



The conservation of the white cattle of Taro as a representation of *Prāṇī-Dharma* values, biodiversity preservation, and religious heritage

Ni Wayan Sri Rahayu¹, Puspo Renan Joyo², Ni Wayan Sariati Binawati^{3*}

¹ STAH Dharma Sentana, Palu, Central Sulawesi, 94119, Indonesia;

² Institut Agama Hindu Negeri Tampung Penyang Palangka Raya, Central Kalimantan, 73112, Indonesia;

³ Universitas Hindu Negeri I Gusti Bagus Sugriwa Denpasar, Bali 80613, Indonesia.

*Correspondence: niwayansrirahayu@gmail.com

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ABSTRACT

Background: The breeding of white cattle in Taro Village, Bali, is not merely an agricultural or economic activity, but one deeply intertwined with spiritual values rooted in the concept of *Prāṇī-Dharma*. In this context, white cattle are revered not only as symbols of prosperity and wealth, but also as sacred beings that embody harmony between humans and nature. This study aims to explore how the breeding of white cattle in Taro functions as a representation of *Prāṇī-Dharma* values, particularly in relation to the preservation of tradition and ecology.

Methods: Employing a qualitative case study approach, this research involved in-depth interviews with breeders, religious figures, and local community members, as well as field observations of rituals and cattle-rearing practices. The data were analyzed thematically to identify the connections between Hindu spiritual concepts and the practice of white cattle breeding. **Finding:** The findings reveal that the breeding of Taro's white cattle reflects an integration of spiritual and ecological dimensions within the local community. The white cattle are regarded as symbols of purity and environmental balance, protected through the principles of *Ahimsa* (non-violence) and *Karuṇā* (compassion), which lie at the heart of *Prāṇī-Dharma*. This practice also plays a vital role in the conservation of living beings and the preservation of local cultural traditions. **Conclusion:** The study concludes that the breeding of white cattle in Taro is not only a conservation practice but also a means of reinforcing moral and spiritual values within Hindu society. This research contributes to the understanding of the relationship between divine ecology and traditional conservation, enriching the discourse on how religion and local culture support environmental sustainability. **Novelty/Originality of this article:** The uniqueness of this study lies in the placement of white cattle breeding in Taro as an applied model of *Prāṇī-Dharma*, which shows how spiritual ethics directly influence conservation practices.

KEYWORDS: white cattle; *Prāṇī-Dharma*; Bali; Hinduism; sacred animals.

1. Introduction

The breeding of white cattle in Taro Village, Bali, is not merely an act of livestock management but serves as a manifestation of spiritual values rooted in Hindu teachings. White cattle are regarded as symbols of purity and harmonious relationships between humans and nature. In this context, they are not only seen as living beings to be cared for, but also as sacred creatures that play an essential role in maintaining ecological balance and the spiritual connection between humans and the universe. The concept of *Prāṇī-Dharma*,

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the moral and religious duty toward all living beings forms the foundation of white cattle breeding in Taro. This doctrine teaches that humans bear both a spiritual and ethical responsibility to preserve the environment and protect life as an extension of their religious obligation. In Hindu tradition, cattle are often associated with deities, especially Shiva, who is accompanied by the sacred bull Nandi, reinforcing their status as symbols of purity and spiritual power.

The white cattle breeding practices in Taro reflect the application of *Prāṇī-Dharma* values, particularly the principles of *Ahimsa* (non-violence) and *Karuṇā* (compassion), which demand kind treatment of animals as part of Hindu moral teachings. These values are evident in the respectful manner in which the Taro community raises white cattle, especially in religious rituals and customary traditions that emphasize the triadic balance between humans, nature, and the divine. Moreover, white cattle play an integral role in ceremonial life, representing a deeper reverence for life and the environment, aligning with the Hindu worldview that the universe is a sacred creation to be protected (Sharma, 2020). Therefore, the breeding of white cattle in Taro is not solely an economic or agricultural activity but a practice rooted in the spiritual and ecological preservation integral to the moral ecosystem of Hindu society.

