



RESEARCH ARTICLE

Section(s): *Literature, Linguistics & Criticism; Visual & Performing Arts***Minangkabau local wisdom in coastal environmental conservation: An ecocritical review of Wisran Hadi's drama script *Nilonali***

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Correspondence: yennihayati@fbs.unp.ac.id**ABSTRACT**

Environmental degradation, particularly in coastal areas, has emerged as a critical challenge facing contemporary society. Addressing this issue requires a comprehensive approach, including the revitalization of local wisdom. This study examined the representation of Minangkabau local wisdom in coastal environmental conservation as portrayed in *Nilonali*, a drama script by Wisran Hadi, through the lens of ecocriticism. The research identified and analyzed forms of indigenous knowledge, belief systems, and cultural practices contributing to coastal ecological sustainability. Employing qualitative analysis, the study revealed three interrelated categories of local wisdom: (1) local knowledge, encompassing environmentally friendly fishing methods and an understanding of coastal climatology and geophysics; (2) local belief systems, including religious and superstitious values that function as social controls; and (3) cultural practices, particularly the tradition of *berpantun* (reciting traditional rhymed quatrains), whose lyrical content is inspired by the coastal environment. The findings highlight the ecological significance of Minangkabau local wisdom in fostering environmental protection and ecological awareness among coastal communities.

KEYWORDS: coastal environment, ecocriticism, local wisdom, Minangkabau, *Nilonali*

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Introduction

Environmental issues represent one of the most pressing challenges facing humanity today. The consequences of natural resource exploitation and unsustainable development practices are increasingly visible. The world is facing a growing frequency of natural disasters and extreme weather events, which are reshaping traditional agricultural and fisheries zones and accelerating biodiversity loss. In addition, frequent flooding in residential areas poses a serious threat to both environmental and socio-economic stability (Ojala, 2022; Pires et al., 2025). Sutisna (2021) emphasizes that the exploitation of flora and fauna and land-use changes are urgent environmental concerns that deserve critical attention in literary works. This aligns with Zulfa's (2021) argument on the importance of understanding ecocriticism and its application in literature as a means of engaging with ecological issues.

One of the most critical ecological concerns globally is the degradation of marine and coastal environments. A primary driver of coastal ecosystem degradation is unsustainable development, adversely impacting mangrove forests, seagrass meadows, and coral reefs. Without effective management and control, these ecosystems are at risk of collapse, threatening biodiversity and the livelihoods of communities dependent on marine resources (Radita et al., 2023). Moreover, destructive fishing practices, such as dynamite fishing and the use of toxic chemicals, further exacerbate the damage. Mulyan (2018) reports that the use of potassium cyanide and mangrove deforestation in the coastal areas of Sumbawa Besar has led to significant marine ecosystem destruction. Compounding this issue is the unregulated discharge of industrial waste into the ocean, which contributes to pollution and jeopardizes natural habitats and marine life.

Plastic pollution in marine environments is another alarming issue. As plastic debris breaks down into microplastics, it can interact with marine organisms and disrupt the food chain. Siqueira et al. (2017) highlight that microplastics pose a novel threat to marine ecosystems, as these particles can accumulate in marine organisms and affect overall ecological health. Similarly, Napper and Thompson (2019) underscore that the rate of plastic degradation in marine environments varies significantly depending on regional conditions, which in turn influence the scale and impact of pollution.

Coral reef degradation presents yet another serious challenge for coastal ecosystems. According to data from the Global Coral Reef Monitoring Network, approximately 54% of coral reefs worldwide are considered at risk, with much of the damage in Indonesia linked to human activities (Nurcahyanto et al., 2021). The deterioration of coral reefs reduces marine biodiversity and compromises their function as natural barriers protecting coastlines from erosion. In sum, coastal and marine environmental degradation is a complex, multidimensional issue that demands interdisciplinary solutions. Effective conservation and management strategies are essential for ensuring marine ecosystems' sustainability and coastal communities' well-being.

Various efforts can be undertaken to preserve environmental integrity, especially in coastal regions. Among these are conservation initiatives rooted in the values of local ecological wisdom. Lisdiyono (2017) stresses the importance of preserving local wisdom to maintain environmental balance. In a study by Syamsi et al. (2024) on the role of indigenous knowledge in biodiversity conservation along the southern coast of Gunung Kidul, Indonesia, three enduring local traditions were identified: (1) *labuhan* or *larungan* (sea offerings), (2) *musim gugur gunung* (ritual harvest season), and (3) *rasulan* (thanksgiving ceremonies). The local community incorporates principles of environmental stewardship into daily life through prohibitions against the exploitation of protected species and the extraction of sand and coral. These practices illustrate how traditional knowledge systems can contribute meaningfully to contemporary conservation efforts.

Furthermore, preserving local wisdom in coastal environmental management is crucial to sustainable resource development. Sulaiman et al. (2023) highlight that the Bajo people's traditional ecological knowledge regarding mangrove forest conservation is embodied in three core practices: (1) conservation efforts, (2) wise and balanced management, and (3) sustainable economic development based on mangrove ecosystems. These practices have proven effective in preserving mangrove forests and have also contributed to raising the ecological awareness of the Bajo community about the critical role of mangroves in coastal resilience. In line with the findings of Syamsi and Sulaiman, Tetelepta et al. (2022) recommend incorporating local wisdom as a key strategy for promoting sustainable development within coastal environments.

