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Dynamics of Hindu Ceremonial Waste and Ecological Challenges: An Eco-Theological Cultural Analysis

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Abstract

The issue of waste generated from Hindu religious ceremonies is escalating and poses potential ecological risks to the environment. Ritual activities involving items such as *canang sari*, *banten* (offerings), and other ceremonial paraphernalia generate both organic and inorganic waste, yet current management practices remain traditional. This study aims to describe the dynamics of ceremonial waste management, analyze the roles of the customary community and religious leaders, and examine the resulting ecological implications. A qualitative approach utilizing descriptive methods was employed. Data were gathered through in-depth interviews, observations, and documentation involving village officials, customary leaders, Hindu religious figures, PHDI administrators, and the residents of Rangdu Village. The findings indicate that ceremonial waste is still perceived as possessing sacred value. Consequently, management practices have not fully taken ecological aspects into account. Furthermore, the use of inorganic materials such as plastic in rituals exacerbates the environmental impact. Religious leaders and the customary community play a crucial role in fostering ecological awareness grounded in *Tri Hita Karana* values. The study concludes that a cultural eco-theological approach is essential to establish ceremonial waste management practices that are sustainable and aligned with the religious values of the Balinese Hindu community.

Keywords

Ecological Challenges, Eco-Theology, Ceremonial Waste, Hindu Rituals, Traditional Village

1. Introduction

Rangdu Village, located in Seririt District, Buleleng Regency, is one of the areas in North Bali that continues to strongly preserve Hindu religious practices through various traditional rituals, such as *canang* sari and *banten*. These rituals not only represent the spiritual relationship between humans and God, but also contain symbolic meanings within the concepts of *sekala* and *niskala* as mediums of spiritual communication (Eiseman, 2011). In addition to their religious function, Hindu rituals in Bali also embody a sacred aesthetic dimension that reflects the integration of cultural values and spirituality within community life (Bandem & deBoer, 1995). These traditions play an important role in maintaining the cultural identity of Balinese Hindu society while demonstrating the close interconnection between religion and culture in everyday practices.

Behind these sacred values, increasingly complex ecological issues have emerged, particularly concerning the growing volume of ceremonial waste. Ritual activities generate various forms of waste, including leftover offerings, coconut leaves, flowers, incense residues, and non-organic materials such as plastic and synthetic packaging (Cairns, 2020; Surpi et al., 2025). The management of this waste is often not conducted optimally, resulting in waste accumulation in temple areas, residential environments, and river streams. This phenomenon reflects the tension between sacred religious practices and the demands of ecological responsibility in modern society. In this context, ceremonial waste is not merely an environmental cleanliness issue but is also closely related to how communities interpret the sacredness of ritual materials and their relationship with nature.

Normatively, Hindu teachings through the concept of *Tri Hita Karana* emphasize the importance of maintaining harmonious relationships between humans and God (*parhyangan*), among fellow humans (*parwongan*), and with the natural environment (*palemahan*). This concept serves as a philosophical foundation for Balinese society in sustaining social, spiritual, and ecological balance. However, in social practice, the *palemahan* dimension is often not implemented optimally, particularly in the management of ritual waste. From an eco-theological perspective, this condition reflects an imbalance in the relationship between humans and nature, which consequently disrupts the principle of *RTA* as a cosmic order. This situation indicates that religious values, which should encourage environmental preservation, have not yet been fully internalized within community practices.

The issue becomes more complex due to the religious meanings attached to ceremonial remnants. Some community members still regard ritual waste as sacred and therefore tend not to dispose of or manage it systematically. This condition demonstrates that the issue of ceremonial waste extends beyond ecological concerns and is deeply connected to the cultural and theological dimensions embedded within society. Previous studies by Van Horn (2006) have predominantly discussed Hindu rituals from cultural, aesthetic, and spiritual perspectives, while research examining ceremonial waste as an ecological issue grounded in religious values remains relatively limited. Furthermore, earlier studies tend to approach waste management primarily from a technical environmental perspective without comprehensively connecting it to cultural eco-theology and the social practices of indigenous communities. Therefore, a significant research gap exists in the limited integration of religious, cultural, and ecological dimensions in the study of Hindu ceremonial waste management at the local community level (Tyagi, 2024; Kirin & Kariman, 2026).

