

Crisis Communication Based on Local Wisdom: The Voice of Indigenous Women of Bayan Indonesia for Climate Action

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ABSTRACT

This study aims to examine the role of Bayan indigenous women in addressing the global climate change crisis. Climate change has created various ecological threats that affect the environmental, social, and cultural sustainability of indigenous communities. In patriarchal indigenous societies, women are often positioned as subordinate actors, their roles restricted to the domestic sphere. This system perpetuates rigid gender roles as men as leaders and primary decision-makers. Nevertheless, indigenous women play a strategic role in maintaining traditions, protecting the environment, and strengthening social solidarity within the community. This study is significant because limited research has specifically positioned indigenous women as central actors in culturally based crisis communication. This research employs a qualitative approach using interpretive phenomenology to gain an in-depth understanding of the social realities of the Bayan community. Data were collected through in-depth interviews, participatory observation of traditional rituals, and documentation of cultural practices. The findings reveal that Bayan rituals reflect three fundamental relationships: the relationship between humans and God, the relationship among human beings, and the relationship between humans and nature. Within these ritual practices, women serve as cultural communicators, custodians of ecological values, social mediators, and agents of intergenerational knowledge transmission. The findings demonstrate that Bayan indigenous women construct a distinctive model of crisis communication rooted in spirituality, collectivity, and local wisdom. This model contributes significantly to community resilience and the preservation of both cultural traditions and the natural environment in the face of climate change.

Keywords: *Crisis communication, indigenous women, climate change, local wisdom.*

INTRODUCTION

The impact of climate change has been experienced globally, ranging from extreme rainfall that triggers flash floods, prolonged droughts, forest fires, coastal flooding due to rising sea levels, and increasing hunger and malnutrition, to displacement, violence, and various physical and mental health problems (United Nations, n.d.). Among the most vulnerable groups are women (IRID, 2022), children (UNICEF, 2021) and indigenous peoples (United Nations, 2025). In times of climate-induced disasters, women are particularly at risk, especially those with dual roles in the household and who face economic constraints.

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E-ISSN: 2289-1528

<https://doi.org/10.17576/JKMJC-2026-4202-05>

Received: 17 April 2025 | Accepted: 21 October 2025 | Published: 30 June 2026

According to the United Nations, 80 percent of people displaced by climate change are women (Wilkinson, 2021). In refugee camps, women face various challenges related to their health and reproductive rights, which are often neglected.

Women belonging to indigenous communities face multiple layers of vulnerability. Indigenous peoples are communities living on ancestral lands over generations, maintaining distinctive socio-cultural systems and possessing sovereignty over land and natural resources. Their lives are governed by customary law and institutions that safeguard community sustainability. Unfortunately, their existence is often marginalized for reasons of development. Climate change exacerbates this marginalization by threatening the natural environment that underpins their survival. In many customary law societies, women continue to encounter patriarchal cultural systems (Kemitraan, 2023). They are often denied land ownership, excluded from decision-making processes, and deprived of equal social and economic rights. Patriarchal values remain deeply entrenched, granting men priority in leadership and consultation, while women's voices are undervalued or ignored. Despite bearing the direct brunt of climate change impacts, women contribute minimally to greenhouse gas emissions, revealing a stark injustice.

Women hold significant potential to be central agents of change in climate mitigation and adaptation. According to the United Nations Framework Convention on Climate Change in IRID (2022), women constitute 43 percent of farmers in developing countries. Agriculture is closely tied to indigenous communities, who manage natural resources sustainably through local wisdom and practices. For them, rituals and traditions are not merely cultural expressions but mechanisms for ensuring survival, ecological balance, and social harmony. In 2023, Asia-Pacific Climate Week brought together Indigenous Peoples in Johor Bahru, Malaysia. Participants emphasized the importance of traditional knowledge in adaptation, mitigation, and responding to loss and damage (UNCC, 2023). According to the Rights and Resources Initiatives Report (RRI, 2022), Indigenous peoples protect one-third of the world's remaining forests and safeguard 80 percent of global biodiversity, despite representing only 5-6 percent of the world's population.

One unique case in Indonesia is the Bayan indigenous community, located within the sovereign customary territory of Bayan in West Nusa Tenggara Province, Indonesia. As descendants of the Sasak Bayan ethnic group, they traditionally inhabit the foothills of Mount Rinjani, the highest peak on Lombok Island. Their livelihoods primarily include farming, hunting, livestock rearing, gardening, and fishing. Over time, some members have also engaged in trade, tourism, and civil service (BRWA, 2024). While embracing certain aspects of modern life, the Bayan people remain deeply committed to preserving their cultural traditions.

