

Integrating Bugis Local Wisdom with Social Pillars of Sustainable Development: A Model for Aligning Cultural Practices

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ABSTRACT

This study examines how Bugis local wisdom aligns with social goals in sustainable development, particularly the United Nations Sustainable Development Goals (SDGs) 1 to 5. It highlights how values embedded in Bugis culture—such as integrity in leadership, community responsibility, and resilience—can support social equity, environmental stewardship, and community well-being. By analysing the *Pangngajak Tomatoa*, a traditional Bugis text, and conducting interviews with cultural leaders in South Sulawesi. This study identifies cultural practices that contribute to sustainability in ways that are meaningful and effective at the community level. The findings suggest that Bugis wisdom offers a practical and culturally relevant approach to sustainable development, one that values fairness, shared decision-making, and inclusive leadership across genders. The study also provides a framework for integrating local cultural values into global sustainability goals. While its focus on the Bugis community may limit broader generalisation, future studies are encouraged to apply this model in diverse contexts and use quantitative methods for further validation.

Keywords: Bugis, cultural integration, local culture, sustainable development model

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INTRODUCTION

Sustainable Development Goals (SDGs) aim to balance economic growth, environmental protection, and social justice, reflecting a universal commitment to prosperity and sustainability. However, real-world implementation often encounters challenges,

particularly in harmonising global standards with local wisdom. For developing countries like Indonesia, integrating international frameworks with indigenous practices is crucial to ensuring the relevance, effectiveness, and long-term sustainability of development efforts. Indigenous values and traditional knowledge offer context-specific solutions to address the unique social, economic, and environmental challenges faced by local communities (Costanza et al., 1997; Sachs 2015).

In Indonesia, particularly within the Bugis community in South Sulawesi, a wealth of cultural wisdom supports sustainable development. Bugis local wisdom, captured in sources like *Pangngajak Tomatoa*, offers principles and practices of social, economic, and environmental stewardship that have sustained the community for generations. These practices, including collective farming, traditional irrigation, and community-based resource management, align with the sustainable development goals by promoting collective welfare, environmental conservation, and social equity (Nur et al., 2023; Slikkerveer, 2019; Warren, 2013). Such indigenous knowledge systems provide models for sustainable resource management that respect ecological limits, thereby enriching both national and global development strategies (Costanza et al., 2014; Leach et al., 1999).

Pangngajak Tomatoa, literally “the call of the enlightened,” is a classical Bugis compendium from South Sulawesi that systematically codifies leadership conduct, resource allocation, social obligations, and

conflict-resolution protocols—traditionally used to mediate village disputes and guide collective decisions—making it an ideal cultural lens for aligning Bugis communal wisdom with the social pillars of sustainable development and filling a gap in Bugis textual studies to inform community-based policy and practice (Pelras, 1996; Saleh, 2024).

This study employs two key sociological theories to integrate Bugis wisdom with the sustainable development goals: Anthony Giddens' Structuration Theory and Pierre Bourdieu's Habitus Theory. Giddens' Structuration Theory highlights how social structures both constrain and enable individual agency, suggesting that local traditions can act as supportive frameworks within global sustainability efforts (Giddens, 1984). Meanwhile, Bourdieu's Habitus Theory emphasises that enduring cultural practices shape community interactions with their environment and social systems, positioning them as active participants in sustainability (Bourdieu, 1990; Pelras, 1996). Together, these theories offer a robust framework to demonstrate how Bugis wisdom can be harmonised with global sustainable development goals, creating a synergy between traditional practices and international standards.

Recent studies highlight the importance of integrating local wisdom into development policy, demonstrating enhanced effectiveness and sustainability when efforts align with community values. Prasetyo et al. (2021) emphasise that development initiatives grounded in

indigenous customs gain greater community acceptance, leading to more sustainable outcomes. Harris and Nowverl (2000) further illustrate that the interaction between local knowledge and modern scientific approaches fosters innovation and resilience, creating mutually reinforcing strategies. (Lasaiba, 2022) underscores that indigenous participation in sustainability policies ensures culturally resonant approaches, promoting local ownership and long-term success in development efforts.

While existing research highlights the value of indigenous knowledge, gaps remain in understanding how to systematically integrate it into sustainable development frameworks. This study addresses this gap by proposing a model that aligns Bugis local wisdom with the social pillars of sustainable development. By harmonising traditional values with modern development strategies, the study demonstrates how such integration can create more inclusive and sustainable outcomes while preserving and leveraging local cultural heritage.

LITERATURE REVIEW

Sustainable Development Model

The concept of sustainable development, central to global strategies since the WCED's Brundtland Report in 1987, introduced a three-pillar model integrating economic growth, environmental protection, and social equity (Pertiwi, 2017; Sachs, 2012). This model underpins the United Nations Sustainable Development Goals (SDGs), which aim for balanced, long-term sustainability. However, scholars often

Forsyth (2004) critique the SDGs' universal framework for often overlooking culturally specific needs in regions with unique socio-environmental contexts.

The SDGs' social pillar is crucial for community-level sustainability, focusing on five key goals: ending poverty (SDG 1), eradicating hunger (SDG 2), promoting health and well-being (SDG 3), providing quality education (SDG 4), and ensuring gender equality (SDG 5). These goals prioritise reducing disparities and fostering equity. The economic and environmental pillars focus on resource preservation and ecological balance for future generations (Costanza et al., 1997; Keiner, 2005; Munasinghe, 1993). However, Martinez-Alier (2002) argues that achieving these pillars simultaneously is difficult in developing regions, where economic growth often conflicts with environmental protection.