The forms and values of local wisdom are also reflected in oral traditions and contemporary literary works rooted in particular communities. One notable example is the Minangkabau community in West

Sumatra. Historically, the Minangkabau people have maintained a deep and respectful relationship with nature, as encapsulated in the local philosophy “*alam takambang jadi guru*,” meaning “nature is the ultimate teacher.” This phrase underscores the notion that nature serves as a source of livelihood and a wellspring of cultural inspiration and moral guidance. Environmental stewardship among the Minangkabau is thus deeply embedded within inherited cultural values and traditional practices passed down through generations. These values include sustainable use of natural resources and a holistic approach to environmental management, forming a cornerstone of Minangkabau’s local wisdom.

According to Nasri et al. (2022), the Minangkabau community upholds well-defined principles in interacting with the natural world, reflected in the concept of *kieh* (figurative speech), which emphasizes environmental aesthetics and ethics. This worldview suggests that natural resources are not merely to be exploited but must also be conserved for the benefit of future generations. Additionally, the concept of *pusaka*, which includes agricultural land, fields, and forests, is integral to Minangkabau’s cultural identity. These ancestral assets must be protected and preserved as part of the community’s responsibility toward intergenerational equity. The Minangkabau’s agricultural practices employ environmentally friendly and sustainable techniques that maintain ecological balance while ensuring food security. To support long-term environmental sustainability in West Sumatra, it is essential to uphold and integrate traditional ecological management principles (Utami & Oue, 2021).

While much of the Minangkabau population inhabits the mountainous regions of the Bukit Barisan range, a significant portion also resides in coastal areas, spanning from Muko-Muko to Air Bangis along the Indian Ocean. Like other coastal regions in Indonesia, Minangkabau coastal communities are increasingly vulnerable to the impacts of climate change and natural resource exploitation. These environmental challenges serve as a critical lens through which literary works can be analyzed using an ecocritical approach grounded in local wisdom. Moreover, a study by Syarif (2022) demonstrated that local wisdom embedded in literature could function as a pedagogical tool for cultivating public awareness about the importance of environmental conservation. Dewi (2015) also observed a growing number of contemporary literary works addressing the issues of pollution and environmental degradation, reflecting a rising ecological awareness among authors. This heightened awareness, in turn, has the potential to inspire readers to adopt more sustainable attitudes and behaviors toward the environment.

In this study, the selected literary work was *Nilonali*, a drama by Wisran Hadi, which is closely associated with the Minangkabau community residing in coastal areas. Previously, Zamzami et al. (2019) conducted a study titled “*The Development of Marine Resources in Indonesia*,” which was motivated by the Indonesian government’s commitment to establishing marine conservation areas grounded in local wisdom. Their findings identified four core values of Minangkabau local knowledge that hold significant potential to positively impact marine conservation zones and coastal livelihoods more broadly. These values include: (1) spiritual wisdom, (2) environmental sustainability wisdom, (3) cultural-traditional wisdom, and (4) economic wisdom. The study provides an important foundation for further research into how Minangkabau local knowledge contributes to the preservation of coastal environments.

The present study built upon this foundation by exploring Minangkabau local wisdom as represented in the drama *Nilonali*, thereby extending previous empirical investigations into new interpretive and literary domains. While Zamzami et al. (2019) employed interviews and direct field observations to assess the impact of traditional ecological knowledge on marine conservation, this study focused on literary representation. Specifically, it examined how local ecological wisdom is expressed, transformed, or critiqued within a dramatic text adapted from Minangkabau folklore. This approach allows for the exploration of symbolic meanings and subtle cultural insights that might remain obscured in empirical fieldwork. Through an ecocritical lens, *Nilonali* by Wisran Hadi could be viewed as a work of art and a vehicle for cultural and environmental conservation, capable of fostering ecological awareness among its audience.

Analyzing local ecological wisdom through the lens of ecocriticism offers a valuable approach to understanding how literary texts engage with environmental issues. Ecocriticism serves not only as a critique of environmental degradation but also as a catalyst for collective awareness and sustainable action, particularly within coastal communities. In the context of Minangkabau culture, an ecocritical framework is relevant for interpreting literature and inspiring real-world environmental stewardship. This approach

bridges ecological concerns with culturally rooted values, reinforcing the idea that literature can reflect and shape social and environmental realities. Accordingly, this study sought to represent Minangkabau's local wisdom in the preservation of coastal environments, as reflected in the drama *Nilonali* by Wisran Hadi. Since the drama is adapted from Minangkabau folklore, it uniquely portrays community values and traditions.

Literature Review

Local Wisdom

According to Sibarani (2012) and Geertz (1983), local wisdom refers to a body of knowledge and values rooted in cultural traditions that guide communal life. This concept was commonly referred to as indigenous knowledge in ancient Greek society and traditional Indonesian rural communities, particularly those from three generations ago. This form of knowledge plays a crucial role in shaping the internal structure of a community, including its relationship with nature and the divine. Local wisdom also reflects the maturity of a community, which is evident in attitudes, behaviors, and perspectives toward the sustainable development of local resources. As stated by the Indonesian Ministry of Social Affairs (2005), such wisdom is instrumental in facilitating positive societal transformation.