The Bayan indigenous community is also known as the *Wetu Telu* Muslim community, representing a distinctive form of cultural Islam in Indonesia. Their religious identity emerged through a dialectic between Islam and Sasak culture, producing a unique syncretism. Islam has been integral to the Bayan people since their ancestors embraced it in Lombok. Their worldview emphasizes three interrelated dimensions of life, they are: human relations with God (*hablum-minallah*), with fellow humans (*hablum-minannas*), and with nature (*hablum-minal 'alam*). Religious rituals and customary practices are thus not separated but interwoven, reflecting a holistic understanding of existence, spirituality, and environmental stewardship.

The research question of this study arises from the recognition that climate change disproportionately affects vulnerable groups, particularly indigenous women. Although they possess extensive local knowledge for maintaining ecological balance, their roles are frequently marginalized within patriarchal social systems. This context leads to the central inquiry: how do Bayan indigenous women contribute to addressing the climate crisis? Specifically, how do they practice crisis communication, and in what ways are their positions and authority established within this process? The objectives of this study are three-fold to analyse the role of Bayan indigenous women, to examine the contribution of local wisdom in climate change adaptation and mitigation, and to formulate a crisis communication model that strengthens women's agency in responding to climate challenges at the community level.

LITERATURE REVIEW OR RESEARCH BACKGROUND

A number of previous researches has examined the relationship between indigenous peoples and climate change from multiple perspectives. For instance, Leal and Carreño (2024) investigated indigenous women in the Amazon and explored how their communities construct environmental discourse, articulate motivations, identify opportunities, and navigate obstacles faced by women's organizations. Their findings confirm that indigenous women make critical contributions to climate change mitigation and adaptation (Leal & Carreño, 2024). Similarly, research on indigenous women in Western Canada, showing that although they experience marginalization within social structures, they continue to voice their aspirations regarding the climate crisis, which directly affects their ancestral lands. The knowledge and experiences of indigenous women have proven essential for informing policy-making and government interventions (Datta et al., 2024).

In the Indonesian context, diverse indigenous groups also display distinctive forms of communication and cultural resilience. Indigenous communities possess traditional communication systems that function both to preserve culture and to disseminate information. Research in the Tolon District, Ghana, for example, highlights how rural communities rely on traditional media such as storytelling, drumming, and gong beating as effective means of communication (Abdulai et al., 2023). These practices illustrate how indigenous peoples employ cultural creativity to address challenges, strengthen resilience, and sustain community well-being.

Then, the Bayan indigenous community in Lombok remains deeply rooted in its beliefs and customs despite increasing exposure to technological modernization. Traditional communication underpins social harmony and collective identity within the Bayan community (Khusnia et al., 2022). They practice family-based communication patterns (primary) alongside community patterns (circular and star-net), which facilitate reciprocal interaction between communicators and communicants (Nufus et al., 2023). While the community also engages with digital media to expand their horizons, they consistently preserve traditional communication through the continuity of customary institutions and rituals. This persistence is reinforced by ancestral values, the authority of traditional leaders, and customary sanctions that ensure collective adherence to cultural traditions.

Extensive research has also been conducted on local wisdom for disaster mitigation. For instance, a study on the use of folk media for disaster mitigation found that communication models utilizing traditional media such as *koa* (a chain message transmitted through echoing sounds to warn of danger) and *naton* (traditional poetic expressions) are effective tools for disaster information literacy (Andung et al., 2024). In Gorontalo, disaster

mitigation efforts remain heavily reliant on formal government structures, while the potential of local wisdom has not yet been fully optimized (Laraga, 2022). Other research on the Baduy community revealed that they preserve local wisdom through agricultural regulations and the construction of earthquake-resistant houses made from natural materials (Suparmini et al., 2014). In Wajok Village, West Kalimantan, the research highlighted the practice of *belalek*, a form of mutual cooperation employed by the community to cope with floods, droughts, and forest fires (Herawati, 2019).

Despite the growing number of studies on local wisdom, no research to date has specifically examined how indigenous women construct crisis communication in the face of climate change. In the Bayan community, women hold a particularly significant role in both cultural preservation and ecological management. The expression "*Gumi Bayan Gumi Nina*" (Bayan land is women's land) underscores the perception of women as sources of fertility and life within the Bayan indigenous worldview. Therefore, it is essential to investigate how Bayan women not only fulfil cultural roles but also act as key agents of crisis communication in responding to the climate crisis.

This study employs two theoretical frameworks, crisis communication theory and ecofeminism. Crisis communication theory (Coombs, 2007; Heath & O'Hair, 2009) provides a lens to explain how communities respond, adapt, and develop communication strategies when facing crises, including environmental crises. Within the context of indigenous customs, this theory demonstrates that local wisdom functions not only as cultural heritage but also as a strategic form of crisis communication.