The WCED framework outlines seven requirements for sustainable development: participatory governance, economic growth, social stability, responsible production, technological advancement, international cooperation, and adaptive administration (Meadows & Randers, 2004; Pertiwi, 2017). However, developing nations face challenges like structural inequality and environmental degradation, complicating implementation. Amin (1990) critiques dominant development models, noting that local populations in the Global South bear the environmental and economic costs with little benefit. This aligns with Leach et al. (1999), who stress the need to

incorporate community-specific practices and knowledge for effective and inclusive development strategies.

Research by Forsyth (2004) emphasises the importance of integrating local knowledge into sustainable frameworks to improve their relevance and effectiveness. Agrawal (2002) highlights the role of indigenous knowledge in addressing specific environmental and social challenges, while Forsyth (2004) stresses the importance of community resilience. Leach et al. (1999) advocate for a community-based approach that considers environmental entitlements and the influence of local institutions on resource management. Together, these studies suggest that ignoring local wisdom in sustainable development risks overlooking unique socio-environmental dynamics.

Mattulada (Tenri Rawe & Darwis, 2020) positions *siri'*—honour and shame—as Bugis society's core moral code, enforcing communal cohesion, while Pelras (1993, 1996) shows how *pesse*—compassion and reciprocal obligation—operationalises these ethics through everyday support networks. Jubba (Jubba, 2019; Jubba et al., 2018) offers a hermeneutic reading of *Pangngajak Tomatoa's pappaseng*, revealing its dialogic proverbs as centuries-old prescriptions for leadership, resource sharing, and dispute resolution. Finally, Maarif (2015) bridges these indigenous norms with modern development discourse, arguing that Bugis stewardship and mutual aid can guide community-based governance aligned with social-development goals. Together, these works form the theoretical

scaffold—linking moral codes (*siri'*), practices (*pesse*), textual authority (*Pangngajak Tomatoa*), and development applications—that underpins our five-pillar analysis of Bugis values and their relevance to the social dimensions of the SDGs.

Bugis Local Culture

The Bugis people of South Sulawesi have a rich cultural heritage rooted in social, economic, and environmental practices. Their local wisdom, termed local genius by Koentjaraningrat (1985) reflects collective knowledge and adaptive strategies developed to address community needs and environmental challenges. Preserved through traditions like *Pangngajak Tomatoa*, these moral teachings emphasise responsibility, social cohesion, and community resilience (Hakim, 1992).

Key dimensions of Bugis wisdom, as identified by Puspawati et al. (2019), include environmental knowledge, resource management, decision-making, and group solidarity. These align with sustainable practices like community-based water management and forest conservation, supporting environmental conservation and social equity (Lewerissa et al., 2018; Pelras, 1996). The *pabbicara* governance model, emphasising balanced decision-making and integrity, ensures community welfare and equitable resource distribution (Hakim, 1992).

The *pabbicara* leadership promotes consensus-building, social cohesion, and shared responsibility essential for sustainable resource management.

Scholars, Koentjaraningrat (1985) and Nur et al. (2023) stress that Bugis cooperation forms a strong foundation for sustainability, while Pelras (1996) highlighting how traditions of reciprocity strengthen resilience and integrate social stability with environmental awareness.

The Bugis cultural framework integrates spiritual beliefs, positioning humans as stewards of the earth, aligning with sustainable development by linking social equity, environmental sustainability, and ethical stewardship (Nanlohy et al., 2019; Pelras, 1996). Empirical evidence supports the relevance of Bugis wisdom in addressing social, economic, and environmental challenges. Sharma (2024) argue that development policies rooted in local contexts are more sustainable, with Agrawal (2002) and Leach et al. (1999) advocating for community-driven, indigenous knowledge-based solutions for inclusive and effective development strategies.

Theories Supporting the Integration of Local Wisdom with Sustainable Development Models

The integration of local wisdom into sustainable development is explained through Giddens' Structuration Theory and Bourdieu's concepts of Habitus and Social Capital. Giddens highlights how social structures both constrain and enable agency, as seen in Bugis governance practices promoting collective decision-making (Giddens, 1984). Bourdieu's Habitus theory shows how cultural practices shape values like social responsibility and environmental

stewardship, while his Social Capital theory emphasises the role of social networks in sustainability, exemplified by the Bugis tradition of *gotong royong* (mutual aid) (Nur et al., 2023; Pelras, 1996).

Comparing indigenous knowledge systems shows the universal relevance of local wisdom in achieving SDGs. The Maori of New Zealand incorporate *kaitiakitanga* (land guardianship) into policies aligning with SDG stewardship goals (McAllister et al., 2023), while the Sami of northern Europe adapt reindeer herding and land use traditions for sustainable livelihoods (Salomaa et al., 2013). These examples underscore the importance of context-specific knowledge Agrawal (2002) and Leach et al. (1999) argue that community-driven solutions enhance inclusivity and resilience, while Sharma (2024) emphasise that aligning development policies with local wisdom ensures long-term sustainability.

METHODS

This study adopts a qualitative approach using Reflexive Thematic Analysis (RTA) to explore the alignment of Bugis local wisdom with the social pillars of sustainable development. Developed by Braun et al. (2022) RTA is well-suited for in-depth examination of cultural and social phenomena, enabling nuanced interpretations of cultural values. Braun et al. (2022), further highlight RTA's flexibility and iterative nature, making it an effective method for analysing culturally embedded practices.

Research Design

The study employs a qualitative exploratory design, offering flexibility to thoroughly investigate how Bugis cultural values and practices contribute to sustainable development. This design enables a comprehensive analysis of thematic elements and their alignment with global development goals (Creswell & Poth, 2016).