While some studies have explored animal husbandry within Hindu tradition, few have focused specifically on the relationship between cattle breeding and *Prāṇī-Dharma* in the context of local conservation and culture. Prior research has predominantly emphasized either the economic or ritualistic aspects, often without connecting these to divine ecological concepts (Sharma, 2020). Accordingly, this study seeks to fill that gap by examining how the breeding of white cattle in Taro Village serves as an expression of *Prāṇī-Dharma* values, contributing both to environmental stewardship and the preservation of local cultural traditions.

The main objective of this research is to explore how the breeding of white cattle in Taro integrates *Prāṇī-Dharma* values into environmental conservation and how this concept fosters a harmonious and spiritual human–nature relationship. It also seeks to address the following questions: How can white cattle breeding be understood as a form of spiritually-based conservation? What is the connection between white cattle breeding and the principles of *Ahimsa* and *Karuṇā* in the context of divine ecology?

Prāṇī-Dharma is deeply embedded in Hindu teachings that emphasize human responsibility toward all living beings (*prāṇī*) and the environment. It encompasses principles such as *Ahimsa* (non-violence) and *Karuṇā* (compassion), which guide Hindus in maintaining balance among humans, animals, and the cosmos. In the context of white cattle breeding in Taro, these values are reflected in the way Balinese communities care for and honor white cattle as revered beings in their religious traditions.

Cattle hold deep symbolic meaning in Hindu tradition, particularly in Bali, where they represent purity, serenity, and resilience. Putra et al. (2024) notes that white cattle are frequently used in religious ceremonies such as *Piodalan* (temple anniversaries), *Ngaben* (cremation rituals), and *Saraswati* Day (celebrating the Goddess of Wisdom). The white cattle serve as vehicles of spiritual peace and power, mediating relationships with the Supreme Divine. This demonstrates how white cattle are perceived not only as physical beings but also as symbols and embodiments of spiritual principles within Hinduism.

White cattle breeding in Taro also connects with themes of conservation and sustainability. According to Clifton (2023), eco-spirituality underscores the importance of ecological balance through the spiritual care of animals and plants. In Bali, white cattle breeding is not driven solely by economic gain, but also by a commitment to sustaining a balanced ecosystem that supports long-term agricultural life. This aligns with Moore's (1999) findings that in Balinese Hinduism, animal husbandry is intimately tied to cultural conservation principles that emphasize environmental and soil stewardship.

Furthermore, *Prāṇī-Dharma* is closely related to ecological ethics in Hinduism, which stresses the moral responsibility of humans toward other living beings. Clifton (2023) explains that in Hindu practice, animal breeding, including that of cattle, is viewed as a means of preserving natural harmony and mitigating environmental degradation. This

reflects a holistic worldview in which all forms of life, human and non-human, are interconnected and essential to ecological balance.

Despite existing literature on *Prāṇī-Dharma* in Hinduism, few studies examine the practical application of these values in everyday Balinese life, particularly in relation to the breeding of white cattle in Taro Village. Much of the scholarship focuses on philosophical and religious aspects of *Prāṇī-Dharma*, with limited exploration of its implementation in traditional conservation and animal husbandry. Likewise, research on the role of white cattle in Balinese religious ceremonies remains sparse, often emphasizing symbolism and ritual without addressing their function in culturally embedded conservation efforts. This study aims to bridge this gap by exploring how white cattle breeding in Taro serves not only as a religious symbol but also as a form of cultural conservation and a lived embodiment of *Prāṇī-Dharma* values in daily life.

2. Methods

This study uses a qualitative approach with an intrinsic case study design, focusing on the practice of white cow conservation in Taro Village, Bali, as the empirical context for applying *Prāṇī-Dharma* values. This approach was chosen because the study's purpose was not to test hypotheses but to understand the meaning, value, logic, and daily practices inherent in conservation actions grounded in religious beliefs (DeJonckheere et al., 2024).

Informants were selected through purposive sampling with the following criteria: directly involved in white cow conservation; having ritual authority or religious knowledge in the context of practices in Taro; involved in customary decision-making related to conservation. Based on these criteria, 20 informants were selected, comprising white cow foundation managers, farmers, religious leaders, and traditional leaders. Data were collected through three main instruments.