Meanwhile, the ecofeminist approach offers a critical perspective on the intersections of ecology, gender, women's agency, and indigenous knowledge. Ecofeminist scholars argue that women's lived experiences are deeply interconnected with environmental sustainability, and that the marginalization of women often coincides with ecological degradation. In addition, key studies on the nexus of gender, ecology, and indigenous epistemologies (Whyte, 2018) affirm that indigenous women's ecological knowledge is not merely cultural heritage, but a living system of knowledge that actively supports community resilience. Accordingly, this study not only explores the communication practices of Bayan women but also situates them within the broader global discourse on the ecofeminist resilience of indigenous peoples.

Building on the literature review, this research focuses on how Bayan indigenous women confront the climate crisis through a crisis communication model rooted in local wisdom and informed by an ecofeminist approach. The main objective is to address the existing research gap concerning the communicative dimension of indigenous women in the context of climate change, while simultaneously highlighting the strategic role of Bayan women in sustaining both cultural traditions and ecological balance.

METHODOLOGY

This study employs a qualitative approach with an interpretative phenomenological design. The primary focus is to explore in depth how the Bayan indigenous community, particularly women, understand, experience, and construct meaning from their lived realities in relation to climate change adaptation and mitigation. In other words, the study seeks to capture how participants interpret the challenges they encounter. The interpretative phenomenological approach enables the researcher to reveal the subjective experiences of Bayan women as authentic and significant through narratives, expressions, and everyday practices, allowing

the social context under study to be understood holistically and reflectively (Smith & Osborn, 2015).

Data were collected using three main techniques. First, semi-structured interviews were conducted to elicit the experiences of Bayan women. While the interview guide was prepared in advance, it remained flexible to accommodate new insights that emerged in the field. Second, non-participant observation was undertaken by directly observing activities, behaviors, and cultural symbols without engaging in them. Third, documentation was used to examine written records, archives, and images related to the history and practices of the Bayan indigenous community.

Informants were selected through an emergent sampling strategy, determined at the outset of the research and refined throughout fieldwork to ensure relevance to the research objectives. Key informants included traditional leaders, community leaders, and Bayan women. In total, eleven (11) informants from two indigenous villages, Bayan and Karang Bajo, participated in the study. These villages were chosen because they have consistently preserved their traditions and cultural practices to the present day.

Data analysis followed interpretative phenomenological procedures. The first stage involved repeatedly reading all data from interview transcripts, field notes, and documents. The researcher then made initial notes, attending to keywords, metaphors, and expressions that reflected the informants' significant experiences. From these notes, emergent themes were developed as patterns of meaning drawn from the participants' narratives. The next step was to connect these themes to identify broader networks of meaning. Analysis was conducted ideographically, focusing on each informant individually, before moving toward a nomothetic stage that sought similarities and differences across all participants.

In interpretative phenomenological research, the position of the researcher is crucial. The researcher serves not only as a data collector but also as the primary instrument of the study. In this case, the researcher positioned themselves as an outsider seeking to understand the social world of the Bayan indigenous community. Although one member of the research team was from North Lombok Regency, none were part of the Bayan community. This positionality presented both advantages and challenges. As outsiders, the researchers could maintain critical distance and objectivity, while limited familiarity with local culture required a deep process of adaptation.

The research was conducted over one year, during which the researchers resided for four months in the homes of residents in Karang Bajo. This immersion allowed for direct observation of daily life while building trust with informants. During interviews, the researchers consciously reflected on potential biases arising from their outsider position and academic backgrounds, and worked to mitigate these by creating space for the voices and narratives of indigenous women themselves. Reflexivity was maintained through field notes that captured not only empirical observations but also the researchers' reflections on interactions, emotions, and interpretations throughout the study. In this way, the experiences of Bayan women were not forced into the researchers' framework but were presented as the women themselves understood their lives, culture, and responses to climate change.

RESULTS AND DISCUSSION

a. The Role of Women in Bayan Tradition

The traditions of the Bayan indigenous community are reflected in customary law, forest management, and sacred ritual practices. These rituals are not merely ceremonial activities,

but function as “communication texts” that convey moral messages about the interconnectedness between humans and nature. For instance, the river blessing ritual (*selamet olor*) emphasizes the community’s attachment to water sources, where the women involved are not limited to domestic roles but also serve as environmental communicators, transmitting messages of conservation to the wider community.

These diverse traditions serve several important functions: (1) Spiritual function. Closely related to religious practices, these traditions reflect the application of religious teachings. The indigenous people of Bayan are deeply religious and place great importance on ritual observances. (2) Social function. Traditional ceremonies act as mechanisms of social control, social cohesion, and the reinforcement of social norms, strengthening community relationships through bonds of friendship and solidarity. (3) Tourism function. These traditions also promote cultural values and serve to introduce the Bayan customary area as a tourist destination, attracting both local and international visitors. (4) Crisis mitigation and adaptation function. Certain rituals, such as *selamat asuh* (the ritual of surviving foster care), represent forms of indigenous concern and attachment to nature and the environment, functioning as symbolic practices of resilience in the face of crisis or disaster situations. In this sense, rituals are not only cultural practices but also communicative acts that embody moral teachings about the human and nature relationship.