Based on these conditions, this study offers novelty through the application of a cultural eco-theology approach to analyze the relationship between Hindu ritual practices and community ecological responsibility. This approach not only

emphasizes the reinterpretation of religious values in environmental preservation but also explores how indigenous communities and religious leaders construct ecological awareness through local cultural and social practices. In addition, this research integrates cultural ecology theory, Max Weber's theory of social action, and eco-theological perspectives to provide a more comprehensive understanding of ceremonial waste management dynamics. Through this interdisciplinary framework, the study is expected to contribute a new perspective regarding the relationship between religion, culture, and environmental sustainability within the context of Balinese Hindu society.

This study aims to describe the dynamics of Hindu ceremonial waste management in Rangdu Village, analyze the role of indigenous communities and religious leaders in responding to emerging ecological challenges, and examine the ecological implications of ceremonial waste on the environment. This research is expected to enrich interdisciplinary studies, particularly in the fields of eco-theology, local culture, and environmental studies. The findings of this study are expected to serve as a reference for communities, government institutions, and customary organizations in formulating ceremonial waste management strategies grounded in religious values, local cultural wisdom, and principles of environmental sustainability.

2. Literature Review

2.1. Eco-Theology and Tri Hita Karana

Eco-theology is an interdisciplinary approach that examines the relationship between religion, spirituality, and environmental sustainability. In Hinduism, eco-theological values are reflected through teachings that emphasize harmony between humans and nature as part of cosmic balance. According to Tucker and Grim (2001), religious traditions play an important role in shaping ecological awareness because they provide moral and spiritual foundations for environmental responsibility. In the Balinese Hindu context, eco-theology is closely connected with local wisdom that encourages people to maintain harmony with the natural environment as a sacred obligation.

The concept of *Tri Hita Karana* represents one of the primary philosophical foundations of Balinese Hindu society in maintaining harmony between humans, God, and nature. This concept consists of *parhyangan* (human relationship with God), *parwongan* (human relationship with others), and *palemahan* (human relationship with the environment). According to Gupta (2021) and Öhlmann and Swart (2022), *Tri Hita Karana* functions as a cultural and spiritual guideline that supports environmental sustainability through community-based practices and local traditions. Through this philosophy, environmental preservation is understood not only as a social responsibility but also as a form of religious devotion and spiritual ethics. The implementation of *Tri Hita Karana* encourages communities to maintain ecological balance, strengthen social solidarity, and preserve cultural values in sustainable environmental management practices.

2.2. Ceremonial Waste Management

Ceremonial waste management has become an increasingly important environmental issue, particularly in regions where Hindu ritual traditions remain strongly practiced. Ceremonial waste generally consists of leftover offerings, flowers, coconut leaves, incense residues, and inorganic materials such as plastic and styrofoam used in ritual activities. According to Astiti et al. (2015) and Vita et al. (2018), the increasing intensity of religious ceremonies without proper waste management systems can lead to waste accumulation around temples and residential areas. This condition indicates that religious activities also produce ecological

impacts that require sustainable management practices (Surya et al., 2017; Ardika, 2018; Suryathi et al., 2018).

In Balinese Hindu society, ceremonial waste management is not only related to technical aspects of cleanliness but is also deeply influenced by cultural values and religious beliefs. Certain ritual remains are still considered sacred, resulting in specific disposal practices carried out by the community. Suartana et al. (2015) and Adi et al. (2015) explain that cultural understandings regarding the sanctity of ceremonial materials significantly influence how ritual waste is managed within traditional communities. Therefore, a culturally based and community-oriented approach is necessary to ensure that ceremonial waste management aligns with both religious values and environmental sustainability principles (Narasimham et al., 2025).