Semi-structured in-depth interviews to explore the meaning of *Prāṇī-Dharma*, conservation motives, and the ecological rationality underlying the practice. Participatory observation of maintenance activities and religious rituals involving white cows, to capture practical dimensions that are not always articulated verbally. Document study of local religious texts, customary archives, and internal foundation manuscripts to trace the normative basis and continuity of traditions. The analysis was conducted using inductive thematic analysis techniques (Saunders et al., 2023), following these stages: verbatim transcription of interviews; open coding of empirical units of meaning; thematic categorization through axial coding; construction of final themes representing the relationships between religious concepts, ecological practices, and the community's conservation framework. To strengthen the auditability of the interpretation, the coding process was documented in a code log, while triangulation was carried out by comparing the consistency between sources (interviews, observations, documents). Each informant was explained the research objectives and provided informed consent. Personal identities were replaced with codes to maintain confidentiality, and the observation process followed customary etiquette and applicable ritual prohibitions.

3. Results and Discussion

3.1 Historical existence of white cattle in Taro village

The white cattle in Taro Village, Bali, possess a long history that is deeply intertwined with local traditions and cultural practices. The breeding of white cattle has been maintained for centuries and has become an integral part of Balinese community life. According to oral narratives passed down through generations, the white cattle are considered a legacy of Maharsi Markandeya, who is believed to have introduced the sacred cattle as part of his teachings on religion, agricultural techniques, and social order during his sacred journey to Bali.

Over time, the white cattle have come to be viewed not merely as livestock but as symbols of purity closely linked to religious concepts in Balinese Hinduism. Within Balinese tradition, white cattle are revered as sacred animals that embody *Sang Hyang Widhi Wasa* (the Supreme God) manifested in living beings. In Taro Village and several other Balinese villages, white cattle are associated with the worship of Lord Shiva, who is often depicted riding the sacred bull Nandi in Hindu iconography. As such, white cattle symbolize sanctity and spiritual strength, believed to bring prosperity and blessings to those who care for them.

Historical records by Putra et al. (2024) note that white cattle breeding in Taro began around the 18th century, when local farmers started rearing these cattle as part of their cultural heritage linked to religious ceremonies and community rituals. Since then, white cattle have become emblematic not only in religious observances but also in the daily lives of the Balinese people, who regard them as sacred beings deserving of respect and care. This tradition has been maintained across generations, underpinned by *Prāṇī-Dharma* values that emphasize environmental preservation and ecological balance.

Moreover, the presence of white cattle in Taro Village is closely associated with sustainable agricultural systems. White cattle serve not only in religious rituals but also play practical roles in farming activities, such as plowing rice fields and providing natural fertilizer. The organic agricultural practices that accompany cattle rearing reflect an ecological balance that the people of Taro have preserved up to the present day. It is important to note that white cattle breeding in Taro encompasses more than religious or agricultural functions; it represents a cultural value system that honors and maintains harmony with nature. This aligns with the Balinese Hindu worldview, which perceives nature and all its elements as divine creations that must be safeguarded.

Thus, the historical existence of white cattle in Taro Village reflects not only religious significance but also the enduring connection between community, tradition, and the environment that continues to be nurtured today. Most informants emphasized that the existence of white cattle is regarded as an unbroken religious heritage from their ancestors. This historical narrative is reproduced through oral stories and traditional rituals. A traditional leader stated:

"White cows are not ordinary livestock. They have been passed down since Mpu Markandeya descended on Taro. This did not start because of economic reasons, but because of the guidance of our ancestors." (Informant-01, a traditional leader)

A similar statement came from the caretakers:

"We raise white cows not for profit. It is part of a customary promise, part of the dharma that must be passed on." (Informant-02, caretakers)

The consistency of these narratives shows that the legitimacy of the white cow's existence is genealogical-normative, not economic-utilitarian. The consistency of this narrative shows that the legitimacy of the white cow's existence is genealogical-normative, not economic-utilitarian. The tradition of conservation is reproduced through the authority of ancestral memory and religious obligations, so that the status of the white buffalo does not depend on calculations of material benefit. Thus, conservation in Taro occurs because it is attached to a structure of sacred obligation, not profit incentives.

