development. Data were collected through in-depth interviews, focus group discussions, and participatory observation. These data were then analyzed using thematic analysis with inductive coding and categorization. The validity of the findings was ensured through source and method triangulation, as well as member checking.

Results The findings suggest that the inhabitants of Raijua Island interpret sustainable development as a means to address fundamental needs, including access to essential resources such as clean water, electricity, and infrastructure, while maintaining adherence to traditional values and ecological equilibrium. Local wisdom, encompassing traditional agricultural calendars, seasonal marine harvesting regulations, and lontar palm management, functions as an adaptive mechanism in response to limited natural resources and climate change.

Conclusion Community participation, particularly through customary deliberations, plays a crucial role in sustaining social and environmental harmony. These findings underscore the necessity of locally grounded and participatory sustainable development in small islands, ensuring alignment with the cultural and ecological context of the community.

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Keywords

Key words: Community Participation; Local Wisdom; Sustainable Development; Small Islands; Raijua

Introduction

Sustainable development, first articulated in the 1987 Brundtland Report and popularized after the 1992 Rio Earth Summit, integrates social, economic, and environmental dimensions within a unified framework ([Alimin, 2024](#); [Kates et al., 2005](#); [Ruggerio, 2021](#)). The idea has since evolved from a normative concept into a guiding paradigm for global development, influencing national planning systems and international cooperation. In Indonesia, the 1993 GBHN (State Policy Guidelines) defines development as a holistic transformation to improve societal welfare, while sustainability emphasizes the long-term continuity of this process ([Molenkamp, 2023](#); [Tahir Kasnawi & Ramli, n.d.](#)). The government's commitment to the Sustainable Development Goals (SDGs) is reflected in policies promoting infrastructure development, community participation, inequality reduction, environmental preservation, and inclusive education. These efforts are further reinforced through fiscal incentives, green investment, and technological innovations designed to harmonize economic progress with ecological resilience ([Adila et al., 2025](#); [Bappenas.go.id, 2018](#)).

Despite these advancements, the implementation of sustainable development in Indonesia reveals significant disparities between policy formulation and local realities. Over time, sustainable development has evolved from a normative concept into an integrated policy framework linking technological innovation, participatory governance, and evidence-based decision-making.

Empirical studies highlight that community participation ([Abidin, 2023](#)) and local wisdom ([Aldiansyah, 2021](#)) play crucial roles as socio-cultural capital that enhance sustainability outcomes. However, many government programs tend to adopt a top-down and formalistic approach that overlooks contextual differences across regions. This is particularly evident in remote and small island areas such as Raijua, where environmental challenges such as chronic water scarcity, steep terrain, and limited accessibility demand adaptive and location-specific strategies ([bps sabu raijua, 2024, 2025](#)). Achieving sustainable development in these contexts requires participatory governance models that empower local communities, integrate indigenous knowledge systems, and promote inclusive innovation. Thus, Indonesia's pathway toward sustainability depends not only on macro-level policy coherence but also on its capacity to translate global frameworks into grounded, context-sensitive practices that reflect the diverse ecological and cultural landscapes of the archipelago.

This research wants to explore how the Raijua community perceives and practices sustainable development, emphasizing place-based development that integrates traditional knowledge systems such as seasonal fishing restrictions, agricultural calendars, and cosmological rituals into planning ([Jacob, 2023](#)). The study aims to develop a model for integrating formal policies with local values to balance economic, social, and environmental sustainability. Theoretically, it contributes to the discourse on sustainability grounded in cultural and social capital, practically, it proposes an adaptive framework replicable in other small-island contexts in Indonesia.

This framework rests on two interrelated pillars that determine the effectiveness of sustainable development at the local level: community participation and local wisdom. Community participation refers to the active engagement of citizens in every stage of the policy cycle from planning and implementation to evaluation, ensuring that development initiatives reflect real needs and priorities. Through participatory mechanisms such as public

consultations, village meetings, and collaborative monitoring, communities not only gain a sense of ownership but also contribute to greater transparency and accountability in governance. Meaningful participation transforms citizens from passive beneficiaries into active agents of change who shape, negotiate, and sustain development outcomes. In this way, participation becomes both a democratic right and a practical strategy for enhancing the legitimacy and sustainability of public policies ([Marzouki et al., 2022](#); [Riyanto & Kovalenko, 2023](#)).