Data Topology

Primary data includes *Pangngajak Tomatoa*, a Bugis text with 313 teachings on ethics and social responsibilities. Supplementary data consists of semi-structured interviews with cultural leaders and community members, providing context on the application of these teachings in modern Bugis society.

Data Collection Methods

Data was collected using document analysis and semi-structured interviews:

Document Analysis: The *Pangngajak Tomatoa* text was reviewed systematically to identify core values and principles relevant to sustainable development.

We used a semi-structured interview guide (Patton et al., 2015) with three sections: (1) Background and social roles (e.g., “Describe your position in the community”); (2) Cultural texts and norms (e.g., “How do you apply Pangngajak Tomatoa in decision-making?”); and (3) SDG alignment (e.g., “How do these practices support social welfare, education, or gender equality?”). Interviews (60-90 min) were conducted in Bahasa Indonesia or Bugis, audio-recorded,

and transcribed verbatim. All participants gave written informed consent.

Data Analysis

The Reflexive Thematic Analysis (RTA) was conducted in the following stages, guided by Braun et al. (2022) an iterative framework as shown in Figure 1:

Familiarisation with the Data: Extensive reading of *Pangngajak Tomatoa* and interview transcripts helped identify recurring themes and values.

Initial Noting: Key cultural values such as leadership, social responsibility, and environmental stewardship were highlighted.

Developing Emergent Themes: Core themes like leadership integrity, social obligations, environmental care, and resilience were linked to sustainable development pillars.

Searching for Connections Across Themes: Relationships between themes were explored to see how they support sustainable development.

Moving to the Next Cases: Similar processes were applied to all interviews to identify patterns and validate themes from *Pangngajak Tomatoa*.

Looking for Patterns Across Cases: Common patterns across datasets helped create a model that integrates Bugis wisdom with sustainable development.

Our Reflexive Thematic Analysis (Braun et al., 2022) builds an integrated framework rather than merely mapping concepts. We began by familiarising



Figure 1. Reflexive thematic Analysis

Source: Braun et al. (2022)

ourselves with the *Pangngajak Tomatoa* text and interview transcripts, then coded key values (*siri*, *pesse*) during Initial Noting. In Developing Emergent Themes, codes were grouped into SDG-aligned themes. Searching for Connections revealed inter-theme links (e.g., *siri*'s role in leadership integrity and resilience), and Moving to Next Cases validated these codes across informants. Finally, Looking for Patterns Across Cases synthesised these findings into a cohesive model of Bugis wisdom and SDG integration. This reflexive process yields novel analytical insights.

Sampling and Participants

Purposive sampling was used to select participants with expertise in Bugis culture:

Cultural Leaders: As key figures in preserving Bugis traditions, they provided insights into the application of traditional values.

Elders and Community Members: Participants were chosen based on their roles in community decision-making and experience in traditional practices aligned with sustainable goals.

Participants (N = 10 - 3 cultural leaders, 3 elders [≥ 50 years], and 4 community members)

were purposively sampled based on three criteria— ≥ 10 years' continuous residence in a Bugis village, recognised status as a cultural leader, elder, or knowledgeable community member, and active engagement with *Pangngajak Tomatoa* in decision-making—via nominations from village councils and adat institutions.

Trustworthiness and Reflexivity

The study's trustworthiness was ensured through triangulation of document analysis, interviews, and participant observations, enhancing the credibility of findings (Zamili, 2015). Reflexivity was maintained by actively reflecting on the researcher's biases and assumptions to ensure that interpretations faithfully represent Bugis values. To strengthen analytic validity, we triangulated three data sources: (1) textual analysis of the *Pangngajak Tomatoa* manuscript; (2) interview transcripts; and (3) relevant secondary literature on Bugis social norms. First, codes generated from the text were compared against themes emerging from interviews. Second, discrepancies between textual prescriptions and lived practice were resolved by revisiting both the text and participant comments. Third, we cross-checked our thematic interpretations against existing studies. This iterative process ensured that our final themes reflect both the canonical text and contemporary community enactment.

Data Visualisation

Themes were visualised through thematic maps, illustrating the relationship between

Bugis cultural values and sustainable development goals. These maps provide a visual representation, helping readers understand the integration of cultural themes within a global framework (Hashimov, 2015).

RESULTS

Verbatim excerpts from ten purposively selected informants—three Cultural Leaders (CL1-CL3), three Elders (E1-E3), and four Community Members (CM1-CM4)—support the themes below. Each quote is labelled by source, ensuring diverse community perspectives. All excerpts are translated into English.

The analysis of *Pangngajak Tomatoa* and interviews with cultural leaders highlight five key themes in Bugis wisdom that align with the Social Pillars of the Sustainable Development Goals (SDGs 1-5): leadership integrity, social responsibility, environmental stewardship, collective decision-making, and courage in social resilience.

Leadership Integrity

In Bugis society, leadership integrity is highly regarded, as seen in both *Pangngajak Tomatoa* and interview data. The Bugis concept of leadership, embodied by the *pabbicara* (traditional leader), emphasises qualities like honesty, responsibility, and wisdom, which align with: SDG 1: No Poverty and SDG 5: Gender Equality.

Issue Statement: Bugis local wisdom assigns a central role to integrity in

leadership, yet how this value translates into community practice remains under-examined.

Textual Evidence: *Pangngajak Tomatoa* underscores that:

Four principles that cement a ruler's authority: honesty; a sincere effort to uplift the people; refraining from commanding what cannot be done; and a profound reverence for God.

This statement highlights the essential role of ethical leadership in supporting community welfare and equity.