*3.2 Application of the *Prāṇī-Dharma* concept in white cattle breeding in Taro villagei*

This study uncovered several key findings regarding the breeding of white cattle in Taro Village, particularly its connection to the application of *Prāṇī-Dharma* values within the community. The main findings, derived from in-depth interviews, observations, and document analysis, are summarized as follows:

Table 1. Key research findings

References	Percentage of Informants Who Reported This
White Cattle Breeding as Ecological Conservation	85%
Role of White Cattle in Religious Rituals	90%
Application of <i>Prāṇī-Dharma</i> Values in Daily Practices	80%
Sustainability of White Cattle Breeding in Economy and Culture	75%
Community Involvement in Preserving White Cattle	100%
Interconnection Between Tradition and Conservation	100%

The data presented in Table 1 provides a comprehensive overview of the central themes that emerged from the fieldwork and interviews in Taro Village. A significant proportion of informants (85%) indicated that white cattle breeding serves not only agricultural purposes but also plays a vital role in ecological conservation. This underscores the community's awareness of the environmental value of traditional animal husbandry practices, particularly in supporting soil fertility and maintaining agro-ecological balance.

The highest percentage (90%) acknowledged the religious importance of white cattle in ceremonial life. White cattle are actively involved in major Hindu rituals, reinforcing their status as sacred beings and cultural symbols. These spiritual dimensions are not merely symbolic but are practiced and revered through daily rituals and temple ceremonies.

Furthermore, 80% of informants emphasized that *Prāṇī-Dharma* the moral responsibility toward all living beings, is applied in everyday practices. This includes compassionate care for animals, the avoidance of violence (*Ahimsa*), and reverence for life, which are embodied in how the white cattle are treated. A notable 75% highlighted the economic and cultural sustainability of white cattle breeding. Beyond its spiritual significance, the practice contributes to livelihood resilience through organic farming systems and community-based cattle cooperatives, which are embedded within local cultural traditions.

The most universal responses were seen in the final two categories: 100% of informants reported active community roles in safeguarding the white cattle population, and all recognized the intrinsic link between traditional customs and conservation ethics. This affirms the notion that religious tradition, ecological mindfulness, and community values coalesce in a lived system of sustainability in Taro Village. Together, these findings illustrate that the breeding of white cattle is not an isolated practice but a dynamic, community-based system of spiritual ecology where culture, religion, and conservation intersect in everyday life.

3.2.1 White cattle breeding as a practice of ecological conservation

The majority of cattle breeders (85%) in Taro Village emphasized that white cattle breeding is not solely economically motivated but also functions as a conscious ecological conservation effort. They believe that by preserving white cattle, they contribute to ecosystem sustainability, both through the maintenance of natural habitats and the use of organic farming practices that avoid harmful chemicals. The white cattle are viewed as part of a natural balance that must be preserved, in alignment with *Prāṇī-Dharma*, which teaches the human responsibility to maintain harmony among humans, animals, and the environment.

The breeding practices in Taro reflect a conservation approach that integrates traditional values with ecological awareness. Most breeders perceive the white cattle as a symbol of environmental balance, consistent with *Prāṇī-Dharma*, which emphasizes coexistence and ethical treatment of all life forms. This aligns with the principles of

community-based conservation, which prioritize local participation in sustaining ecological systems.

Research by Maduriana & Gata (2021) has shown that culturally rooted conservation practices are often more effective in the long term because they involve embedded local values. Taro Village exemplifies how the integration of spiritual concepts like *Prāṇī-Dharma* can strengthen ecological sustainability. The community's decision to avoid chemical inputs in organic farming that supports cattle breeding aligns with findings by Kholijah et al. (2024), who demonstrated that organic practices enhance soil health and local biodiversity. White cattle, as part of the ecosystem, contribute to natural processes such as seed dispersal and soil fertilization through their manure.

Prāṇī-Dharma reflects environmental ethics similar to Leopold's *The Land Ethic*, which proposes that all elements of the ecosystem should be considered part of an ethical community (Piccolo, 2020). The Taro breeders, in caring for white cattle, essentially embody this principle, balancing human needs with ecological sustainability. Additionally, studies by Gadgil et al. (2023) emphasize that traditional conservation initiatives led by local communities are often more sustainable than top-down policy interventions. White cattle breeding in Taro illustrates this dynamic, as the community maintains ownership and stewardship of its conservation practices. Maduariana & Gata (2021) also supports the claim that avoiding chemicals in agriculture minimizes environmental harm. Taro's organic systems, with white cattle at their center, strengthen both ecological health and farmer well-being. Thus, the breeding of white cattle in Taro stands as a significant example of how localized, tradition-based, and religiously motivated practices can contribute to broader ecological conservation. This approach not only protects an iconic species but also promotes biodiversity and sustainable farming systems. Future studies may investigate the long-term ecological impacts of this practice and its potential replicability in other communities.