Local Wisdom defined as traditional knowledge and values sustaining ecological and social harmony ([Aldiansyah, 2021](#); [Sagajoka & Fatima, 2023](#)). It embodies adaptive strategies developed through generations of interaction with specific environmental and social contexts, offering insights into resource management, conflict resolution, and community resilience. Integrating local wisdom into formal policy processes allows for context-sensitive development models that respect cultural identity while promoting innovation grounded in local realities. In regions rich in traditional knowledge such as indigenous communities and small island societies. This integration not only safeguards cultural continuity but also strengthens environmental stewardship, ensuring that sustainability is achieved not through external imposition, but through the revitalization of endogenous values and practices.

The intersection of both forms cultural social capital, which strengthens identity and resilience ([Kaseng, n.d.](#)). Such integration fosters place-based development a strategy that situates local communities at the center of policymaking to ensure contextual relevance and long-term sustainability. Despite limited prior research on Raijua's socio-cultural adaptation mechanisms, this study demonstrates that aligning local participation and traditional wisdom with policy frameworks can enhance governance, environmental stewardship, and resilience in small island regions ([Haeril & Purnomo, 2019](#); [Ismail et al., 2024](#); [Lionel, 2014](#); [Nurhasanah & Van den Broeck, 2022](#)).

Methods

This study employed a qualitative approach with a case study design to explore the perceptions, values, and practices of the raijua island community within its unique geographical and cultural context. Following [Yin \(2018\)](#), the case study was chosen for its ability to address the “how” and “why” questions of social phenomena in real-life settings. epistemologically grounded in an interpretive paradigm, the research views social reality as a subjective construction of meaning formed through interaction, with knowledge generated inductively from local narratives ([Creswell, 2014](#)). The informant selection process was carried out in several stages using **purposive sampling** to identify key informants such as traditional leaders, village heads, community figures, and representatives of women's, fishermen's, and farmers' groups, followed by **snowball sampling** to recruit additional participants recommended by the initial informants. Data were collected through in-depth interviews, focus group discussions (FGD), and participatory observation involving traditional leaders, community figures, and residents of diverse ages and genders to capture both individual and collective perspectives.

The primary instrument in this study was the researcher, serving as the main tool for data collection, interpretation, and analysis. Supporting instruments included semi-structured interview guides, FGD guidelines, and observation sheets designed to explore community perceptions, participation, and local wisdom related to sustainable development. Data

analysis used a thematic approach involving coding, categorization, and interpretation to identify patterns in perceptions and practices related to sustainable development. The credibility and validity of the findings were ensured through source and method triangulation, member checking, and reflexive analysis, ensuring that results were empirically grounded, contextually relevant, and reflective of Raijua's socio-cultural realities.

Result and Discussion

Geographical and Climatic Context of Raijua Island

Raijua Island, a diminutive island in the Sabu Raijua archipelago, exhibits distinctive geographical characteristics, including a hilly topography characterized by dry and barren land. These conditions impose limitations on the availability of fertile land for agricultural use and underscore the island's ecological vulnerability. Raijua's geographical characteristics, including its relatively small area and considerable distance from major economic centers, have resulted in challenges related to isolation. These challenges have had a negative impact on transportation access, goods distribution, and basic community services. The aforementioned geographical factors exert a direct influence on the lifestyle and adaptation strategies of the local community, particularly with regard to the management of limited natural resources ([bps sabu rajjua, 2024](#)).