3. Methods

This study employed a qualitative approach with a descriptive research design. A qualitative approach was selected because the research aims to gain an in-depth understanding of the dynamics of Hindu ceremonial waste as part of the ecological issues experienced within the community. In addition, this approach was used to examine the relationship between ritual practices, cultural values, and community ecological awareness through the perspective of cultural eco-theology. The research was conducted in Rangdu Village, Seririt District, Buleleng Regency. This location was chosen because Rangdu Village remains actively engaged in various Hindu religious rituals, particularly the implementation of *Panca Yadnya* ceremonies, which potentially generate ceremonial waste that affects the surrounding environment.

The population of this study consisted of members of the Rangdu Village community who are involved in Hindu religious ceremonies and ceremonial waste management activities. Research informants were selected using a purposive sampling technique, in which participants were intentionally chosen based on specific considerations. The informants were considered to possess knowledge, experience, and direct involvement in ritual practices and ceremonial waste management. The informants included village officials, traditional leaders, Hindu religious leaders, administrators of Parisada Hindu Dharma Indonesia (PHDI), and members of the Rangdu Village community who actively participate in religious and customary activities.

Data collection techniques in this study included in-depth interviews, observation, and documentation. In-depth interviews were conducted to obtain information regarding ceremonial waste management practices, community perceptions concerning the sacredness of *banten*, and the role of traditional and religious leaders in responding to ecological issues. Observations were carried out directly to examine environmental conditions surrounding temple areas, residential settlements, village roads, and river flows that are commonly used as locations for ceremonial waste disposal. Meanwhile, documentation was used to complement the research data in the form of photographs of ritual activities, village archives, records of customary activities, and other relevant documents related to the study.

The data analysis technique applied in this study was qualitative data analysis consisting of data reduction, data presentation, and conclusion drawing. Data reduction was conducted by selecting and simplifying data relevant to the research focus. The data were then presented in descriptive form to facilitate the identification of patterns and relationships among the findings. The final stage involved drawing conclusions based on the interpretation of field data. To ensure data validity, this study employed source triangulation and method triangulation techniques so that the findings obtained would possess stronger validity and reliability.

4. Results

4.1. Dynamics of Waste Management from Hindu Religious Ceremonies

Based on interviews with the traditional village head of Rangdu Village, the dynamics of waste management during Hindu religious ceremonies in Rangdu Village are still traditional, simple, and not yet systematically institutionalized. Each religious ceremony, such as *Purnama* (full moon), *Tilem*, *Galungan*, *Kuningan*, *Saraswati*, and various *tumpek* (concert ceremonies), generates relatively large amounts of ritual waste, particularly from the use of ceremonial instruments such as offerings (*banten*), *canang sari*, and *caru* (*caru* offerings). In practice, this waste is not managed through a specific mechanism but tends to be disposed of directly into the surrounding environment. This is reflected in the interviewee's statement "*dilebar ke lebu*," which refers to the practice of spreading or dumping ceremonial waste into open spaces without further treatment. This situation indicates that waste management is still oriented towards traditional customs, rather than an environmentally-based management system.

The type of waste produced is dominated by *canang* and *caru* remains, which are inherently organic. However, in contemporary ritual practices, these materials are often mixed with non-organic materials such as plastic and other synthetic elements. This waste is generally placed in the rear area of the temple or *teba*, which is culturally considered an appropriate space for ceremonial waste. However, this practice is not yet supported by an environmentally friendly and sustainable waste management system (Dewi, 2025). Furthermore, the dynamics of waste management in Rangdu Village are also characterized by the lack of a separation process between organic and non-organic waste. All waste tends to be treated as a single unit, hampering further processing. Furthermore, there are no customary regulations specifically governing the management of ceremonial waste, and no actors or institutions have been structured to take responsibility. As a result, waste management remains individual and uncoordinated.