3.2.2 White cattle as a symbol of purity in Balinese Hindu tradition

Field data show that 90% of informants affirmed the crucial role of white cattle in religious rituals in Taro Village. These cattle are prominently featured in major ceremonies such as *Piodalan* (temple anniversaries), *Ngaben* (cremation rituals), and *Saraswati* Day (celebrating the Goddess of Knowledge). In these contexts, the white cattle are perceived as sacred embodiments of *Sang Hyang Widhi Wasa* (the Supreme Divine). This reflects the deep interconnection between cattle breeding and religious life in Balinese society, where the white cattle represent spiritual sanctity.

In rituals such as *mepepada*, white cattle are walked around ceremonial grounds to establish a sacred circle and purify the space. Informants consistently described the white cattle as carriers of divine presence and symbols of spiritual protection. In *Ngaben*, the white cattle often serve as symbolic vessels for the souls of the deceased, aiding their journey to the spiritual realm. The reverence for white cattle reflects the belief that all living beings possess spiritual essence.

Balinese belief systems are grounded in cosmological relationships among humans, animals, and deities. White cattle epitomize this interconnectedness. While Hindu traditions in India also revere cattle as sacred, Bali's specific use of white cattle in religious rites adds a unique dimension. Here, the color white carries symbolic weight, representing purity and divine blessing. White cattle breeding not only reinforces Balinese cultural identity but also sustains spiritual ties with the natural world. It demonstrates the integration of religious belief with conservation, offering valuable lessons on maintaining harmony between tradition and ecology.

3.2.3 The application of *Prāṇī-Dharma* values in daily practices

A large portion of informants (80%) stated that white cattle breeding is deeply intertwined with the application of *Prāṇī-Dharma* values, which emphasize respect for all living beings and the duty to maintain ecological balance. This is manifested in the way

breeders feed cattle with natural fodder, ensure their health, and treat them compassionately. These practices extend beyond animal care and encompass organic farming methods that protect the surrounding environment.

In Taro Village, the values of *Prāṇī-Dharma* which highlight responsibility, compassion, and reverence for all living *beings* are embedded in white cattle breeding. The core principles of *Ahimsa* (non-violence), *Karuṇā* (compassion), and organic ecological practices reflect an ethic of care that governs both the treatment of animals and land stewardship. The majority of informants stated that the practice of raising white cows is understood as dharma towards living beings. The emphasis on *Ahimsa* (non-violence) and *Karuṇā* (compassion) is evident in their daily treatment of the cows. One manager said:

"You can't hit them, you can't curse at them, you can't speak harshly to them, you can't force them to do hard work. We consider them sacred gifts, so they must be cared for gently, in a sacred and sincere manner." (Informant-03, manager Taro Village)

Ecological practices also stem from religious principles. A farmer explains:

"Because these are sacred cows, we do not use chemical fertilizers. The environment must be clean, so that it is in balance with the cows' lives." (Informant-04, farmer)

These findings show that religious ethics are not symbolic but are translated into ecological protocols. These findings show that religious ethics are not symbolic but are translated into ecological protocols. The principles of *Ahimsa* and *Karuṇā* do not stop at normative doctrines; they are manifested in technical decisions such as the prohibition of physical violence against cows, the selection of organic feed, and the avoidance of chemical inputs, as forms of environmental ethics. In other words, theological values function as a regulatory device that tangibly guides ecological actions, so that the spiritual dimension becomes an instrument for controlling conservation behavior, not merely a rhetorical framework.

Ahimsa is enacted through attentive animal care that avoids harsh treatment and emphasizes natural feeding, such as organic grasses. This aligns with Hindu teachings that promote living in harmony with nature. Beyond cattle care, *Prāṇī-Dharma* also inspires organic agriculture. The people of Taro avoid chemical fertilizers and pesticides to preserve the health of the land, understanding environmental stewardship as a spiritual obligation.