With regard to its climate, Raijua Island is classified as semi-arid, exhibiting low and uneven rainfall throughout the year. The short rainy season often fails to guarantee adequate water availability, while the long dry season causes droughts almost every year. These extreme climatic conditions have far-reaching consequences, including the reduction of water availability for household needs and significant economic impact on agriculture, livestock, and other sectors that depend on natural resources. The community faces a dual challenge: how to survive in a situation of water scarcity while maintaining the sustainability of family economic activities. In this context, the Raijua community has developed various forms of local wisdom and adaptive strategies to overcome geographical and climatic limitations. The utilization of palm trees, for instance, has evolved into a pivotal component of life, given their capacity to generate a range of products that possess economic value, in addition to serving as a substitute food source. Furthermore, customary social systems play a role in regulating resource management, including land distribution and water management. Consequently, the geographical and climatic challenges confronting Raijua underscore the community's vulnerability and demonstrate its capacity for adaptation and resilience in sustaining life on this diminutive, arid, and isolated island.

Development Challenges due to Topographical Conditions

The topography of Raijua Island, characterized by a predominance of hills, poses significant challenges to the pursuit of sustainable development. One of the primary challenges confronting the region is the issue of physical isolation, compounded by limited accessibility. The challenging topography hinders the construction of infrastructure, including roads, bridges, and electricity networks, which in turn negatively impacts human mobility, the distribution of goods and services, and investment interest in the local economy. Access to Raijua Island is only possible by sea transportation via motorboat from Seba Port on Sabu Island. Ferries that transit Raijua on inter-regional routes in East Nusa Tenggara (NTT) also facilitate the region's transportation network. However, the infrastructure for road transportation in Raijua remains underdeveloped. The quality of the roads varies significantly across the region; while a limited portion of the area has been surfaced with a rough asphalt, the remainder consists of cement roads or compacted limestone, which is susceptible to damage.

Moreover, the vulnerability to erosion and soil degradation has emerged as a substantial ecological concern. Raijua Island exhibits a geomorphological pattern of plains and weak undulating morphology, which facilitates the rapid dissemination of rainwater in all directions. This phenomenon is accompanied by a significant potential for erosion. Despite the relatively low precipitation levels in this region, during periods of heavy rainfall, the runoff from these slopes can lead to erosion, particularly in areas lacking vegetative cover. This phenomenon is compounded by the presence of critical soil conditions and a pervasive trend of deforestation, leading to a decline in agricultural productivity and an exacerbation of the local ecosystem's vulnerability to further degradation.

Another challenge is the high cost of constructing and maintaining basic infrastructure. The Raijua Subdistrict Center is situated in a coastal region, where a subdistrict office and several public facilities dedicated to health, education, and transportation can be found. However, the development of facilities and infrastructure remains significantly constrained. The construction of telecommunications towers has occurred at several locations; however, signal distribution remains uneven, and network strength remains inadequate in numerous areas. This imbalance is indicative of the state's constrained capacity to develop remote island regions and underscores the necessity for a development approach that is adaptable to local geographical and socio-cultural conditions.

The Impact of Low Rainfall on Natural Resource Management

The low rainfall conditions that have persisted on Raijua Island have had significant ramifications for the management of natural resources, including but not limited to the following:

a. Limited Water Resources

Rainwater constitutes a primary source for irrigation and clean water supply for the community. Given the limited rainfall and brief rainy season, the availability of water is contingent on the implementation of effective water storage and conservation strategies. The implementation of water management systems, particularly rainwater storage facilities such as small-scale reservoirs, retention ponds, and rainwater harvesting devices used at the household level, is imperative. In light of the constrained water resources, local governments must adopt a strategic approach to meet household water needs. Conversely, agricultural policies must consider the varying degrees of water scarcity experienced by communities across the island. The following table presents a summary of the descriptions provided by participants during the focus group discussions (FGDs) conducted with the community regarding the limited rainfall in the Raijua region:

Table 1. Community Memories of Rainfall on Raijua Island

Years	Rainfall Collected	Rainfall Period
to 2015		March begins to dry up
2016	2-3 profiles/water tendons*	December – March
2017	Approximately 1 profile*	December 1-2 times, February stops
2018	Approximately 1 profile*	December 1-2 times, February stops
2019	Approximately 1 profile*	December 1-2 times, February stops
2020	Approximately 1 profile*	December 1-2 times, end of January/early February stopped
2021	More than 3 profiles*	October – April
2022	More than 3 profiles*	October – December