Interview Excerpt:

Apabbicara must place their community first; all decisions should be guided by the pursuit of the collective welfare. (CL1)

During preparations for the customary ceremony, I convened a meeting with the village head; although I was initially apprehensive about facing criticism, I remained firm for the sake of the public good. (CL1)

Analytical Insight: This illustrates the cultural expectation for leaders to prioritise the common good.

Social Responsibility and Collective Obligations

Social responsibility and collective obligations are integral to Bugis culture, where individuals are expected to contribute to community welfare. This aligns with:

SDG 1: No Poverty, SDG 2: Zero Hunger, and SDG 3: Good Health and Well-Being.

Issue Statement: While gotong royong is celebrated conceptually, its role in mitigating poverty and hunger via communal safety nets requires empirical substantiation.

Textual Evidence: *Pangngajak Tomatoa* highlights collective duties:

Four obligations that demand immediate attention: interring the deceased; arranging children's marriages; hosting guests; and settling outstanding debts.

These obligations ensure that significant social events are supported by the community.

Interview Excerpt:

Gotong royong is a cornerstone of our culture, especially when it comes to helping those in need. Every member of the community is expected to take part. (CM1)

Pangngajak Tomatoa teaches that a leader's integrity resides in steadfastness rooted in the values of collective welfare. (CL3)

"My duty to uphold *siri*' means I cannot absent myself from communal tasks; failing to join would shame my family's name" (E2)

Analytical Insight: This demonstrates the enduring practice of mutual aid in Bugis society.

Environmental Stewardship

Bugis local wisdom emphasises sustainable use of natural resources, aligning with: SDG 2: Zero Hunger and SDG 3: Good Health and Well-Being.

Issue Statement: Traditional environmental practices shape resource management, but their alignment with contemporary sustainability goals merits clarification.

Textual Evidence: *Pangngajak Tomatoa* advises moderation:

Local wisdom teaches us to remain ever grateful for the gifts bestowed by nature and to refrain from desiring more than our necessities.

This statement emphasises the importance of using natural resources responsibly to ensure sustainability.

Interview Excerpt:

We manage water with meticulous care to ensure there is enough for every farmer. This is how we preserve the sustainability of our water resources. (E1)

I was hesitant to reprimand my neighbour for felling trees and burning refuse indiscriminately, but for the sake of the environment, I mustered the courage to speak up. (CM4)

Analytical Insight: This reflects the Bugis approach to resource management, particularly in agriculture.

Collective Decision-making

The practice of collective decision-making ensures inclusive involvement in decisions impacting resource management and social obligations, aligning with: SDG 4: Quality Education and SDG 5: Gender Equality.

Issue Statement: The mechanisms through which Bugis communities ensure inclusive governance, especially gender inclusion, require systematic exploration.

Textual Evidence: *Pangngajak Tomatoa* promotes collective involvement:

Decisions must be made collectively, ensuring that everyone's voice is heard so that no one feels left behind.

This highlights the value of inclusivity in decision-making.

Interview Excerpt:

Every major decision is made only after gathering input from everyone in the community. This approach ensures that all members feel valued and involved. (CM2)

Analytical Insight: This reinforces that collective decision-making is a central value in Bugis society.

Courage and Social Resilience

In Bugis culture, courage and social resilience are often championed by women, who actively participate in social and cultural leadership, particularly in traditional rituals. This theme aligns with: SDG 5: Gender Equality, emphasising women's roles in leadership.

Issue Statement: Courage—a key dimension of resilience—is often described abstractly; its concrete manifestations in Bugis communal life need specification.

Textual Evidence, *pangngajak tomatoa* advice:

Women in Bugis society often preside over traditional rituals and play a pivotal role in social decision-making.

This underscores how gender equality is deeply rooted in Bugis traditions, with women actively contributing to community leadership.

During preparations for the customary ceremony, I convened a meeting with the village head; although I was initially apprehensive about facing criticism, I remained firm for the sake of the public good. (CL2)

While preparing for the traditional event, we worked together in collective mutual aid to assemble the necessary equipment; through this, we learned to depend on one another to recover and move forward. (CM3)

We relay stories of our elders' sacrifices as exemplars of courage, so that younger generations remain undaunted when confronted with challenges. (E3)

Analytical Insight: These passages demonstrate that Bugis traditions institutionalise gender-inclusive leadership and collective resilience. The *Pangngajak*

Tomatoa's endorsement of women's roles in ritual and decision-making, CL2's account of steadfast leadership, CM3's mutual aid, and E3's storytelling of ancestral courage together show how *siri*' and *pesse* foster participatory governance and strengthen community solidarity and adaptability.

DISCUSSION

Interpretation of Findings Based on the Social Pillars of Sustainable Development

The social pillar of sustainable development focuses on justice, community welfare, and harmonious interactions with the environment. Bugis local wisdom aligns closely with these principles, particularly supporting SDGs 1 to 5, which emphasise the social aspects of sustainability.

Leadership Integrity and Social Pillars (SDG 1: No Poverty, SDG 5: Gender Equality)

Leadership integrity, a central value in Bugis culture, supports fair resource distribution and community welfare. Ethical leadership enhances public trust and social cohesion by promoting transparency, accountability, and inclusive decision-making (Rusdiono et al., 2024).

SDG 1: No Poverty - Leadership integrity in Bugis society ensures fair resource distribution, aligning with SDG 1 to reduce poverty through equitable access. Bugis leaders, especially traditional *pabbicara*, priorities community welfare over personal gain, reflecting governance research that links ethical leadership to

poverty reduction through resource equity (Sharma, 2024). Giddens' Structuration Theory (1984) further explains how structured leadership roles reinforce collective welfare, creating a community-centred resource allocation system that supports vulnerable members.