The values of *Prāṇī-Dharma* in Taro align closely with modern ecological ethics. Respect for life and non-violence mirror the ecological philosophy of Aldo Leopold who emphasized ethical relationships between humans and the land. There are notable parallels with Jain communities in India, where *Ahimsa* and reverence for life guide daily practices. However, the Balinese approach uniquely integrates these values with agriculture and ritual, creating a synergistic relationship between religious belief and ecological practice.

In Taro Village, *Prāṇī-Dharma* serves not only as a spiritual foundation but also as a practical guide for ecological balance. Through the care of white cattle and organic farming, traditional teachings are brought into contemporary relevance, offering a model for responding to environmental challenges with spiritual integrity.

This finding shows that religious ethics are not symbolic, but are translated into ecological protocols. This means that theological beliefs do not stop at the level of meaning or discourse, but are "downgraded" to operational standards that regulate how humans treat animals and the environment. This transformation of values into procedures is important epistemically because it indicates that conservation does not arise solely from rational-scientific impulses but rather from the internalization of religious norms that then consistently produce ecological behavioral discipline beyond material incentives and state regulations. Thus, religion in the case of Taro functions not as a moral justification for conservation, but as a causal mechanism that produces conservation itself through the

habitualization of rituals, customary obligations, and sacred guilt when principles are violated.

3.2.4 Sustainability of white cattle breeding in economic and cultural contexts

Seventy-five percent of informants in Taro Village reported that white cattle breeding has positive implications for the local economy. Beyond being a sacred symbol, white cattle also serve as a tourist attraction, play an essential role in organic farming (e.g., as providers of manure), and contribute to ritual economies. However, the informants emphasized that white cattle breeding goes beyond economics it is a cultural heritage practice passed down through generations, representing the continuity of religious, ecological, and cultural values.

In agricultural contexts, white cattle are used for land cultivation within organic systems. This method reduces production costs by replacing machinery and eliminating synthetic chemicals. In Sustainable Agriculture and Food, observed that the use of draft animals in traditional farming enhances long-term economic efficiency while preserving soil health. White cattle are frequently involved in major ceremonies such as *Ngaben* and *Saraswati*, attracting participants from within and outside the village. These rituals generate local income through animal provision, ritual services, and various forms of logistical support. Priests and Programmers, highlights the economic impact of religious systems in Bali, where traditional institutions mediate between spiritual obligation and modern community needs. White cattle breeding represents an intergenerational tradition that reinforces Balinese cultural identity while sustaining spiritual and social values.

Thus, white cattle in Taro are not only agricultural laborers but also spiritual symbols integrating religion, culture, and ecology. They embody a model of cultural sustainability rooted in sacred animal stewardship. Government and community support are crucial to ensure that these practices remain relevant and viable in the future.

3.2.5 Community participation in the preservation of white cattle

This study found that white cattle breeding in Taro Village is not limited to the activities of the Lembu Putih Foundation, which was established by the *Desa Adat* (customary village authority), but involves the broader community. Most residents participate in preservation efforts through rituals and by supporting animal welfare. This illustrates a symbiotic relationship among humans, animals, and nature in Balinese culture, where the care of white cattle is part of everyday life aimed at sustaining ecological and spiritual harmony.

Community members actively engage in religious ceremonies involving white cattle, such as *Piodalan*, *Ngaben*, *Saraswati*, and others. In these rituals, white cattle function as both sacred symbols and spiritual mediators between humans and the natural world. Many residents also educate younger generations on the significance of preserving white cattle as part of cultural and ecological identity. This educational approach seeks to secure the longevity of traditional practices. White cattle are not only cultural icons but also active elements in local ecosystems. Their organic management enhances environmental balance, while their manure naturally fertilizes the soil. The people of Taro have successfully integrated religious and environmental values into a unified system of sustainability. This reflects the *Tri Hita Karana* philosophy, which emphasizes harmony among humans, nature, and the divine.

The community's collaborative role in conserving white cattle demonstrates a comprehensive approach to tradition and ecology. This model of integrated conservation offers valuable insights for other communities seeking to combine cultural identity with ecological resilience. The meaning of conserving the Taro White Cow within the framework of *Prāṇī-Dharma* becomes clearer when linked to the early Hindu ecological vision. Sherma (2021) asserts that the Hindu tradition contains a relational paradigm that places all living beings as part of cosmic revelation. This relationship underscores that the protection of

animals, including sacred cows, is a direct application of the Hindu ecological vision that emphasizes interconnectedness and human ethical responsibility towards all creation.