Zakaria (1994) defines local wisdom more succinctly as cultural knowledge held by specific communities, particularly concerning sustainable models for utilizing and managing natural resources. Similarly, Indonesia's Law No. 32 of 2009 defines local wisdom as a set of noble values practiced within society to support environmental protection and sustainability (Government of Indonesia, 2009). This legal framework further mandates the state's responsibility to acknowledge, respect, and protect the rights of indigenous and traditional communities, including their locally embedded wisdom, particularly regarding coastal zones and small islands across the archipelago. According to Nurjaya (in Irianto, 2009), local wisdom is fundamentally derived from a community's religious values and belief systems. Local religious teachings and convictions shape the community's environmental ethos, influencing attitudes and behaviors toward nature. Thus, local wisdom acts as a moral compass that encourages humans to live in harmony with the universe, fostering a balanced relationship between human beings and the environment.

Furthermore, Sibarani (2012) emphasizes that local wisdom encompasses a range of mechanisms for behaving, acting, and making decisions to achieve social well-being and communal peace. This endeavor necessitates the presence of wise values, norms, and regulations that help maintain harmonious relationships among people, with nature, and with the divine. Historically, the ancestors of Indonesia's diverse ethnic groups have nurtured such wisdom in their interactions with nature. For instance, many communities maintain belief systems or myths prohibiting harmful behavior toward specific objects, trees, or locations; the warnings are often framed as spiritual taboos meant to deter negative consequences. These longstanding practices have contributed to sustaining respectful and balanced human-nature interactions. Moreover, local wisdom is regarded as a mechanism for conflict resolution, capable of fostering social harmony and well-being across generations.

Ife (2002) categorizes local wisdom into five cultural dimensions: (1) local knowledge, (2) local culture, (3) local skills, (4) local resources, and (5) local social processes. Likewise, Maria (2018) identifies the manifestations of local wisdom in society as comprising (1) customary rules, (2) indigenous knowledge, (3) practical skills, (4) shared values, and (5) ethical norms, all of which structure social life and are passed down through generations. For instance, traditional values that guide environmental stewardship are a clear expression of such inherited wisdom. Based on the explanations above and the five dimensions proposed by Ife (2002), local wisdom can be understood as encompassing (1) collective knowledge, (2) belief systems, and (3) cultural practices specific to a community. Passed down through generations, this body of wisdom plays an essential role in structuring community life and influencing critical areas such as environmental management, conflict resolution, and social interaction. Consequently, this study focused specifically on the role of local wisdom in the context of environmental management.

Ecocriticism in Drama

Ecocriticism first emerged in the 1990s as a theoretical framework primarily concerned with nature writing and the depiction of natural landscapes in literature (Fiskio & Bamert, 2017). Over time, its scope broadened

to encompass a range of theoretical approaches and interdisciplinary perspectives, all aiming to examine the complex relationship between humans and the natural world. As Glotfelty (1996) explains, ecocriticism is the study of the interaction between literature and the environment, emphasizing the potential of literary works to inspire readers and offer critical reflections on environmental issues. Glotfelty also highlights the importance of evaluating texts based on their responses to environmental crises, which often involve social and psychological dimensions (Barbanti et al., 2024). Buell et al. (2011) similarly describe ecocriticism as a cross-disciplinary field that seeks to raise environmental awareness by analyzing how ecological concerns are expressed in literature and other creative media. Garrard (2004) supports this view, emphasizing that ecocriticism focuses on the relationship between humans, literature, and nature. He defines ecocriticism as a cultural critique that investigates artistic and literary productions through the lens of human-environment relationships.

Furthermore, ecocriticism can be understood as a critical response to contemporary environmental movements. In an era marked by escalating ecological crises, the ecocritical approach serves as a valuable tool for exploring the nuanced interdependence between humans and nature. Barbara Ward, as cited in Swaminathan and Chakravarthy (2023), poignantly remarks, “*We have forgotten how to be good guests, how to walk lightly on the earth as its other creatures do.*” To achieve a better quality of life, it is imperative to recognize humanity’s profound reliance on the natural world. Amid today’s global ecological instability, ecocriticism aspires to reestablish a harmonious relationship between human beings and their environment (Swaminathan & Chakravarthy, 2023).

Drawing from the conceptual frameworks proposed by Glotfelty and Garrard, ecocriticism can be articulated through four key concepts: (1) human–nature relationships, (2) environmental crisis, (3) interdisciplinary approaches, and (4) social justice. *First*, scholars emphasize literature’s role in representing the interconnection between humans and the natural world (Swaminathan & Chakravarthy, 2023). *Second*, ecocriticism evaluates how literary texts respond to environmental crises, urging ethical engagement and ecological awareness. According to Garrard, literary critics play a vital role in fostering reader awareness of ecological degradation (Mohammed, 2024). *Third*, ecocriticism traverses multiple disciplines, including literary studies, ecology, philosophy, and politics, positioning itself as a richly interdisciplinary field (Egan, 2006). *Fourth*, Glotfelty underscores the intrinsic link between environmental issues and social justice, advocating for the inclusive representation of marginalized voices within ecocritical discourse. Expanding further, Garrard (2004) explores the development of environmental movements and identifies several key concepts within ecocriticism: (1) pollution, (2) wilderness, (3) apocalypse or natural disaster, (4) dwelling, (5) animals, and (6) the earth. He asserts that ecocriticism offers alternative pathways for identifying, examining, and potentially resolving ecological issues. The concepts presented by Glotfelty and Garrard also intersect meaningfully with local wisdom, which often functions as a form of environmental conservation.