2023	More than 3 profiles*	January – March
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Note: * Capacity/volume varies between 700-1000 liters

The scarcity of rainfall necessitates that the community depend on wells as a primary source of water for essential activities such as drinking, cooking, and personal hygiene. The situation is further exacerbated by the onset of the dry season in August/September, which persists until the onset of the rainy season. This is due to the limited number of operational wells in Raijua, which necessitate a foot journey to access. The execution of this work is typically undertaken by women and children. The coastal plains of Raijua are characterized by the presence of multiple water sources; however, these sources are located a considerable distance from the local population, requiring a journey of three to four hours on foot. The transportation of water is further complicated by the necessity of a carrying pole to assist in the transport of two buckets, which are the maximum capacity for carrying. In addition to the distance, other factors that complicate the task of locating water include the time spent waiting in line and the hilly topography of the area. The island of Raijua is home to numerous reservoirs, many of which lack fencing. These reservoirs serve as natural water sources for animals in the region, where free-range livestock farming is prevalent.

The local government has endeavored to construct wells; however, not all excavation sites have yielded water. According to local residents, drilling wells (bore wells) is not a viable option for Raijua due to the island's porous soil, which can have deleterious effects on its sustainability. Two major springs, located in Menanga and Lobarawo on Raijua Island, provide a stable water supply throughout the year. However, the implementation of piping infrastructure to channel water from these springs poses significant challenges due to their coastal location, a considerable distance from residential areas, and the presence of challenging and steep access roads. During the protracted dry season in Raijua several years ago, water tank trucks were responsible for collecting water from the Menanga spring and subsequently selling it to the community. However, the selling price was exorbitant, ranging from Rp 350,000 to Rp 500,000 per 5,000 liters, and even reaching Rp 750,000 at one point.

b. Stress on Local Ecosystems

The ecological system on the dry island of Raijua is particularly susceptible to the impacts of climate change. According to the community, the most pressing issue is drought. The scarcity of rainfall has multifaceted ramifications for the community, impeding its capacity to satisfy its clean water requirements and exerting a deleterious effect on crop productivity. This phenomenon also disrupts the availability of drinking water for animals and contributes to an increase in local temperatures, a process that has the potential to expedite the rate of natural habitat degradation.

The agricultural practices of the people of Sabu Raijua are characterized by a single annual harvest, which occurs during the rainy season. This harvest is dedicated to the cultivation of mung beans and rice. However, they also engage in a variety of productive activities throughout the year, including the extraction of palm sap and the preparation of food. A focus group discussion with women on Raijua Island revealed that the primary crops cultivated by the local populace are beans, particularly mung beans, black beans, peanuts, and sorghum, in addition to corn. In certain regions with convenient access to wells, some individuals also cultivate a variety of vegetables, including mustard greens, kale, tomatoes, and cayenne pepper. However,

it is important to note that precipitation significantly influences the quantity of harvest produced.

c. Agricultural Adaptation and Increased Disaster Risk

Agriculture, as the primary economic driver at the local level, is susceptible to volatile climatic conditions. The dependency on minimal precipitation renders it rather challenging to anticipate a complete reliance on agricultural sectors, given the topographical characteristics of Raijua Island, which is characterized by a hilly terrain, thereby hindering the feasibility of implementing extensive irrigation systems. This situation underscores the imperative for nature-based conservation efforts to curtail the rate of ecosystem degradation and ensure the sustainability of biological resources. The community on Raijua Island must cultivate trees that are resistant to extreme dry climates but can also collect rainwater and have economic value that can be exploited by the community. The lontar palm (*Borassus flabellifer*) is a tree native to dry areas that is widely found in Sabu Raijua Regency and requires cultivation due to its significant value to the local community. The plant is utilized for various purposes, including construction materials and roofing, weaving for household equipment and handicrafts, and processing sap for the production of Sabu Raijua's distinctive liquid brown sugar. This sugar is consumed and marketed as a local product.