The Bayan community in Lombok embodies a socio-cultural system in which women hold a central and indispensable position in ritual life. Contrary to common assumptions that ritual and public spaces are dominated by men. In Bayan women play crucial roles as organizers, ritual specialists, and custodians of cultural continuity. First, *ngesokin bangket* (agricultural vow ritual). *Ngesokin bangket* is a personal ritual closely tied to the agricultural cycle. It is performed after the harvest season as an act of gratitude to God and as a prayer for fertility and abundance in the next planting season. This ritual reflects the vow (*saur ucap*) of rice field owners who, having reaped their harvest, express gratitude and reaffirm their commitment to sustaining agricultural life. Women play a key role in its performance, symbolizing their connection with fertility, life, and continuity (RG, Informant Y7).

Second, institutionalized female roles in ritual life. The role of women in rituals is not merely a spontaneous activity or technical assistance, but rather predetermined, regulated, and formally recognized within the customary system, including:

1. *Inan Meniq* (mother of rice). *Inan Meniq* is a hereditary female office responsible for coordinating community members in managing produce collected for rituals. She oversees the distribution of food provisions for ceremonies such as *Maulud adat*, and performs *sembeq*, the ritual application of betel leaves and herbs on the forehead as a symbolic act of blessing and protection. *Inan Meniq* also leads the rice-pounding ritual, after which the rice (*meniq*) is ritually washed in the river, signifying purification and renewal (DM, Informant Y1).
2. *Inan Pedangan* ensures the sufficiency and proper arrangement of food prepared for rituals. Working in tandem with *Inan Nasiq* (responsible for rice preparation) and *Aman Jangan* (a male cook preparing side dishes) (SR, Informant Y2). During the ritual, there is an equitable division of roles between men and women, particularly in food preparation (SA, Informant Y9). This role highlights the collaborative gender dynamics present in ritual kitchens.

3. *Inan Aiq* (water keeper). *Inan Aiq* is tasked with drawing “mother water” from the sacred spring of *Ngalu Aiq*. This procession, accompanied by ritual music (*gong gerantung*), reflects the sacredness of water as a source of life. The role of *Inan Aiq* also embodies ecological stewardship: damage to rivers, springs, or forests (*dedosan*) constitutes one of the gravest customary violations, underscoring the community’s ethic of environmental preservation (IM, Informant Y3).
4. *Nyaka Mantri* are assistants who accompany *Inan Aiq* during water-fetching rituals. Appointed through hereditary lines, *Nyaka* derives from noble descent, while *Mantri* comes from commoner families. Their appointment, carried out by both male and female customary leaders, illustrates the shared and gender-inclusive structures of ritual leadership (RR, Informant Y4).
5. *Inaq Belian* (traditional healer) is a traditional health specialist, particularly in matters concerning pregnancy and childcare (SU, Informant Y6). She is consulted in times of illness and crisis, providing treatment that continues to coexist alongside modern medicine. Her practice reflects accessible, community-based healing and represents an enduring form of ancestral knowledge passed down through generations of the Sasak people (DJ, Informant Y5).

Third, symbolic and social significance. Bayan women serve as guardians of cultural continuity, transmitting ritual knowledge and practices across generations (Rodiyah, 2018). While their contributions are sometimes less visible in formal public spaces, their influence on decision-making and cultural resilience is profound. Through their roles as ritual organizers, food coordinators, water keepers, and healers, Bayan women embody an integrated system of ecological ethics, spiritual guardianship, and community well-being.

The Bayan village community is a traditional society that continues to preserve its ancestral culture. Leadership within the community system remains intact, reflecting their long-standing values and practices. This includes customary offices or local leadership figures such as *Mangku Gumi*, *Kiyai*, *Lebe*, *Maq Lokaq Grantung*, *Pande*, *Inan Aiq*, *Inan Belian*, *Inan Pedangan*, *Inan Meniq*, and other hereditary positions. These offices are passed down through male lineage, known as *Turun Wali*, and female lineage, known as *Turun Bibit* (MS, informant Y11). Both women and men within the community maintain distinct yet complementary roles in sustaining their cultural existence. Since ancient times, these roles have been organized in such a way that every traditional ceremony can be carried out effectively.

Bayan traditional rituals cannot be conducted without the involvement of women. Women hold a highly significant position in the implementation of these rituals, serving as *Inan Meniq*, *Inan Pedangan*, *Inan Aiq*, *Nyaka Mantri*, and *Inaq Belian*. These roles are not merely technical tasks but represent the social and cultural authority of women within the traditional system. For example, *Inan Meniq* not only manages the logistics of ceremonies but also has the authority to decide on the distribution of food and resources. This demonstrates that women actively participate in decision-making processes, even though their contributions may not always be visible in formal public spaces.