SDG 5: Gender Equality - Bugis culture prioritises gender-inclusive leadership, supporting SDG 5 by encouraging both men and women to participate in decision-making, particularly in family and community contexts. Koentjaraningrat (1985) notes that Indonesian societies, including the Bugis, integrate significant female leadership roles, fostering respect and gender representation. This inclusivity is evident in community gatherings and forums where women actively contribute to decisions on resource distribution, social initiatives, and conflict resolution.

Applying Bugis leadership integrity to broader contexts could include governance training programmes emphasising honesty, responsibility, and inclusivity for community leaders across Indonesia. Such programmes would strengthen leadership effectiveness, public trust, and equitable resource management. The gender inclusivity inherent in Bugis principles can also serve as a model for balanced leadership in rural governance, promoting equal opportunities for men and women in decision-making. Similar initiatives in Kenya and Uganda demonstrate that integrity-driven and gender-inclusive leadership enhances

community trust and welfare (Salomaa et al., 2013).

Social Responsibility and Collective Obligations (SDG 1: No Poverty, SDG 2: Zero Hunger, SDG 3: Good Health and Well-being)

Social responsibility and collective obligations are fundamental in Bugis culture, exemplified by *gotong royong* (mutual aid).

SDG 1: No Poverty - In Bugis society, *gotong royong* functions as a social safety net, providing support during hardships. Forsyth (2004) highlights that collective action, like *gotong royong*, can address gaps in formal social services by pooling resources to assist individuals and families, reducing poverty through resource redistribution. This aligns with Giddens' Structuration Theory (1984), which explains how social structures like *gotong royong* empower individuals by offering a support system that lessens dependency on external aid.

SDG 2: Zero Hunger - Food sharing during cultural and religious events supports food security in Bugis communities, aligning with SDG 2's focus on sustainable and equitable food systems. This grassroots food distribution ensures that no one lacks essential nutrition. Warren (2013) highlights that such traditional practices, rooted in generosity and collective welfare, are vital for building sustainable and culturally relevant food systems.

SDG 3: Good Health and Well-Being - In Bugis society, mutual aid extends to healthcare, with community members offering physical, emotional, and financial support to those facing health challenges. This practice promotes communal health and aligns with SDG 3's goal of ensuring healthy lives and well-being for all. Giddens' Structuration Theory (1984) explains how mutual aid networks foster shared responsibility, creating an environment of communal care and resilience (Pelras, 1996).

Broader Applications and Hypothetical Scenarios - Bugis principles of social responsibility can guide community development programmes to strengthen social support systems. For example, rural areas in Indonesia could establish community funds where members contribute to assist those facing illness or financial hardship. Similar shared healthcare models in Bangladesh and India have reduced financial strain and promoted collective well-being (Agrawal, 2002; Leach et al., 1999).

Bugis gotong royong is uniquely grounded in *siri'* (/shame) and *pesse* (compassion/reciprocity). *Siri'* obliges individuals to protect their family's honour—making collective labour a moral necessity—while *pesse* fosters an authentic drive to ease neighbours' burdens. By contrast, Malay *malu* centres on avoiding personal embarrassment (*Malaysian - Core Concepts — Cultural Atlas*, n.d.; Subandi & Good, 2018), and Javanese *rukun* promotes voluntary harmony—suppressing conflict

for “pseudo-harmony” before nurturing “essential harmony” (Zhang & Andreychik, 2013). Mandar *sipa'pa* and *sipa'bati* likewise encourage solidarity and respect through kinship ties (Awaru et al., 2024; Latief & Rahhman, 2025).

Applying Giddens' (1984) structuration, we see that these cultural codes both enable and shape villagers' agency: *siri'* and *pesse* guide mutual aid practices, while community actions—such as adapting rituals for flood relief or extending aid to marginalised households—continuously reproduce and refine those norms.

Environmental Stewardship (SDG 2: Zero Hunger, SDG 3: Good Health and Well-being)

Environmental stewardship is a core element of Bugis local wisdom, which emphasises the responsible and sustainable use of natural resources.

SDG 2: Zero Hunger - Traditional Bugis practices, like community-based water management, enhance food security through sustainable agriculture. Agrawal (2002) highlights that indigenous knowledge systems provide effective, culturally relevant resource management frameworks. Bugis culture emphasises fair water distribution and resource conservation to sustain agricultural productivity, as taught in *Pangngajak Tomatoa* (Hakim, 1992). These practices align with SDG 2's goal of ensuring food security and achieving zero hunger.

SDG 3: Good Health and Well-Being - A healthy ecosystem is vital for community health. Bugis environmental stewardship, including forest conservation and water preservation, fosters a clean and balanced environment, aligning with SDG 3's goal of promoting well-being. Forsyth (2004) emphasises that environmental health underpins human welfare by ensuring access to clean water, air, and ecosystems. In the Bugis context, conservation efforts protect local flora and fauna, contributing to ecosystem resilience and mitigating environmental hazards, thereby supporting community health.

Broader Applications and Hypothetical Scenarios - The Bugis model of environmental stewardship provides guidance for resource management in various contexts. For example, adapting Bugis water management principles to agricultural communities in arid sub-Saharan Africa could enhance sustainability through community-managed irrigation systems. Similarly, community-led conservation projects in India have alleviated water scarcity and improved food security (Salomaa et al., 2013).