According to Cohen (2017), drama can be understood as a written work composed to be brought to life through performance. Its narrative is conveyed through spoken dialogue and the physical actions of its characters. A dramatic script thus serves as a blueprint for theatrical staging. The application of ecocriticism to the study of drama has been explored in various works, including those by Juráni (2019), Cassio et al. (2020), and Arianto et al. (2021). Juráni (2019) introduced a contemporary ecocritical approach that highlights dramatic works focusing on the often-overlooked relationships between humans and the natural world. Several plays explicitly engage with ecological crises and the environmental consequences of human actions. For instance, the play *Margaret zo zámku* by Štefan Králik was analyzed through an ecocritical lens to underscore its contribution to Slovak ecodramaturgy and its reflection on environmental concerns. In line with Juráni’s work, Arianto et al. (2021) examined the ecological conditions of peat swamp ecosystems in South Sumatra by studying the drama *Rawa Gambut* by Conie Sema. They argue that dramatic texts possess the power to inspire and emotionally move audiences, thereby fostering greater ecological awareness. The play’s contribution lies in its capacity to illuminate the human-nature relationship and offer pathways toward resolving environmental crises and the social problems that arise from ecological degradation.

Meanwhile, Cassio et al. (2020) concentrated on the symbolism of nature in drama. In Shakespeare’s works, elements such as trees, forests, and wilderness are employed symbolically to evoke themes of death, confusion, and enchantment. These natural elements often serve to deepen the meaning of the characters’

actions, reinforce personality traits, and establish an atmospheric tone. Thus, ecocritical research on dramatic texts extends beyond the analysis of symbolic natural imagery; it seeks to promote human ecological awareness and critical engagement with pressing environmental issues.

The present study focused on *Nilonali*, a drama by Wisran Hadi, as the primary object of analysis due to its strong connection with Minangkabau culture. The play appears in the anthology *Baeram*, published by the Indonesian Ministry of Education and Culture in 1982. *Nilonali* is an adaptation of the Minangkabau folktale *Putri Bungo Karang*, and although rooted in oral tradition, it is presented as a contemporary dramatic text. The play continues to be staged in various performing arts settings and remains relevant within Indonesia's cultural landscape. Set on the coastal areas of West Sumatra, home to the Minangkabau people, the drama integrates the cultural values of the Minangkabau community as foundational elements in character development and narrative progression.

Wisran Hadi's works offer profound insights into local cultural identities, often highlighting the threat of erosion posed by Western cultural influences (Prasasti & Anggraini, 2020). Accordingly, *Nilonali* serves as a form of entertainment and a medium for preserving and transmitting Minangkabau cultural values to younger generations. This view is supported by Prahmana and Astuti (2022), who emphasize that the dialogues and narrative elements in *Nilonali* richly reflect Minangkabau cultural identity. Wisran Hadi, a distinguished Indonesian author and cultural figure of Minangkabau descent, is widely recognized for his work across multiple literary forms, including drama, novels, short stories, and poetry. Much of his writing addresses social, political, and cultural issues within the Minangkabau context. His contributions to modern Indonesian literature have consistently spotlighted the local wisdom of the Minangkabau people.

Methodology

This study employed a qualitative research method. Bogdan and Taylor (1975) define qualitative methodology as a research procedure that produces descriptive data in the form of written or spoken words and observable behavior. According to Ritchie and Lewis (2003), qualitative descriptive research aims to identify phenomena within the social world and to explore how these phenomena manifest themselves. A key characteristic of this approach is its capacity to describe and portray experiences as perceived by the research population in rich, detailed ways. Lim (2024) further emphasizes that qualitative research generates context-rich findings grounded in empirical evidence. He notes that qualitative researchers use various techniques to gather in-depth and comprehensive data. Among these are four commonly recognized data collection methods: archival/document analysis, in-depth interviews, focus group discussions (FGDs), and observation. In addition, two data collection strategies are highlighted: the use of interview guides and investigation management.

In this study, data were collected through archival/document analysis. The primary source used was the anthology *Baeram*, a collection of plays by Wisran Hadi published by the Indonesian Ministry of Education and Culture in 1982. The anthology includes eight plays, one of which, *Nilonali* (pages 59–75), served as the main text analyzed in this research. The data comprised excerpts in the form of words, phrases, clauses, and sentences from the play *Nilonali* that reflect the local wisdom of the Minangkabau people in coastal environments. To ensure data credibility, the triangulation technique was applied. Berg (2001) defines triangulation as a general term encompassing multiple data collection techniques, such as surveys, mapping, and field practices. In this study, data validity was assessed through the availability of supporting literature and reference materials. This involved reading, comprehending, and repeatedly reviewing relevant sources related to the research topic. The collected data were analyzed using the interactive model proposed by Miles and Huberman (2014), including data reduction, data display, and conclusion drawing/verification.

Findings

This study identified eleven data points regarding the representation of local wisdom within the Minangkabau community for coastal environmental conservation, as portrayed in Wisran Hadi's dramatic script. These data were categorized based on three dimensions of local wisdom: (1) local knowledge, (2) local belief systems, and (3) cultural practices, each of which plays a significant role in sustaining the coastal ecosystem. The primary source, *Nilonali*, appears in the drama anthology *Baeram* (pages 59–75), comprising a total of 16 pages. All data were cited verbatim from the original text, including the use of capital letters as they appear

in the source.