An analysis of these roles reveals that ritual spaces serve as arenas for gender negotiation. On the one hand, men are often represented as public figures of tradition; on the other hand, women exercise substantive authority in determining the course of ceremonies, ensuring food security, and safeguarding the ecological dimensions of rituals.

Thus, rituals are not only cultural practices but also sites of gender communication, where power and roles between men and women are continuously negotiated.

In Bayan, women hold a highly respected position. The Bayan territory is referred to as *gumi nina*, symbolising the “earth of women” that brings well-being to all people, much like a mother who offers love and a sense of security. The spirit of *gumi nina* also inspires the indigenous community to cultivate a character that emphasises maternal qualities, compassion, and a commitment to peace (RS, Informant, Y10).

The ritual traditions of the Bayan community function as a communication system that integrates spiritual devotion (human-God), social cohesion and female authority (human-human), and customary-based environmental stewardship (human-nature). Thus, these traditions are not merely cultural heritage but also constitute a knowledge framework that sustains ecological balance while enhancing the community’s social and spiritual resilience. First, the human and God relationship is expressed through sacred rites, such as Maulid Adat and agrarian ceremonies, which go beyond mere ceremonial acts (RS, Informant Y8). These rites convey moral values regarding human attachment to the God while also offering prayers of gratitude for the harvest and the community’s well-being.

Second, interpersonal relationships are reinforced through traditions that facilitate community gatherings, mutual cooperation, and the strengthening of collective identity. These rituals provide a space for social interaction, collaboration, and the consolidation of shared commitments. In this context, women play a crucial role by managing both the logistics and the implementation of rituals, ensuring that traditions are conducted in a structured and orderly manner. Third, the human-nature relationship is reflected in the use of natural resources, which is regulated by specific ritual protocols. In Bayan society, the utilization of river water, springs, and agricultural produce must follow traditional procedures. This practice instills a moral ethos of ‘seeking permission’ from nature while establishing ethical boundaries for resource use.

b. Crisis Communication and Knowledge Transfer

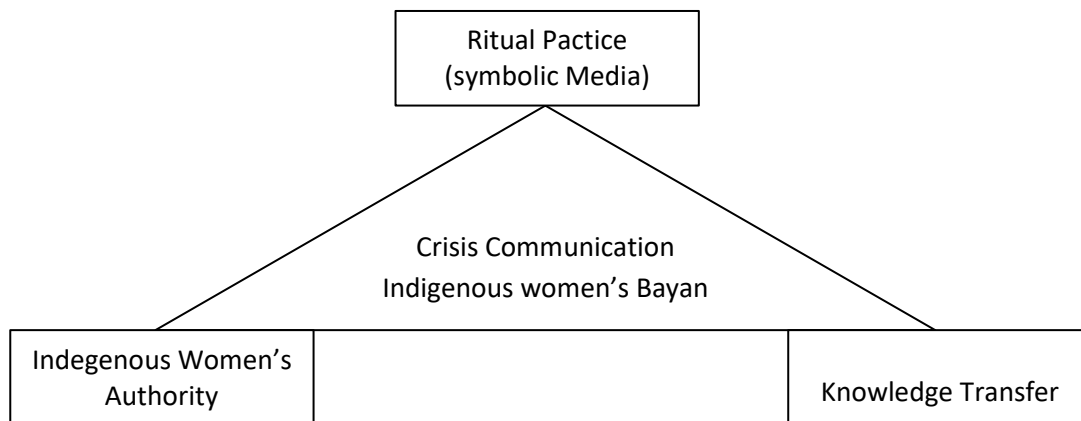
Crisis communication can be understood as the intensive process of conveying information when the public faces emergency situations, such as natural disasters, climate crises, or other critical events. Crisis communication is essential because it delivers urgent and relevant messages to affected communities (Sheehan & Quinn-Allan, 2015). Crisis communication is not only vital during the disaster itself but also throughout the recovery phase, as it constitutes an integral part of the overall crisis management cycle (Dufty, 2020). When managed effectively, crisis communication enables communities to respond more quickly, reduce risks, and accelerate the recovery process (Negoro, 2021; Wijayanto et al., 2022).

A local wisdom-based approach to crisis communication highlights the importance of utilizing indigenous values, cultural practices, and traditional knowledge. This aligns with Coombs’ argument that crisis communication strategies must be contextualized and tailored to the specific needs of local communities (Matías & Cardoso, 2023). There are crucial phases in the crisis communication management model, namely the pre-crisis phase, the crisis phase, and the post-crisis phase (Sulistyanto et al., 2020). Within indigenous communities, these phases are often marked by cultural symbols and rituals that serve as channels of collective communication.