Bugis forest conservation practices can also serve as a model for community-driven efforts. In Indonesia's peatland areas, adopting Bugis-inspired regulated resource use could protect ecosystems while supporting sustainable livelihoods. These initiatives promote local ownership and long-term environmental stewardship (Warren, 2013).

Environmental stewardship, a central Bugis principle, champions sustainable resource use—from traditional irrigation systems that bolster ecosystem resilience (Forsyth, 2004) to indigenous Sulawesi beliefs that extend personhood to forests and impose ritual sanctions for conservation (Maarif, 2015)—paralleling Bugis water-management and environmental customs to support sustainable agriculture (SDG 2: Zero Hunger) and safeguard the natural resources essential for community health (SDG 3: Good Health and Well-Being).

Collective Decision-making (SDG 4: Quality Education, SDG 5: Gender Equality)

The Bugis practice of collective decision-making highlights inclusivity in governance, ensuring decisions reflect the needs of all members.

SDG 4: Quality Education - Bugis inclusive decision-making fosters a social learning environment where knowledge and values are shared across generations, aligning with SDG 4's focus on equitable access to quality education. Through collective discussions, the Bugis governance system supports informal education, imparting social norms, cultural knowledge, and practical skills. Bourdieu's concept of habitus (1990) explains how such social learning shapes individual dispositions and access to resources, enabling younger members to learn cultural values, civic responsibility, and community resilience, essential for social and educational development.

SDG 5: Gender Equality - Bugis inclusion of women in decision-making demonstrates a strong commitment to gender equality, aligning with SDG 5. Traditional governance structures, as noted by Koentjaraningrat (1985), actively involve women in family and community-level decisions, fostering respect for their leadership. This gender-inclusive practice creates a balanced and representative governance system, ensuring both men and women are valued contributors, consistent with cultural values and global standards.

The Bugis model of collective decision-making offers a useful framework for diverse cultural and organisational contexts. Rural development projects in Southeast Asia, for example, could adopt Bugis-inspired inclusive decision-making to engage both men and women, fostering community buy-in and improving programme effectiveness. Similar initiatives in Nepal show that inclusive decision-making enhances engagement and equitable resource distribution (Sondaal et al., 2019).

This model also promotes gender equality in governance, as NGOs can adopt Bugis practices by involving both genders in decision-making councils, supporting diverse perspectives and alignment with SDG 5. Efforts in Kenya and Uganda have strengthened welfare and gender equality in leadership (Salomaa et al., 2013). By integrating Bugis inclusivity, organisations can enhance education and gender balance, supporting SDG 4 and SDG 5 for sustainable development.

Bugis collective decision-making illustrates Giddens' structuration: enduring norms of *siri'* and *pesse* form the structure, while community agency enacts and refines these norms through deliberation. This recursive process fosters social learning (SDG 4) by valuing every voice and institutionalises gender equality (SDG 5) as women engage actively. Over time, these practices adapt and reinforce the very cultural codes that guide them, demonstrating how structure and agency co-produce resilient, equitable governance.

Courage and Social Resilience (SDG 5: Gender Equality)

Courage and resilience are integral to Bugis society, with women taking prominent roles in social and cultural leadership. Their active participation in rituals and community gatherings underscores their impact on decision-making and cultural preservation.

SDG 5: Gender Equality - Bugis culture reflects a strong commitment to gender equality through women's active roles in leadership, particularly in social resilience efforts. Women contribute significantly to community decision-making, conflict resolution, and ritual leadership, maintaining social harmony and resilience. Koentjaraningrat (1985) highlights that women in Indonesian societies, including the Bugis, hold influential positions in social and family structures, fostering balanced and inclusive governance. This inclusion ensures equal leadership opportunities, where both men and women are respected and engaged in sustaining cultural and social stability.

The Bugis model of gender-inclusive resilience provides valuable insights for broader applications. In Southeast Asia, post-disaster recovery programmes could adopt Bugis principles by establishing female-led community response teams that leverage local practices to rebuild and strengthen social cohesion. Similar initiatives in Nepal have demonstrated that women’s leadership enhances resilience and recovery effectiveness (Sharma, 2024). Comparable efforts in Kenya’s women-led cooperatives have successfully improved social resilience and economic stability (Salomaa et al., 2013).

Courage is the willingness to act in the presence of fear, based on a balanced

awareness of personal capabilities and the perceived importance of the goal (Santisi et al., 2020). Social resilience refers to the collective capacity of a community to utilise available resources, social networks, and shared norms to adapt to and recover from stressors (Tchounwou et al., 2022). Table 1 summarises how Bugis local wisdom aligns with the social pillars of the sustainable development goals.

As shown in Table 1, leadership integrity—honesty and responsibility—underpins SDG 1 (No Poverty) and SDG 5 (Gender Equality). Gotong royong creates safety nets that alleviate poverty (SDG 1), hunger (SDG 2), and improve health (SDG 3).