Firstly, several data were categorized as local knowledge of the Minangkabau people in preserving coastal environments, as exemplified in the following excerpts.

[data 1]

KAYU APUNG TAMPAK HILANG TIMBUL DI LAUT. PARA NELAYAN TERSENTAK DAN MEREKA MENARIK PUKAT JADI BERSEMANGAT. DENGAN CIRI KHAS PANTAI MEREKA BEKERJA MENARIK PUKATNYA DENGAN BERTERIAK-TERIAK DI SELINGI GURAUAN YANG SEGAR. JALA PUN SAMPAI KE PANTAI.

Translation:

DRIFTWOOD APPEARED AND DISAPPEARED ON THE SEA. THE FISHERMEN WERE STARTLED AND PULLED THEIR SEINE NETS WITH RENEWED SPIRIT. IN THEIR DISTINCT COASTAL STYLE, THEY WORKED TOGETHER, HAULING THE NETS WITH SHOUTS AND LIGHTHEARTED JOKES. FINALLY, THE NET REACHED THE SHORE.

(Hadi, 1982: 59)

Data 1 reflects the embodiment of local ecological knowledge among Minangkabau fishermen. Their environmental awareness is evident in the use of eco-friendly tools for fishing, namely (1) driftwood (*kayu apung*), (2) seine nets (*pukat*), and (3) cast nets (*jala*). Driftwood, typically derived from certain low-density tree species, is collected after floating in the sea and never cut directly from living trees. As a result of prolonged exposure to seawater, the wood becomes lighter, functioning as a natural float for fishing nets and rafts. The depiction of driftwood “disappearing and reappearing” at sea symbolizes its function as a natural marker. The traditional use of such tools suggests ecological sensitivity and a communal, non-industrial approach to fishing, which minimizes harm to marine ecosystems.

[data 2]

NILO: *“Bagaimana kita bosan terhadap hidup ini, Pawang. Matahari kita, masih matahari yang dulu juga. Bulan, bintang, tanah, dan air adalah yang dulu juga. Kampung nelayan ini, adalah kampung yang dulu juga. Kau adalah Pawang. Besok badai kan turun, kau telah tahu dari sekarang.”*

PAWANG: *“Aku diberi petunjuk oleh bintang-bintang.”*

Translation:

NILO: “How could we ever grow weary of this life, Shaman? Our sun is still the same. The moon, the stars, the land, and the water, just as they always were. This fishing village is still the village we’ve always known. And you are still the Shaman. Tomorrow, the storm will come, you already know.”

SHAMAN: “I was given signs by the stars.”

(Hadi, 1982: 67)

Data 2 illustrates the Minangkabau community’s traditional meteorological knowledge. The local shaman (*pawang*) is entrusted with the ability to predict weather changes through indigenous rituals and environmental signs, notably the stars. Historically, such astronomical observations have been employed by traditional societies. For instance, a clear night sky indicates high atmospheric pressure, suggesting fair weather. Conversely, rapidly flickering stars may indicate air turbulence and impending weather shifts. This knowledge system, grounded in empirical observation, continues to be relevant today, particularly in rural areas where pollution does not obscure celestial cues. It reflects the Minangkabau coastal community’s longstanding expertise in climatology.

[data 3]

PAWANG: *“Kita hidup saling berkaitan, pantai landai karena hempasan gelombang.”*

Translation:

SHAMAN: “Our lives are all interconnected; the shoreline is shaped by the crashing waves.”

(Hadi, 1982: 70)

Data 3 conveys the Shaman's understanding of coastal geophysics. A sloping shoreline is formed by a dynamic interplay between wave action and coastal sediments. Waves do not merely erode; they also shape the coastline through natural processes. Over time, beaches tend to attain a state of dynamic equilibrium, an optimal formation for dissipating wave energy and preventing excessive erosion. The metaphor used by the Shaman draws a parallel between human-nature relations and the equilibrium between waves and the shore. Just as a balance between wave force and coastal form is essential to avoid degradation, harmony between humans and nature is equally vital to prevent ecological disasters.

Secondly, the analysis of local belief systems held by the Minangkabau coastal community in preserving their environment, as depicted in Wisran Hadi's *Nilonali*, was categorized under religious faith and superstition.

[data 4]

"Hentikan badai ini, ya Tuhan.

Selamatkan anak-anak kami, ya Rabbi.

Labuhkan sampannya dalam ketenangan."

Translation:

"Stop this storm, O Lord.

Save our children, O *Rabbi*.

Let the boat land in calm."

(Hadi, 1982: 62)

Data 4 illustrates the religious beliefs of the Minangkabau coastal community, particularly the perception that natural disasters like storms are divine admonitions meant to guide human behavior. In times of crisis, the community turns to prayer, imploring divine intervention for the safety of their children and their environment. The invocation of the term "*Rabbi*," an Arabic word meaning "Lord" or "Sustainer," highlights a belief in a higher power that governs the balance of the natural world. Within this context, *the Rabbi* becomes a central symbol of faith and surrender, especially in moments of environmental peril.

[data 5]

NELAYAN: *"Sebelum mayat sampai ke pantai, gelombang takkan teduh."*

Translation:

FISHERMAN: "The waves won't calm until the corpse reaches the shore."