In the Bayan community, crisis communication is expressed through symbolic language, traditional rituals, and collective action. Rituals such as *sembeq* (a purification rite), the holy water collection, and *bisoq menik* are not only regarded as religious practices but also as collective messages reaffirming the values of balance, ecological stewardship, and social solidarity. These rituals strengthen social cohesion and foster ecological awareness, enabling the community to navigate the challenges of the climate crisis.

Within this framework, indigenous women play a particularly strategic role. Ecological and spiritual knowledge is transmitted across generations, as seen when young women accompany *Inan Aiq* in the ritual of collecting water. This involvement is not merely symbolic but constitutes experiential ecological education that enhances the community's adaptive capacity to climate change. Beyond rituals, Bayan women also make use of informal social spaces, such as religious gatherings, family meetings, and communal labor (*gotong royong*), to articulate their perspectives on the environment.

From these practices, a model of crisis communication specific to Bayan indigenous women can be outlined, grounded in three main pillars: (1) Rituals as a medium of ecological communication: traditional symbols and practices that convey collective messages about harmony between humans and nature. (2) Women's authority in decision-making: figures such as *Inan Aiq* provide moral and spiritual legitimacy in shaping community responses to crises. (3) Intergenerational knowledge transfer: women serve as key intermediaries in ensuring the continuity of ecological knowledge through practical engagement and oral traditions. This model underscores that crisis communication in Bayan is not merely ritualistic, but rather a gendered, ecological, and spiritual communication system that strengthens community resilience (Houston et al., 2015). This explanation can be illustrated as follows:



Picture 1: Crisis communication indigenous women's Bayan

This model highlights that Bayan indigenous women's crisis communication constitutes a complex and adaptive system, combining rituals, traditional knowledge, women's leadership, and ecological strategies to respond effectively to the climate crisis. Unlike purely theoretical approaches, this model emphasises practical, culturally grounded, and context-specific practices. First, Rituals as a medium of communication and crisis mitigation. Traditional rituals within the Bayan community serve not merely symbolic purposes but function as a means of collective communication that conveys ecological and spiritual values. Practices such as *Inan Aiq*, *bisoq menik*, and *Selamat Asuh* transmit important messages about life balance, environmental stewardship, and social solidarity. Through

processions, prayers, and ritual symbols, the community is encouraged to understand its ecological responsibilities and the consequences of violating customary laws. Consequently, rituals serve both as a mechanism for crisis mitigation and as a collective medium for conveying critical information.

Second, women's leadership and social legitimacy. Indigenous women occupy a strategic role in decision-making and in mediating ecological and spiritual knowledge. Figures such as *Inan Aiq* play a central role in determining strategies to address crises through moral and customary legitimacy. Women's participation extends beyond formal rituals. They also engage in non-formal spaces, such as religious study groups, family gatherings, and mutual cooperation activities, to express environmental concerns, educate community members, and strengthen social communication networks. In this way, women act as a bridge between generations, genders, and the environment, ensuring that ecological messages and practices are widely internalised.

Third, transfer of knowledge across generations. Ecological, spiritual, and technical knowledge is transmitted through the active involvement of younger generations in daily rituals and community activities. This represents a form of experiential learning, whereby women guide the younger generation in sustainable agricultural practices, water resource conservation, and forest preservation. Thus, women serve as key mediators in maintaining the continuity of local knowledge, enhancing the community's adaptive capacity, and fostering profound ecological awareness among future generations.

The Bayan community's crisis communication framework is constructed through the integration of ritual practices, female authority, and intergenerational knowledge transfer. All crisis communication practices by Bayan indigenous women demonstrate the integration of three primary dimensions, including social, ecological, and spiritual. This ensures that mitigation, adaptation, and decision-making processes consider not only environmental factors but also community participation and spiritual values that guide daily life.

Women strategically mediate these interconnections, rendering crisis communication not merely a ritualistic activity but a continuous, contextually grounded, and adaptive system. Traditional rituals serve as channels of spiritual and ecological communication that instill teachings about balance and harmony in life. Female authority is reflected in the roles of ritual leaders as well as women's active involvement in informal forums such as mutual assistance networks and religious study groups. Meanwhile, ecological knowledge is transmitted across generations through the active participation of young women in both rituals and daily traditional practices.

Accordingly, Bayan crisis communication practices can be traced through four important stages: pre-crisis, crisis, adaptation, and mitigation. Pre-Crisis Stage. The Bayan community upholds *awig-awig* or customary laws for environmental preservation, which function as shared guidelines to prevent ecological degradation. These rules include prohibitions on cutting down trees, burning wood, uprooting plants, grazing livestock in sacred forest areas, and polluting or poisoning water sources. In addition, individuals or groups who utilize water resources are required to contribute a customary fee (*saweni*) as a form of ecological responsibility.