Table 1
Alignment of Bugis local wisdom with the social pillars of sustainable development goals

Theme	SDG	Key findings and relevance
Leadership Integrity	SDG 1: No Poverty SDG 5: Gender Equality	- Bugis leadership values of honesty, responsibility, and wisdom ensure equitable resource distribution, supporting SDG 1 (Rusdiono et al., 2024). - Gender-inclusive decision-making aligns with SDG 5, where both men and women participate in leadership roles, (Giddens, 1984, Koentjaraningrat, 1985).
Social Responsibility and Collective Obligations	SDG 1: No Poverty SDG 2: Zero Hunger SDG 3: Good Health and Well-Being	- <i>Gotong royong</i> (mutual aid) supports SDG 1 by creating social safety nets for vulnerable community members. - Community food sharing promotes food security (SDG 2) and enhances community health (SDG 3) (Forsyth, 2004; Warren, 2013).
Environmental Stewardship	SDG 2: Zero Hunger SDG 3: Good Health and Well-Being	- Bugis wisdom on sustainable resource use, such as water management, supports sustainable agriculture and food security (SDG 2). - Environmental practices like conservation promote community health, aligning with SDG 3 (Agrawal, 2002; Forsyth, 2004).
Collective Decision-Making	SDG 4: Quality Education SDG 5: Gender Equality	- Inclusive decision-making processes support social learning (SDG 4) and ensure gender equality in leadership roles (SDG 5) (Bourdieu, 1990; Koentjaraningrat, 1985).
Courage and Social Resilience	SDG 5: Gender Equality	- Women's leadership in rituals and social roles highlights gender equality in governance, supporting SDG 5 (Koentjaraningrat, 1985).

Environmental stewardship—particularly water management—sustains agriculture (SDG 2) and community well-being (SDG 3). Participatory decision-making advances social learning (SDG 4) and gender-inclusive governance (SDG 5). Finally, courage and social resilience—embodied in women’s ritual leadership and mutual support—reinforce SDG 5 and strengthen community adaptability. Together, these linkages showcase the comprehensive contribution of Bugis values to social sustainability.

Model of Social Pillar Integration in Sustainable Development Based on Bugis Local Wisdom

Building on the findings, this model integrates Bugis local values with the social pillars of sustainable development, highlighting the potential of Bugis cultural practices to support SDGs 1 to 5.

Leadership Integrity as a Pillar of Sustainable Development

Ethical leadership in Bugis culture, emphasised by values of honesty and responsibility, fosters equitable resource distribution, crucial for social sustainability. This aligns with Giddens (1984) Structuration Theory, supporting empowerment and community trust. The inclusion of both men and women in decision-making, as Koentjaraningrat (1985) noted, strengthens the model’s commitment to gender equality and inclusivity.

Social Responsibility and Collective Obligations for Social Equity

Recent scholarship portrays Bugis local wisdom as a cohesive cultural system grounded in reciprocal moral codes and communal practices: *siri’*—an ethic of honour and shame—regulates individual and kinship conduct to uphold social order Mattulada (1993), while *pesse*—compassion and reciprocity—sustains daily support networks (Pelras, 1993, 1996). Built upon these foundations, *gotong royong* (mutual aid) functions as a social safety net that mitigates inequality and advances SDG 1 (No Poverty) and SDG 2 (Zero Hunger) (Agrawal, 2002), and the spiritual and identity-based dimensions of Bugis communal cohesion further reinforce these practices, amplifying their impact on poverty alleviation and social inclusion (Jubba et al., 2018).

Environmental Stewardship as a Foundation for Sustainability

Environmental stewardship, a central Bugis principle, champions sustainable resource use—from traditional irrigation systems that bolster ecosystem resilience (Forsyth, 2004) to indigenous Sulawesi beliefs that extend personhood to forests and impose ritual sanctions for conservation (Maarif, 2015)—paralleling Bugis water-management and environmental customs to support sustainable agriculture (SDG 2: Zero Hunger) and safeguard the natural resources essential for community health (SDG 3: Good Health and Well-Being).

Collective Decision-making for Inclusive Governance

Bugis collective decision-making fosters inclusive governance—mirroring Bourdieu’s concept of social capital—through the dialogic ethos of the Lontara’ Latoa texts (Kajao Laliddong and Arummpone), whose pappaseng proverbs mandate that every voice be heard in village deliberations (Tenri Rawe & Darwis, 2020), while women’s active participation further bolsters gender equality, social cohesion, and broad community engagement (Koentjaraningrat, 1985).

Courage and Social Resilience as a Pillar for Gender Equality

Courage and resilience, particularly demonstrated by women in Bugis society, support SDG 5: Gender Equality. Women’s roles in cultural leadership reflect a deep commitment to gender equality, ensuring equal opportunities for both genders in social and cultural resilience.

Table 2 illustrates a model that fuses Bugis local wisdom with the social pillars of the SDGs: “Leadership Integrity” stresses ethical leadership—honesty, accountability and fair resource sharing—

Table 2
Model of integrating Bugis local wisdom with the social pillars of sustainable development goals

Pillar of Bugis local wisdom	Description	Aligned SDGs
Leadership Integrity	Ethical leadership, emphasising honesty, responsibility, and equitable resource distribution. Bugis leadership includes men and women in decision-making roles, fostering inclusivity.	SDG 1: No Poverty SDG 5: Gender Equality
Social Responsibility and Collective Obligations	<i>Gotong royong</i> (mutual aid) creates a social safety net, reducing inequality and promoting shared community welfare.	SDG 1: No Poverty SDG 2: Zero Hunger SDG 3: Good Health and Well-Being
Environmental Stewardship	Sustainable use of natural resources, including traditional irrigation and forest conservation, ensuring environmental health for future generations.	SDG 2: Zero Hunger SDG 3: Good Health and Well-Being
Collective Decision-Making	Inclusive governance that values community input, with emphasis on social cohesion and gender equality in decision-making processes.	SDG 4: Quality Education SDG 5: Gender Equality
Courage and Social Resilience	Women's active roles in cultural and social leadership, showcasing resilience and supporting equal gender participation in governance.	SDG 5: Gender Equality

to advance SDG 1 (No Poverty) and SDG 5 (Gender Equality) through inclusive decision making. “Social Responsibility” (*gotong royong*) serves as a communal safety net, reducing poverty (SDG 1), fighting hunger via shared food resources (SDG 2) and enhancing health through mutual care (SDG 3). “Environmental Stewardship”—from irrigation management to forest conservation—sustains agricultural yields (SDG 2) and community well-being (SDG 3). “Collective Decision-Making” promotes participatory governance, bolstering lifelong learning (SDG 4) and gender parity (SDG 5). Finally, “Courage and Social Resilience,” exemplified by women’s leadership in rituals, reinforces gender-inclusive governance (SDG 5). Together, these pillars show how Bugis values embed multiple social-development goals in a unified cultural framework.