Despite this, there are early indications of ecological awareness within the community, reflected in efforts to dig pits to store organic waste (Wahyudi & Santoso, 2022). However, these efforts remain sporadic and have not yet developed into an integrated and sustainable management system. In terms of impact, these dynamics of waste management have implications for environmental degradation, such as the less clean condition of temple areas due to the accumulation of ritual waste, and the practice of dumping waste into rivers, which has the potential to pollute the ecosystem. This demonstrates that the issue of ceremonial waste has not only a local impact but also has broader ecological consequences.

When analyzed from a symbolic anthropological perspective by Geertz (1973), these dynamics cannot be understood solely as technical issues, but rather as part of a society's cultural meaning system. Ceremonial instruments such as offerings (*banten*), *canang sari*, and *caru* have symbolic meaning as a medium of spiritual communication between humans and God. This sacred meaning does not necessarily disappear after the ritual is completed, so the remains of the ceremony are not immediately perceived as waste in the profane sense.

However, in the context of modernization, a significant material shift has occurred, with the use of non-organic materials increasing due to practical and economic considerations (Indriani et al., 2025). From a symbolic anthropological perspective, this situation reflects a mismatch between sacred symbolic meaning and the materials used, resulting in waste that is inconsistent with ecological principles. This phenomenon demonstrates the ambiguity between the sacred and profane dimensions in ceremonial waste management. On the one hand, waste is still viewed as having sacred value, while on the other, unmanaged disposal practices indicate

that such waste has become part of the profane reality with ecological impacts (Behare et al., 2025).

Thus, the dynamics of waste management during Hindu religious ceremonies in Rangdu Village reflect the strong construction of cultural meaning within the community. Therefore, waste management efforts cannot be carried out solely through a technical approach but must be accompanied by a cultural approach through reinterpreting the symbolic meaning of offerings (*banten*) and other ceremonial items, thereby maintaining sacredness while encouraging waste management practices that align with the principles of environmental sustainability.

4.2. The Role of Indigenous Communities and Religious Leaders

The role of indigenous communities and religious leaders in responding to the ecological challenges posed by waste from religious ceremonies in Rangdu Village is part of the dynamics of social action formed through the interaction between habitus, field, and capital (Indriani et al., 2025). These three elements are not only interrelated but also simultaneously shape and reproduce patterns of social practice in community life. In this context, responses to waste issues cannot be reduced to merely technical issues but must be understood as manifestations of socio-cultural constructions that have been collectively internalized and persisted over a long period.

Indigenous communities occupy a central position as primary actors in the implementation of religious rituals and as guardians of the continuity of traditions. However, in the context of ceremonial waste management, this role has not yet developed optimally toward a structured ecological response. Ongoing practices are still dominated by inherited customary patterns, such as dumping waste in *lebuh* or *teba* areas. This pattern reflects the strength of habitus, which shapes social action spontaneously, without critical reflection on the resulting ecological implications (Wahyudi & Santoso, 2022).

Habitus, formed through historical processes, has made these practices part of “social normality” (social taken for granted). Within this framework, communities view ceremonial waste as materials that naturally return to the environment, thus requiring no special handling. This view was initially relevant because ritual materials were predominantly organic. However, along with social change and the development of cultural materials, the use of non-organic materials such as plastic and other synthetic materials has increased. This change creates a mismatch between old habits and new ecological realities, resulting in more complex environmental impacts (Wijaya et al., 2021).

In such situations, indigenous communities tend to be passively adaptive, maintaining old practices despite changing material contexts. This indicates a delay in the transformation of habitus in response to changes in social and environmental structures. In other words, communities have not yet fully developed the reflective awareness (reflexivity) necessary to adapt religious practices to principles of environmental sustainability. On the other hand, religious leaders hold a strategic position as symbolic agents who play a role in shaping the community’s knowledge systems and value orientations. Within the religious field, religious leaders function not only as ritual leaders but also as authorities who determine the legitimacy of the meaning of religious practices. However, this role has not been fully utilized to address ecological challenges. Religious discourse still focuses on aspects of sacredness, ritual accuracy, and continuity of tradition, while the ecological dimension has not been substantially integrated into religious discourse (Chakrabarty, 2020).