(Hadi, 1982: 63)

[data 6]

NELAYAN: *"Selama Nilonali masih berdiri di pantai ini, kematian demi kematian akan datang."*

Translation:

FISHERMAN: "As long as Nilonali stands on this shore, death will continue to come."

(Hadi, 1982: 64)

[data 7]

PAWANG: *"Setiap purnama datang, setiap itu pula kematian menjelang."*

Translation:

SHAMAN: "Each time the full moon rises, death follows."

(Hadi, 1982: 65)

[data 8]

NELAYAN: *"Ya. Nilonali telah menyebarkan kematian itu. Siapa saja lelaki yang dijodohkan dengannya meninggal di laut. Sekarang sudah enam orang yang kita kuburkan."*

Translation:

FISHERMAN: "Yes. Nilonali has spread death. Every man betrothed to her has died at sea. We've already buried six of them."

(Hadi, 1982: 69)

Excerpts 5 through 8 present a complex web of superstitions within the Minangkabau coastal community, which are the beliefs that, while lacking scientific rationality, are regarded as having causal influence over events. Lindeman and Svedholm (2012) define superstition as an intuitive cognitive process involving the application of social reasoning to physical phenomena, thereby attributing human-like intentions, emotions, or powers to non-human events or objects. Data 5 and 7 articulate beliefs concerning death at sea. According to Data 5, stormy seas will only calm once the body of a drowned person washes ashore, reflecting a belief that the sea must complete its cycle of death before returning to tranquility. In Data 7, death is believed to recur with each full moon, indicating a cyclical and fated connection between lunar phases and human mortality. Scientifically, this correlation may be rooted in empirical observation: full moons often bring stronger tides and currents, increasing the risk of maritime accidents. These oceanic conditions, combined with the limitations of traditional navigation tools, contribute to the perception of lunar-associated danger.

Data 6 and 8 extend the scope of superstition to personal misfortune. In these scenes, a woman named Nilonali is believed to be the bearer of a fatal curse: any man engaged to her is doomed to die at sea. The community associates her presence with a series of maritime deaths, six in total, which are interpreted as a chain reaction triggered by unresolved grief and emotional unrest. However, such beliefs have significantly diminished in contemporary Minangkabau coastal society.

Thirdly, the analysis of cultural practices among the Minangkabau community in preserving the coastal environment, as represented in Wisran Hadi's *Nilonali*, can be described as follows.

[data 9]

MEREKA BERNYANYI BERGANTI-GANTI, DENGAN PANTUN-PANTUN PERCINTAAN. NYANYIAN ITU DITINGKAH GURAUAN YANG MEMBUAT SUASANA MENARIK PUKAT ITU TERASA MENYENANGKAN.

Translation:

THEY SANG IN TURN, RECITING LOVE-THEMED RHYMED QUATRAINS. THEIR SONGS WERE INTERSPERSED WITH JOKES, MAKING THE TASK OF HAULING IN THE SEINE NETS FEEL JOYFUL.

(Hadi, 1982: 59)

[data 10]

O, lah hilang sampan di lautan

O, sansai nak dagang dalam badai

O, lah pergi putra terbaik negeri ini

DARI JAUH TERDENGAR RATAPAN YANG DIUNGKAPKAN DENGAN PANTUN-PANTUN

Translation:

Oh, the boat has vanished into the sea,

Oh, a foreign trader is caught in the storm,

Oh, the nation's finest son has passed.

FROM AFAR, A LAMENT IS HEARD, EXPRESSED THROUGH RHYMED QUATRAINS.

(Hadi, 1982: 63)

[data 11]

GELOMBANG GEMURUH DI PANTAI. ANGIN BERSUITAN MENGANTAR KEKECEWAAN PARA NELAYAN. BEBERAPA ORANG MENJALA. DI ANTARA MEREKA ADA YANG BERDENDANG DENGAN BUAH PANTUN TENTANG NASIB. YANG LAIN COBA BERGURAU TAPI TERTEKAN.

Translation:

THE WAVES ROARED ON THE SHORE. THE WIND WHISTLED, CARRYING THE FISHERMEN'S DISAPPOINTMENT. SOME CAST THEIR NETS. AMONG THEM, ONE SANG A RHYMED QUATRAIN ABOUT FATE. OTHERS TRIED TO JOKE, BUT THEIR HEARTS WERE HEAVY.

(Hadi, 1982: 64-65)

Data 9, 10, and 11 reveal the cultural tradition of *berpantun* (reciting or singing traditional rhymed quatrains) among Minangkabau coastal communities. Bartosh et al. (2023) define traditional rhymed quatrains as miniature poetry or quatrain-based verse with alternating rhyme patterns. Typically, rhymed

quatrains consist of two couplets, one serving as the *sampiran* (opening) and the other as the *isi* (message), which are often linked more by sound than logical connection. This poetic form has long been embedded in Minangkabau ceremonial practices and is even reflected in modern popular music originating from the region. In Data 9, rhymed quatrains are sung in rotation during the communal activity of hauling fishing nets ashore. The themes are lighthearted, such as romantic, humorous, and uplifting, serving as entertainment and a motivational force among the fishermen. In contrast, Data 10 shows rhymed quatrains used in moments of mourning and emotional distress. When maritime accidents or natural disasters occur, coastal Minangkabau communities often express grief through rhymed quatrains. These poetic laments serve as spiritual appeals for divine intervention: to calm the seas, end the storm, and reverse misfortune. Meanwhile, Data 11 highlights rhymed quatrains as a coping mechanism during difficult times. Despite disappointment and anxiety, fishermen continue to sing verses, often thematically centered on fate and the hardship of life at sea.