Local Wisdom Values of the Sabu Raijua Community

The community of Sabu Raijua is characterized by a rich cultural heritage that has been transmitted through generations. Sabu's philosophy is predicated on the notion that human existence is inextricably linked to the overarching paradigm of the universe. One illustration of this phenomenon is the tree known as lontar or kepue due in the local Sabu language. For the people of Sabu, the lontar tree is of profound significance, representing a pivotal aspect of their cultural identity and historical legacy. As previously mentioned, the Orang Sabu community relies on the lontar tree for all aspects of their lives. However, from a cultural perspective, the relationship between the Sabu people and their environment is characterized by a harmonious symbiosis, as depicted in the lontar, the traditional Sabu Raijua manuscript. This concept is deeply entrenched in the Sabu Raijua belief system, where it plays a pivotal role in understanding the relationship between humanity and the natural world. Lontar also serves as a conduit for establishing a harmonious connection with the divine, also referred to as the Deo Ama ([Anisa et al., 2025](#)).

However, for the people of Sabu Raijua, the fundamental principle is that all aspects of human life must be in harmony with nature. This is because the overall condition of the universe is a representation of how humans treat nature, whether good or bad. As is the case in the majority of indigenous societies, the Raijua people recognize the concept of taboos and rules that determine what is permissible and what is not. These taboos and rules have been passed down from generation to generation. This practice entails limitations on activities and territories. These territorial restrictions are rooted in the Sabu Raijua people's conception of specific locations as sacred according to their customary beliefs.

Table 2. Traditional Calendar of the Sabu Raijua Community Related to Major Agricultural Activities.

Month (Gregorian)	Month Name (in Raijua Terms) and Activities
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Calendar)	
November – December	<i>Matina</i> : calling the spirits of ancestors
December - January	<i>Ko'oma</i> : preparing crops and clearing fields
January - February	<i>Wari Ma</i> : planting mung beans and sorghum
February – March	<i>Leko Wila</i> : mung beans begin to sprout
March - April	<i>Daba</i> : mung bean harvest
April - May	<i>Bhanga Liwu Ae (Bhui Ihi)</i> : sorghum harvest
May – June	<i>Bhanga Liwu Ro</i> : after sufficient mung beans and sorghum
June - July	<i>Bhagarae Ae</i> : month of great celebration
July – August	<i>Bhagarae Ro</i> : month of hunger
August - September	<i>Rokoko</i> : when <i>tuak</i> tapping (tapping palm sap) begins
September - October	<i>Wadu A'a</i> : abundant <i>tuak</i> harvest
October – November	<i>Wadu A'ri</i> : <i>tuak</i> begins to decrease

The implementation of the traditional Sabu Raijua community's life throughout the year, as illustrated in Table 2, is marked by the performance of rituals and traditional celebrations. These practices signify human synergy with nature on a cosmic level. Moreover, rituals are employed to rectify the relationship with nature in instances where human actions deviate from traditional customs. As articulated by the two traditional leaders on Raijua Island:

“Why did Raijua experience drought for several years? According to tradition, the government is now building a road where there is a sacred stone that should not be moved. When the stone is moved, the earth will be angry because something is wrong that affects the climate, resulting in reduced rainfall. And because of that, drought will occur.” (Interview with Father Soleman Biha, April 15, 2023, Raijua).

Community Perceptions of Sustainable Island Development, Local Wisdom, and Community Participation

A series of interviews with prominent community leaders on Raijua Island yielded several key insights concerning the significance of community involvement and local knowledge in the pursuit of sustainable development, particularly within the context of the island. The majority of Raijua residents interviewed considered participation in decision-making, especially through traditional deliberation, to be very effective in addressing environmental issues and natural resource management. The community perceives itself as having legitimate authority to preserve the environment while optimizing local economic activities. This phenomenon can be attributed to the historical and cultural significance of the island, which has served as a long-standing settlement for the community. The population of Raijua Island is predominantly composed of native inhabitants, with the exception of civil servants (ASN) who are assigned to Raijua District and a number of traders from South Sulawesi (Makassar, Bugis) who subsequently settled on the island due to commercial interests. A multitude of individuals interviewed have attested to the fact that the majority of the indigenous populace inhabiting Raijua Island do not entertain the prospect of departing from the island, with the exception of those in the youth demographic who pursue educational or occupational endeavors on the main island of Sabu Island, in Kupang (the provincial capital), or in other locations.