However, from an eco-theological perspective, religious teachings have a strong normative capacity to build environmental ethics. Concepts such as harmony in *Tri Hita Karana* and balance in *Rwa Bhineda* embody ecological values that can be reinterpreted in a contemporary context. In this regard, religious leaders have great

potential as agents of change, capable of re-articulating spiritual values into practices that are more responsive to environmental issues. This reinterpretation is crucial for bridging the gap between the symbolic meaning of rituals and their resulting ecological impacts (Aniah & Yelfaanibe, 2018).

From a capital perspective, limited resources are a factor that influences the effectiveness of the role of indigenous communities and religious leaders. Unorganized social capital has prevented the formation of a focused collective work system for waste management. Although cooperation practices exist within ritual contexts, these have not been specifically directed at waste management. Meanwhile, cultural capital in the form of ecological knowledge and technical skills remains limited, resulting in waste management practices that tend to be rudimentary and unsystematic. This is reflected in the lack of a separation process between organic and non-organic waste and the absence of further processing mechanisms (Baldy, 2013).

Furthermore, weak symbolic capital is evident in the lack of normative legitimacy through customary rules (*awig-awig*) specifically governing ceremonial waste management (Behare et al., 2025). This lack of regulation results in waste management practices lacking collective binding power, leaving community behavior dependent on long-standing individual and collective customs. In this context, the role of customary and religious leaders as holders of symbolic authority has not been fully realized in the form of binding policies or guidelines. Nevertheless, there is potential for transformation. Some simple practices, such as digging pits to bury organic waste, demonstrate practical awareness in responding to environmental issues. Furthermore, the strategic position of traditional and religious leaders within the social structure represents a form of symbolic capital that can be mobilized to encourage collective behavioral change. This potential is crucial as a starting point for building broader ecological awareness within the community.

From the perspective of social practice theory, changes in social practices do not occur instantly, but rather through a process involving habitus transformation, capital strengthening, and field reconstruction. Therefore, efforts to respond to ecological challenges require a multidimensional strategy. Indigenous communities need to be encouraged to develop a reflective awareness of the ecological impacts of religious practices, while religious leaders need to broaden religious discourse by integrating environmental conservation values as part of their spiritual responsibilities (Indriani et al., 2025).

Therefore, the role of indigenous communities and religious leaders in responding to ecological challenges in Rangdu Village is still in a transitional stage and is not yet fully optimal. More systematic efforts are needed through education, strengthening traditional institutions, and developing regulations based on local values that can bind the community's collective behavior. Through this process, it is hoped that a transformation in ceremonial waste management practices will occur that not only maintains the sacredness of tradition but also aligns with the principles of environmental sustainability in the context of modern society.

4.3. Ecological Implications of Ceremonial Waste on the Environment

The ecological implications of waste from Hindu religious ceremonies in Rangdu Village, Seririt District, demonstrate the close relationship between religious practices and environmental conditions. Waste generated from ritual activities not only physically impacts the environment but also reflects human perspectives on the position of nature in social and spiritual life. From an ecocentrism perspective, nature is understood as an entity with intrinsic value, so every human activity, including religious practices, should consider the sustainability of the ecosystem as a whole. However, in empirical reality, ceremonial waste management in Rangdu Village does not fully reflect this principle, giving rise to various ecological implications that require serious attention.

One of the most visible implications is the decline in the cleanliness and tidiness of the temple environment. Areas symbolically viewed as sacred should reflect harmony and holiness, but in practice, they are often littered with disorganized ceremonial debris (Indriani et al., 2025). This situation demonstrates a mismatch between the symbolic meaning of holiness and the ecological reality on the ground. Based on interviews, it was stated that the temple environment has become less clean due to scattered ceremonial waste. Within the framework of ecocentrism, this phenomenon reflects the disruption of the harmonious relationship between humans and the environment, where sacred spaces have not been fully treated as part of an ecological system that must be maintained for their sustainability.