These three examples demonstrate the versatility and emotional depth of rhymed quatrains in Minangkabau society. As Bartosh et al. (2023) assert, rhymed quatrains are highly adaptable and universally applicable, expressing a broad spectrum of human experiences. The structure of rhymed quatrains, particularly the opening, is often drawn from the coastal environment. Though the script does not provide complete rhymed quatrains verses, terms such as “*sampan*” (the boat), “*lautan*” (the sea), and “*badai*” (the storm) serve as strong environmental signifiers within the poetic lamentation of Data 10. These elements exemplify how the surrounding natural world deeply informs the cultural expressions of coastal communities.

Discussion

Based on the data analysis, the local wisdom of the Minangkabau community in preserving coastal environments is manifested in three main forms: (1) local knowledge, including environmentally friendly fishing systems and knowledge of climatology and geophysics; (2) local belief systems, encompassing religious and superstitious elements; and (3) cultural practices, particularly in the form of *pantun* (traditional rhymed quatrains). These findings align with the concept of ecocriticism as articulated by Garrard (2004), which explores the evolution of environmental movements and examines key ecocritical themes, namely: (1) pollution, (2) wilderness, (3) disaster, (4) dwelling, (5) animals, and (6) the earth. According to Garrard, ecocriticism offers an alternative framework for identifying, exploring, and potentially resolving ecological issues.

Local Knowledge

The local ecological knowledge of the coastal Minangkabau community, as depicted in *Nilonali*, a drama script by Wisran Hadi, includes (a) sustainable fishing practices, (b) climatological awareness, and (c) geophysical understanding. These three expressions of local wisdom correspond with Garrard’s ecocritical themes of pollution, natural disaster, dwelling, animals, and the earth. (a) Environmentally friendly fishing systems often rely on traditional tools made from natural materials. In *Nilonali*, traditional fishing tools such as *pukat* (seine nets), *jala* (cast nets), and *kayu apung* (driftwood) are prominently featured. Although nets like *pukat* and *jala* are not entirely natural in origin, they are still considered environmentally friendly when used on small scales and within sustainable limits. However, improper use and disposal of synthetic nets have contributed to marine pollution, as they are often made from non-biodegradable materials. This issue could be mitigated by recycling discarded nets into composite cement materials, which may contribute to sustainable infrastructure development (Gopinath et al., 2024).

Driftwood (*kayu apung*) is another component of traditional fishing gear that plays a role in coastal conservation. As previously noted, driftwood forms naturally. According to Escalle et al. (2023), fishing gear made from natural materials is more environmentally sustainable than synthetic alternatives because it reduces marine pollution and lowers the risk of entanglement for sensitive species. Marine pollution has wide-ranging negative impacts on coastal ecosystems, affecting three core components: coral reefs, mangroves, and seagrass beds. These ecosystems have suffered severe degradation due to various forms of pollution, leading to coral bleaching, the collapse of mangrove root systems, and the widespread death of seagrass meadows. The loss of any of these components can trigger a cascading effect that disrupts the entire coastal

ecosystem, ultimately increasing the risk of natural disasters. Moreover, marine pollution poses health risks to coastal communities, leading to diseases such as diarrhea, cholera, hepatitis, and skin infections, especially among fishing populations who are frequently in contact with contaminated waters.

Today, some Minangkabau communities in coastal areas still practice the use of natural materials such as driftwood in small-scale fishing. However, this practice is declining as technological advancements favor synthetic alternatives. Therefore, preserving traditional, nature-based fishing methods is essential for maintaining coastal ecological balance. From an ecocritical perspective, such practices significantly reduce pollution, protect endangered marine species, sustain community habitats, and prevent ecological disasters.

(b) The coastal Minangkabau community possesses traditional knowledge for interpreting signs of climatic change. Similar traditional weather forecasting methods are also found in Japan. In his study, Bulian (2017) explains that coastal communities in Japan utilize a weather observation technique known as *takayama*, which combines cloud observation with traditional oceanographic knowledge. This method aids in short-term weather prediction to support fishing activities. Such traditional weather forecasting represents a form of indigenous environmental knowledge that is inherently eco-friendly, as it does not rely on modern equipment that could potentially harm coastal ecosystems..

(c) The Minangkabau coastal community also holds traditional geophysical knowledge. Their understanding of ocean waves, coastal dynamics, and surrounding geographical features is passed down through generations and grounded in direct observation. Consistent with their philosophical worldview known as "*alam takambang jadi guru*" (nature is the ultimate teacher), they derive knowledge from natural phenomena. For centuries, the Minangkabau people have developed this understanding to prepare for disaster mitigation and long-term livelihood planning. Anwar (2023) notes that the Minangkabau people have cultivated a comprehensive system of local wisdom, encompassing environmental ethics, land-use regulations, and specific disaster-mitigation practices. Their traditional geophysical knowledge can be instrumental in minimizing the impacts of coastal hazards such as tidal floods, shoreline erosion, and tsunamis.