Discussions with Raijua residents, as well as with a number of community leaders and local

officials, have made it evident that community involvement in the development process in Raijua is imperative. This is due to the fact that the community possesses a profound comprehension of the region, including the island's vulnerabilities and the issues and challenges faced by the local community. The community is also aware of the government programs that have been planned by the government at the regency, sub-district, and village levels, as well as the processes that have been undergone in the planning process. Moreover, the community is cognizant of the prevailing circumstances and the relevant policymakers who must be incorporated into the deliberative processes, encompassing both the formulation and execution of development programs. The people of Raijua have traditionally inhabited this island, characterized by conditions of scarcity. Consequently, the implementation of development programs must address the limitations experienced by the local population. However, it is imperative that each intervention be informed by a comprehensive understanding of the prevailing circumstances and natural conditions in Raijua.

The Sabu Raijua community's cultural identity is inextricably linked to its cultural roots and customs, which are characterized by a set of traditional rules. These regulations encompass a prohibition on the exploitation of the sea for a period of 45 days during the months of September and October, along with stipulations concerning the utilization of land and natural resources, in addition to other customary rituals. The cultural roots and customs of the Sabu Raijua tribe are embedded in the Jingitiu belief system. In contemporary Sabu Raijua society, there has been a notable shift towards the adoption of formal religions that are recognized in Indonesia. However, the values of their ancestors' traditional wisdom are regarded as being conducive to environmental harmony. This is considered a tangible manifestation of local wisdom that has been effective in preserving the ecosystem.

Local spiritual leaders bear a responsibility to ensure that the community lives in harmony with nature, thereby protecting the community from disaster. Admonitions, prohibitions, and traditional rituals are the means used to maintain this harmony, preserve human life, and even ensure prosperity. The principles and practices they uphold and embody are deeply rooted in the historical continuity of their lineage, guided by the collective wisdom of their ancestors, a tradition that has been meticulously preserved through the ages. Activities organized by communities that do not adhere to local beliefs or by the government never cause conflict with local believers and leaders. Traditional leaders have been known to voice strong disapproval of government programs that have been accused of environmental exploitation. An illustration of this phenomenon is provided by the seaweed cultivation program.

“Actually, Deo Rai's father did not agree, because the sea is often dredged. When dredging to harvest seaweed, fish habitats will be destroyed. Even the location of the meeting place will be disturbed. The elders already have negative thoughts about the future of life in the sea. The effort to harvest seaweed will indeed bring benefits to the community, but on the other hand, it will have an impact on the marine life in the sea. We cannot prohibit it because it is a government program, but we are giving our views on what is good and what is not good”. (Interview with Kenuhe and Deo Rai, April 17, 2023, Raijua).

The people of Raijua Island subscribe to the belief that sustainable development must be grounded in the integration of traditional values and government policies. A participatory approach fosters innovation, thereby leveraging local knowledge to inform the development of natural resource management regulations that are more adaptable to evolving circumstances.

“Accessing the Lobarawo spring is rather difficult, as most of the local community believes that the spring is located on sacred ground. Some also say that there is a sacred stone that cannot be moved. However, I (note: the village head) have recently tried to approach the community there. The community says that we can use the water. We can think of a way to draw the water up a little. Perhaps we can use a gravity-fed piping system, because the spring is on the coast, with a slope of about sixty degrees. Perhaps we need to use a large motor (water pump). Hopefully next year we will be allowed to use Village Funds. But it seems we need to do it in stages, so that each year we can work little by little.” (Interview with the Village Head of Bolua, April 16, 2023, Raijua).