Furthermore, the practice of disposing of waste in open areas such as the Teba or the area around the temple has implications for soil quality (Kimmerer, 2012). Waste that is not systematically managed has the potential to disrupt soil structure, especially when organic and inorganic waste is mixed. Ecologically, organic waste has the potential to decompose and return to the soil nutrient cycle. However, when mixed with inorganic materials such as plastic, the decomposition process is hampered. This condition not only reduces soil fertility but also disrupts the balance of microorganisms that play a vital role in maintaining a healthy soil ecosystem.

Furthermore, the presence of inorganic waste that is difficult to decompose has long-term implications for the microenvironment. Materials such as plastic can persist for long periods and potentially contaminate surrounding soil and water sources. In the long term, the accumulation of this waste can impact the ecological chain, including small organisms like insects and soil microbes that play a vital role in maintaining ecosystem balance. From an ecocentrism perspective, this condition demonstrates human domination of nature, where the environment is treated as a dumping ground without considering its carrying capacity and regenerative capacity (Huntington, 2000).

Ecological implications can also be seen from the socio-environmental aspect, particularly those related to public comfort and health (Aniah & Yelfaanibe, 2018). A poorly managed environment has the potential to produce unpleasant odors, increase the risk of disease vector development, and reduce the quality of life for surrounding communities. Although these impacts have not yet been fully recognized collectively, interviews indicate initial public awareness of changes in environmental conditions caused by ceremonial waste. This awareness is an important indication that the community is beginning to perceive the real implications of current practices.

Within the framework of ecocentrism, this awareness can be understood as the initial stage toward a paradigm shift in viewing the relationship between humans and nature (Charnley et al., 2007). This approach emphasizes that humans are part of the ecosystem, not the center of it. Therefore, every activity, including religious activities, needs to consider its impact on ecological balance. In the context of Rangdu Village, there is a gap between religious philosophical values that emphasize harmony and waste management practices that are still not fully aligned with the principles of environmental sustainability. Nevertheless, there are opportunities to minimize the resulting ecological implications. Several simple practices already implemented by the community, such as digging pits to collect organic waste, demonstrate the potential for more environmentally friendly management. From an ecocentrism perspective, these practices can be developed into more structured systems, such as sorting waste by type and reusing organic waste as compost. These efforts not only contribute to reducing negative impacts on the environment but also strengthen the integration between religious practices and principles of ecological sustainability.

Thus, the ecological implications of ceremonial waste in Rangdu Village encompass a wide range of aspects, from deteriorating the physical environment and

disrupting the soil ecosystem to potential social impacts on the community. This situation demonstrates the importance of more targeted and sustainable waste management, so that religious practices not only maintain sacred values but also contribute to environmental preservation as an integral part of community life.

5. Discussion

The findings of this study indicate that the management of Hindu ceremonial waste in Rangdu Village remains largely traditional and lacks a structured waste management system. Ceremonial waste originating from *canang sari*, *banten*, and *caru* is generally disposed of directly into open areas such as *lebu* and *teba* without further processing. This practice demonstrates that waste management patterns are still strongly influenced by customary traditions passed down through generations. These findings are consistent with the study conducted by Wahyudi and Santoso (2022), which explains that religious ritual activities in Bali often generate large volumes of waste without being supported by adequate environmental management systems. As a result, waste accumulation frequently occurs around temple areas and residential environments.

The study also found that ceremonial waste in Rangdu Village is not entirely perceived as ordinary waste in a profane sense. Community members continue to regard the remains of *banten* and *canang* as sacred ritual materials that possess spiritual value. Consequently, ritual waste is not treated in the same manner as ordinary household waste. This perspective demonstrates that the issue of ceremonial waste is closely related to cultural constructions and religious beliefs within the community. These findings support Kimmerer's (2012) perspective, which states that religious symbols carry profound cultural meanings that influence social behavior within society. In this context, the sacredness attached to ritual symbols significantly shapes community practices regarding waste management.