Crisis Stage

When disasters occur, the Bayan community performs the *selamat asuh* (nurturing) ritual. This procession includes animal sacrifice, *simbeq* practices with betel-leaf concoctions, and

communal prayers led by traditional elders. The ceremony is believed to cleanse calamities and restore cosmic balance. *Selamat asuh* can be conducted for villages (*gubug*), mountains, or mosques (*misigit*). Women play important roles in every stage of the ritual, from preparation to implementation. For the Bayan community, disasters are not perceived solely as natural phenomena but also as spiritual warnings from God. Hence, every event whether large or small is addressed through *ruwatan* rituals.

Adaptation Stage

Beyond customary regulations, the Bayan community relies on traditional architecture as part of its adaptation strategies. *Berugak* functions as a communal meeting space, *geleng* serves as a food barn that guarantees food availability during crises, and *Bale mengina* is a traditional house symbolizing cultural continuity. These buildings are not merely symbolic but constitute adaptive instruments that support the community's social and economic resilience. Based on field observations, the presence of Geleng and Bale Mengina has been shown to facilitate the safe and organized storage of local food, ensuring that, in the event of drought or crop failure, the community still has sufficient reserves to meet the needs of both families and the wider community.

Mitigation Stage

Bayan women play a central role in mitigation efforts through ecological rituals such as *selamet olor* (river ceremony), *selamet mata air* (spring ceremony), and *bisoq menik* (ritual rice washing). The *bisoq menik* procession is performed with strict ritual rules as an expression of respect for nature. In addition to rituals, women contribute to sustainable agriculture by diversifying local food crops, preserving seeds, and processing food using traditional methods such as fermentation. These practices ensure food security even during times of crisis. Research findings indicate that women's participation in traditional food rituals and management enhances the community's capacity to adapt to climate change, while simultaneously transmitting ecological knowledge to younger generations through direct involvement and informal instruction.

Through this framework, it is evident that indigenous Bayan women occupy a central position in every stage of crisis management. In the pre-crisis phase, they preserve and transmit customary rules; during the crisis phase, they actively participate in rituals; in the adaptation phase, they manage social spaces and food reserves; and in the mitigation phase, they integrate rituals, authority, and intergenerational knowledge. Thus, crisis communication in Bayan extends beyond symbolic rituals, embodying a local knowledge system that reinforces both ecological and spiritual resilience within the community.

c. Relations of Women and Climate Change

Climate change has become one of the most prominent global discourses, discussed not only in formal settings such as international forums but also in everyday conversations. The United Nations highlights this issue as an urgent threat because it affects multiple dimensions of life, ranging from health, poverty, and food insecurity to hunger and mortality, as well as the availability of natural resources, migration patterns, and even the triggers of social conflict. Moreover, climate change exacerbates gender inequality, particularly for women (Abebe, 2014; Dewi, 2023; UN WomenWatch, 2009). Women experience double vulnerability,

including heightened risks of gender-based violence, limited access to resources, and minimal opportunities for participation in public decision-making.

Climate change exacerbates social inequalities, particularly gender disparities. Women face cultural, social, economic, and political barriers that increase their vulnerability, yet they are often excluded from decision-making processes despite playing a crucial role in environmental management. According to the Climate Investment Fund (CIF) in 2021, the marginalisation of women in policy-making further intensifies the adverse impacts of climate change on them. Their exclusion from decision-making processes not only diminishes the effectiveness of responses to the climate crisis but also overlooks the significant potential of local knowledge and innovations that women possess in addressing environmental disasters.

The effects of climate change are particularly pronounced on the four pillars of food security, including availability, access, utilisation, and stability. In the Bayan community, these pillars are not only economic concerns but are deeply intertwined with cultural identity. Traditional rituals, whether linked to the agricultural cycle or religious ceremonies, rely heavily on locally sourced produce. Consequently, women's active involvement in managing food resources is essential for both household food security and the preservation of cultural heritage. Daily life in Bayan is closely connected to natural resources. Indigenous women maintain a direct relationship with the ecosystem through activities such as fetching water, collecting firewood, farming, managing food, and caring for livestock. As climate change intensifies through droughts and extreme weather events, these responsibilities become increasingly burdensome. Women must travel further, work longer hours, and navigate complex challenges to ensure the survival and well-being of their families and communities.

The Bayan community has long preserved biodiversity through systems of local wisdom. Nevertheless, their heavy reliance on natural resources renders them highly vulnerable to climatic disruptions. Traditional food systems, which underpin both daily sustenance and ritual practices, are particularly threatened by shifting weather patterns, jeopardising the continuity of livelihoods and cultural traditions. In this context, Bayan women are not merely passive victims but active agents of change. They possess and apply ecological knowledge encompassing environmental stewardship, food production, and health management. By assuming responsibility for their households, communities, and surrounding ecosystems, women occupy a strategic position in climate adaptation and mitigation efforts. Their central role in providing traditional food ensures the sustainability of local ecosystems, linking cultural preservation with environmental resilience.