A parallel can be found in Portugal. According to Freitas (2018), traditional fishers have long developed adaptive strategies for coping with coastal environmental challenges. These include distinct architectural designs, seasonal activities, and localized knowledge that enables them to recognize shifts in climate and coastline conditions. Such traditional environmental knowledge provides practical responses to contemporary climate challenges. Hence, engaging in coastal activities based on traditional geophysical knowledge is more sustainable, as it avoids using harmful synthetic materials. The traditional knowledge described in points (b) and (c) aligns with the ecocritical themes of natural disasters, dwelling, and the earth.

Local Belief Systems

The local belief systems of the Minangkabau coastal community, as portrayed in Wisran Hadi's *Nilonali*, manifest in two key forms: (a) religious beliefs and (b) superstition. (a) The community's religious belief system is grounded in Islam, as shaped by the Minangkabau philosophical doctrine: "*adat basandi syarak, syarak basandi kitabullah*," meaning that Minangkabau customary law is rooted in Islamic principles derived from the Qur'an. Hussein (2024) states that within Islamic teachings, humans are regarded as *khalifah* (stewards of the earth) who bear responsibility for preserving and protecting the environment. This moral imperative to safeguard the coastal ecosystem is deeply embedded in Minangkabau coastal society. Prayers offered by community members often express a plea to God for environmental protection and safety from natural disasters. Thus, religious teachings implicitly foster a respectful and protective attitude toward nature.

(b) In addition to religious beliefs, the Minangkabau are known for their rich oral tradition, which includes various superstitions linked to the natural world. Coastal Minangkabau communities hold particular superstitions related to the sea and death. In *Nilonali*, these superstitions are intertwined, illustrating that death at sea is believed to bring prolonged storms, while such deaths are thought to occur most often during a full moon. Interpreted through an ecological lens, the full moon indeed influences both human physiology and tidal activity. Chakraborty (2013) found that during the full moon phase, tidal amplitudes peak, and wave intensity increases significantly. Drawing from multiple studies, Chakraborty (2013) further noted that full moon phases correlate with shifts in mental and physical health, activity patterns, and even reproductive behavior. These phenomena are thought to result from disruptions in the Earth's electromagnetic field,

affecting the autonomic nervous system and cardiovascular activity. Physiological and psychological disturbances can lead to human error and poor decision-making. When compounded by powerful waves and adverse bodily conditions, the risk of marine accidents increases.

In addition, when a death occurs at sea, traditional communities often flock to the coastline as a form of collective emotional response and social solidarity. However, during such events, particularly when accompanied by high waves, approaching the shore can be extremely dangerous and often results in increased pollution due to human presence and waste. In this context, superstitions surrounding the sea serve a regulatory function: they encourage people to act more cautiously and to remain in safer locations during storms. When interpreted rationally, these sea-related superstitions help influence the community's subconscious behavior, prompting more responsible environmental actions and disaster preparedness. A comparable phenomenon is observed in Serbia, where superstitions help regulate human-wildlife interactions, contributing to ecological balance. Nikolić (2021) argues that conservation strategies should incorporate diverse local worldviews, including community-held superstitions, to mitigate future human-wildlife conflict. This reinforces the idea that superstitions, far from mere irrational beliefs, can function as components of local wisdom that actively contribute to environmental management and preservation. In *Nilonali*, the Minangkabau community's beliefs about preserving the coastal environment reflect ecocritical concerns related to natural disasters, pollution, and the earth.

The Cultural Practice

The cultural practice of *berpantun* (reciting traditional rhymed quatrains) is another important element of Minangkabau coastal life. As the data analysis demonstrates, this tradition thrives in everyday communal activities. The rhymed quatrains are often sung in tune with the community's emotional states, and their lyrics are deeply inspired by the surrounding natural environment. Nur (2024) explains that during the Classical Malay era, traditional rhymed quatrains functioned as a vital communication tool, used not only to express feelings but also to convey moral and social messages. Environmental awareness embedded in the tradition of reciting rhymed quatrains can serve as a constant reminder to coastal communities of their relationship with nature. Thus, preserving the tradition of reciting traditional rhymed quatrains indirectly contributes to environmental conservation.

Conclusion

The drama script *Nilonali* by Wisran Hadi illustrates three forms of local wisdom held by the Minangkabau community in preserving coastal environments. *Firstly*, local knowledge. The coastal Minangkabau community employs traditional fishing methods and environmentally friendly tools. They also possess climatological and geophysical knowledge of coastal dynamics derived from long-term observation of natural phenomena. This traditional ecological knowledge serves as a practical guide for preventing environmental degradation and mitigating natural disasters. *Secondly*, local belief systems. The Minangkabau coastal community adheres to a religious belief system that obliges environmental stewardship, grounded in Islamic teachings. In addition, they hold superstitions related to the sea and death, which function as forms of social control, discouraging behaviors that may threaten the integrity of the coastal ecosystem, especially during times of environmental vulnerability. *Thirdly*, cultural practices. The Minangkabau people maintain a tradition of *berpantun* (reciting traditional rhymed quatrains) in their daily activities. The lyrics, often inspired by the natural surroundings, embody ecological values that promote environmental awareness and protection. In summary, these three forms of local wisdom, including knowledge, belief, and cultural practice, embedded in *Nilonali* reflect an integrated ecological awareness among coastal communities.

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