This research further revealed material transformations in ritual practices as a consequence of modernization. Whereas ceremonial materials were previously dominated by organic components, the use of plastic and synthetic materials has increasingly expanded due to practical and economic considerations. This condition has created new ecological problems because non-organic waste is difficult to decompose naturally. These findings are in line with Haq et al. (2023) study, which explains that the modernization of Balinese ritual culture has increased the use of non-biodegradable materials in religious ceremonies, thereby contributing to environmental degradation. This transformation reflects a contradiction between the philosophical values of rituals, which emphasize harmony, and the actual practices that produce ecological consequences.

In addition, the findings show that indigenous communities hold an important role as the primary practitioners of rituals and guardians of tradition. However, community responses to ecological issues remain relatively passive and continue to follow long-established customs. Waste management practices are generally carried out individually without a collectively organized system. Ecological awareness has begun to emerge through simple initiatives, such as digging pits to accommodate organic waste, yet these efforts remain sporadic and unintegrated. These findings are consistent with Huntington (2000) and Charnley et al. (2007), who argue that the implementation of *Tri Hita Karana* values within community life still faces challenges, particularly regarding environmental preservation and community-based waste management practices.

On the other hand, this study found that religious leaders possess a strategic role in shaping community values and orientations, although their contribution to addressing ecological issues has not yet been optimal. Religious discourse continues to focus more heavily on ritual sacredness and ceremonial correctness rather than ecological responsibility. In fact, the concept of *Tri Hita Karana* contains ecological

values that emphasize harmony between humans and nature. These findings support Tucker and Grim's (2001) argument that religious teachings possess strong normative power in fostering ecological awareness and environmental ethics within society. Therefore, the reinterpretation of religious values becomes essential to ensure that religious practices remain aligned with principles of environmental sustainability.

The findings demonstrate that the issue of ceremonial waste in Rangdu Village extends beyond the technical aspects of waste management and is strongly influenced by cultural, spiritual, and social dimensions within the community. This condition highlights the importance of a cultural eco-theology approach in understanding the relationship between religious practices and ecological responsibility. These findings are also consistent with Bandem and deBoer (1995), who state that Balinese culture and rituals fundamentally contain values of harmony that can serve as a foundation for balancing spiritual life and environmental preservation.

6. Conclusion

Based on the findings of this study, it can be concluded that the management of Hindu ceremonial waste in Rangdu Village remains largely traditional and has not yet been systematically organized. Ceremonial waste originating from *canang sari*, *banten*, and other ritual materials is not merely perceived as ordinary waste but also carries sacred meanings within the social and spiritual life of the Balinese Hindu community. As a result, waste management practices often do not fully consider ecological aspects. The study also found that the modernization of ritual practices through the increasing use of non-organic materials such as plastic has intensified the environmental impacts generated by ceremonial activities. Furthermore, indigenous communities and religious leaders play important roles in shaping ecological awareness within society, although the implementation of *Tri Hita Karana* values in waste management practices still faces various challenges. The implications of this research highlight the importance of a cultural eco-theology approach in developing waste management systems grounded in religious values, local cultural wisdom, and environmental sustainability principles.

This study has several limitations, as it was conducted only in one village and focused specifically on Hindu religious practices. Therefore, the findings cannot yet be generalized to other communities with different cultural characteristics. In addition, the research primarily employed a qualitative approach and did not quantitatively measure the ecological impacts of ceremonial waste on the environment. Future research is recommended to expand the study area to other Hindu communities, apply mixed-method approaches, and examine technology-based and community-oriented strategies for ritual waste management. Further studies may also explore the role of government policies and customary institutions in strengthening sustainable ceremonial waste management practices.

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Data Disclosure Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.



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