CONCLUSION

Our findings show that Bugis local wisdom functions through five interdependent pillars—Leadership Integrity (*siri*), Social Responsibility (*pesse*), Environmental Stewardship, Participatory Decision-Making, and Courage-Anchored Resilience—each reinforcing and amplifying the social dimensions of the SDGs. Rather than discrete traits, these pillars form a dynamic system: *siri* underpins ethical leadership that sustains mutual-aid networks, while participatory governance embeds gender equity and collective learning. This culturally grounded model validates Bugis values’ relevance to SDGs 1-5 and provides

a blueprint for integrating indigenous practices into policy and programming. Future studies should test its applicability to other domains—such as clean water (SDG 6), livelihood diversification (SDG 8) and justice (SDG 16)—across Southeast Asia.

Implications of the Study

This study offers significant theoretical and practical contributions to the integration of local wisdom with the social pillars of sustainable development.

Theoretically, the findings expand the application of social theories, such as Anthony Giddens’ Structuration Theory and Pierre Bourdieu’s Habitus Theory, to demonstrate how local cultural values can support global development frameworks. Bugis cultural values like *gotong royong* (mutual aid) and inclusive leadership exemplify how traditional practices reinforce these theories, particularly in community-driven development. Furthermore, the study highlights the relevance and adaptability of traditional knowledge in addressing contemporary global challenges, particularly those aligned with SDG 1-5. Integrate *Siri*’ and *Pesse* Modules into Village Leadership Training. Development agencies and local government should co-design capacity-building curricula that incorporate the moral frameworks of *siri*’ (honour/shame) and *pesse* (compassion/reciprocity). By using case studies and role-plays drawn from Pangngajak Tomatoa, these modules can strengthen ethical decision-making and foster empathetic leadership among desa officials and community facilitators.

Practically, the proposed integration model provides a roadmap for local governments and NGOs to incorporate culturally grounded approaches into development programmes. By leveraging local wisdom, such programmes can enhance community participation, foster a sense of ownership, and improve the sustainability of initiatives. Specifically, in the Bugis context, the model encourages greater inclusion of women in leadership and decision-making roles, aligning with SDG 5 on gender equality. Establish Cross-Cultural Collaboration Guidelines for Local SDG Programmes. NGOs and regional planners should develop best-practice protocols that leverage Bugis communal practices—such as gotong royong and participatory deliberation—as templates for multi-ethnic SDG implementation. These guidelines would standardise inclusive consultation processes, ensure gender-balanced participation, and promote mutual-aid mechanisms across diverse village contexts.

In terms of policy implications, the study advocates for policymakers to integrate local cultural values into development planning. Recognising the contributions of indigenous communities in resource management, education, and poverty alleviation ensures policies are more adaptive and responsive to specific community needs, increasing their chances of long-term success.

Socially, this research emphasises the importance of Bugis cultural values as a social asset that strengthens solidarity, social justice, and environmental sustainability.

By highlighting these values, the study underscores that preserving cultural heritage is not only vital for identity but also serves as a foundation for social innovation in development.

At a global level, the study demonstrates that development models respecting local wisdom can have broader applications in diverse contexts. For instance, the Bugis approach to collective resource management provides inspiration for community-led initiatives in other developing countries, showcasing the universal relevance of culturally sensitive solutions.

In summary, this study underscores the potential of Bugis local wisdom to contribute significantly to sustainable development at both local and global levels. By bridging traditional values and international standards, it offers a culturally resonant pathway to create inclusive and sustainable societies.

Limitation and Recommendation for Future Research

This study has several limitations that must be acknowledged. First, the research focuses on the Bugis community in South Sulawesi, Indonesia, which may limit the generalisability of the findings to other cultural contexts. While the values identified are deeply rooted in Bugis traditions, their applicability to other communities with different cultural frameworks remains uncertain. Second, the study predominantly employs qualitative methods, relying on interviews and textual analysis, which may

limit its ability to quantify the impacts of Bugis local wisdom on sustainable development goals (SDGs). Third, the research primarily examines the alignment of local wisdom with SDGs 1-5, leaving other SDGs less explored, which could offer additional insights into the broader applicability of Bugis cultural practices.

Future studies should address these limitations by exploring the following areas. First, comparative ethnographic studies. Applying the integrative framework to other Indonesian ethnic groups (e.g., Makassar, Toraja, Minangkabau) would test its transferability and identify shared versus unique cultural drivers of social sustainability. Second, researchers could employ mixed-methods approaches, combining qualitative and quantitative methods, to provide a more comprehensive analysis of the relationship between local wisdom and sustainable development. Quantitative validation, such as measuring community-level impacts on poverty reduction or gender equality, could strengthen the study's findings. Third, expanding thematic analysis to additional SDG domains. Future studies should investigate how Bugis wisdom informs management of clean water (SDG 6), justice and institutional trust (SDG 16), and livelihood diversification (SDG 8). Lastly, longitudinal studies tracking the implementation of the proposed model over time would offer valuable insights into its practical effectiveness and adaptability in real-world scenarios.

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