Preliminary findings from fieldwork and discussions with local informants suggest a correlation between the Raijua community's conception of sustainable development and its relevance to their daily lives, traditional knowledge, and collective participation. Their responses demonstrate that ideal development is development that can guarantee access to basic needs such as clean water, roads, and electricity, while still respecting the traditional and spiritual values that govern human relations with nature. The active participation of the local community, including women, is indicative of the presence of local democracy, which functions as social capital in maintaining socio-ecological harmony. Consequently, these findings address the research questions and accomplish the research objectives, namely to understand the perceptions of small island communities in the context of sustainable development and to affirm the relevance of community-based development and local wisdom theories as a conceptual foundation for island development.

Table 3. Synthesis of Findings, Objectives, Questions, and Theories

Aspect	Field Findings (Interviews)	Relevance Research Questions to	Relevance Research Objectives to	Relevance Theory to
Basic needs & infrastructure	Limited clean water, electricity & transportation difficulties (Sub-district Head, Village Head, Dueweli Residents)	How does the community perceive development? → Development is understood as the fulfillment of basic needs	Understanding community perceptions of sustainable development.	Sustainable small island development emphasizes the importance of basic needs as a foundation
Local wisdom & spiritual-ecological	Sacred stones, nyale rituals, well rules (Bapa Soleman, Women's Group, Menanga Discussion)	How does local wisdom influence development?	Exploring the role of local wisdom in sustainability	Local wisdom approach → local wisdom maintains ecological balance
Community participation	Water queue rules, village deliberations, women's involvement (Dueweli, Village Head, Women's FGD)	How does community participation influence development?	Demonstrating that communities are actively involved, not passive	Community-based development & social capital theory support the importance of inclusive participation
Critical	Government	What are the	Connecting	Bottom-up

reflection	programs sometimes do not meet local needs	challenges of development on small islands?	perceptions with policy realities	development theory vs. top-down → the need for policy integration & locality
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Conclusions

This study reinforces the argument that sustainable development on Raijua Island is fundamentally contingent upon community participation and the preservation of local wisdom that have evolved through generations of adaptation. For the people of Raijua, development is not confined to physical infrastructure or technocratic interventions; rather, it constitutes a holistic process of fulfilling essential needs such as access to clean water, energy, and mobility while maintaining ecological integrity and honoring the spiritual and cultural values embedded in their social fabric. Traditional deliberation systems, ecological norms, and practices such as the utilization of *lontar* trees and local agricultural calendars serve as adaptive mechanisms that sustain socio-ecological balance and reinforce community resilience in the face of water scarcity, challenging terrain, and climate variability. These findings affirm that genuine development emerges from within the community itself, reflecting the interdependence between cultural identity, environmental stewardship, and collective well-being. From policy perspective, practical recommendations emerging from this study emphasize the importance of empowering communities to build greater resilience in the face of natural constraints. The enhancement of community competencies in water management, soil conservation, and climate-adaptive agricultural practices constitutes a strategic approach to fortifying economic and ecological resilience. It is imperative that a collaborative effort be initiated among the government, research institutions, and the private sector. This collaborative effort must focus on the provision of training, environmentally friendly technologies, and adaptive infrastructure. The primary objective of this initiative is to address issues of water, accessibility, and isolation. In addition, the promotion of incentives for local innovations is imperative.

Despite these contributions, this research is not without limitations. The analysis primarily employed qualitative and descriptive data, which may not fully capture the quantitative or longitudinal dynamics of socio-ecological transformation. Moreover, the study's findings are context-specific and may have limited generalizability to other island communities with different cultural or environmental settings. Future research should adopt comparative and interdisciplinary approaches, incorporating spatial data analysis, participatory mapping, and mixed-method evaluations to deepen understanding of localized sustainability practices. Expanding collaboration across multiple small-island contexts will be critical to refining adaptive governance models that effectively bridge local wisdom with national and global sustainability agendas.

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