The decline in natural resource quality and availability due to the climate crisis also has broad social implications. Beyond material well-being, it affects security, health, and social cohesion. The Bayan community draws on rich ecological knowledge, including traditional medicinal practices, sustainable farming systems, and harmonious interactions with the environment. This knowledge not only supports adaptive strategies to climate change but also safeguards cultural heritage. Bayan women have demonstrated numerous local innovations in response to these challenges. They engage in activities such as planting trees along riverbanks to prevent erosion, preserving indigenous seeds through seed banks, developing traditional food preservation techniques, and reviving handicrafts to support household economies (RG, Informant Y7). These initiatives serve a dual purpose: enhancing adaptive capacity while facilitating intergenerational transmission of ecological knowledge. Through such practices, women emerge as innovators, experts, and problem-solvers, maintaining balance across domestic, community, and environmental domains.

Bayan women continue to refine expertise in agriculture, water conservation, forest protection, and household food provision. Through communication and leadership within the community, they simultaneously preserve cultural traditions and promote gender equality. Their attentiveness to both domestic and environmental spheres enhances resilience to climate change. In sum, Bayan women occupy a pivotal role at the intersection of cultural preservation, environmental sustainability, and social resilience. By integrating traditional knowledge with active community engagement, they transform the challenges posed by climate change into opportunities for adaptive, culturally rooted solutions.

Although ecofeminism offers a valuable framework for understanding the relationship between women and the environment, its application to the crisis communication practices of Bayan indigenous women reveals several limitations. The theory often assumes that women naturally possess a greater affinity for nature due to their gender, which risks overgeneralising their roles without adequately considering the specific local context. Within the Bayan community, women's participation in rituals and decision-making is shaped by customary law, social hierarchies, and spiritual values, meaning that not all women enjoy the same level of access or authority. Consequently, the application of ecofeminism can overstate the universality of women's connection with nature.

Moreover, traditional ecofeminism tends to emphasise either the biological or symbolic relationship between women and the natural world, as well as overarching patriarchal structures. In contrast, Bayan crisis communication practices are rooted in spiritual values, ritual observances, and the teachings of Wetu Telu Islam, wherein women act as mediators of ecological knowledge through active engagement in rituals and collective practices. As such, the theory struggles to capture the complex interplay between ecological, social, and spiritual dimensions in women's interactions with the environment.

In addition, while ecofeminism foregrounds issues of gender justice, it frequently focuses predominantly on women, potentially overlooking the collective nature of crisis communication and the significant role played by men in Bayan society. Evidence from Bayan demonstrates that crisis communication is fundamentally a communal endeavour, even though women occupy strategic positions in knowledge mediation and ritual practices.

Finally, ecofeminism remains largely theoretical and normative, concentrating on gender-environment relations while giving limited attention to the practical mechanisms of crisis management. In Bayan, crisis communication encompasses ritual performance, intergenerational knowledge transfer, management of food resources, and concrete ecological mitigation measures. Therefore, ecofeminist perspectives must be integrated with locally grounded communication and crisis management approaches to enhance their relevance and applicability.

CONCLUSION

This study concludes that the ritual traditions of the Bayan indigenous community articulate three interconnected relationships: between humans and God, among fellow humans, and between humans and nature. These relationships reflect a worldview in which spirituality, social solidarity, and ecological sustainability are inseparable. Within this framework, Bayan women play central roles as guardians of families and traditions, as well as communicators and actors in ecological preservation.

The research reveals that Bayan local wisdom embodies universal values such as gender equality, collective welfare, ecological inclusivity, and climate change adaptation-

mitigation. Nature is not perceived merely as a resource but as a living entity that holds spiritual and cultural meaning. From these practices emerges a distinctive crisis communication model rooted in local wisdom, integrating rituals, authority, and intergenerational experience.

Beyond its phenomenology findings, this study contributes to broader academic and practical discourses. It enriches interdisciplinary studies in culture, religion, gender, communication, and environmental sciences, while also aligning with global development commitments, particularly the SDGs on climate action and gender equality. The insights generated here are relevant not only for scholars but also for policymakers, NGOs, and community organizations working on disaster resilience and sustainable development.

ACKNOWLEDGEMENT

This research is an independent research or no funding for this project. The researcher would like to thank the Bayan Indigenous People (especially the informants) who have provided valuable experience and knowledge in climate change adaptation and mitigation practices. Then, thank you to the Rector of the Universitas Islam Negeri Mataram and the Dean of the Faculty of Da'wah and Communication Science. Finally, thank you to the research team.

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