On the other hand, the political and ideological dimensions cannot be ignored. Sharma (2023) shows how ecology is often used as a political instrument by contemporary Hindu nationalist movements. Religiously-based conservation, including the symbolization of cows, can be interpreted in two ways: as a preservation practice and as a representation of ideology. This serves as a reminder that the conservation of the Taro White Cow should not be trapped in the politicization of identity, but rather be maintained in its essence: the protection of biodiversity rooted in spiritual values.

In relation to climate action, Saryl (2022) emphasizes that Hinduism and the *Sant Mat* tradition can encourage active participation in climate change mitigation. Religiosity manifested in ecological actions contributes to global preservation. When contextualized, the preservation of the Taro White Cow can be seen as a form of religion-based climate action, namely maintaining the balance of the local ecosystem while also sending a universal message about harmony with nature.

Classical Hindu narratives also provide moral legitimacy. Praveena & Raju (2023) describe how the *Mahābhārata* contains stories that emphasize human harmony with the environment. These narratives support the view that the Taro White Cow is not merely a religious symbol, but also part of the Hindu narrative heritage that teaches the principle of intergenerational ecological harmony.

Furthermore, Awasthi (2021) reinterprets Hindu spirituality as a solution to modern environmental problems. The conservation of sacred cows in Bali can be understood as a form of local reinterpretation, where spirituality is not only doctrinal but is manifested in the actual practice of preserving endangered species. In a global context, Zagonari (2020) asserts that religious environmental ethics, when compared across traditions, can contribute to local and global sustainability. The case of the White Cows of Taro illustrates how religious values support universal conservation goals.

A gender perspective also adds a new dimension. Swer (2020), through Vandana Shiva's ecofeminist analysis, shows that the principle of Prakriti as a feminine force of nature opposes technological reductionism and patriarchy. The maintenance of white cows in Taro, which are often associated with purity and abundance, can be interpreted within the framework of ecofeminism as respect for the maternal principle of nature that must be protected from exploitation. More practically, Apollo et al. (2020) remind us that religious conservation also brings health and governance challenges, especially in sacred spaces visited by pilgrims. This is relevant to the management of Taro as both a religious and ecological site, so that conservation practices are not only oriented towards spirituality but also take into account public health and the sustainability of religious tourism.

Finally, Gadgil (2023) proposes a conceptual framework of ecosystem people, biosphere people, and ecological refugees, which describes the complexity of human-nature relationships in the modern era. In this perspective, the Taro community can be positioned as ecosystem people who maintain ecological balance through the maintenance of white cattle. However, without strengthening religious values and conservation policies, they may be pushed into becoming ecological refugees due to the pressures of modernization and environmental degradation. Sherma (2021) and Gadgil (2023) reinforce the understanding that the conservation of the Taro White Cattle is not only a local practice but also part of a global dialogue between spirituality, religious ethics, ecological justice, and sustainability. By combining Hindu relationality perspectives, epic narratives, reinterpretations of spirituality, ecofeminism, and sociological analyses of political ecology and ecosystem communities, the conservation of the Taro White Cow becomes a holistic model of preservation that unites religious values, biodiversity, and ecosystem health.

3.2.6 The relationship between tradition and conservation

Another key finding is the strong link between tradition and conservation embodied in white cattle breeding in Taro Village. The community has long understood that preserving white cattle also means safeguarding ecosystems, agricultural sustainability, and ritual continuity. Through the application of *Prāṇī-Dharma*, villagers have developed a culture-based conservation model that honors living beings as part of a greater ecological whole.

Taro's white cattle breeding exemplifies how traditional practices can serve ecological goals. By integrating religious beliefs with environmental stewardship, the community ensures both spiritual and ecological continuity. In Balinese cosmology, white cattle symbolize purity and harmony, central to major rituals that affirm their cultural significance. The village's tradition is guided by *Tri Hita Karana*, a philosophical framework promoting harmony between humans, nature, and the divine.

In Balinese culture, religious rituals indirectly promote conservation. The use of white cattle in ceremonial life creates a cultural demand that motivates species preservation. This demonstrates how symbolic and spiritual elements can be effectively harnessed for environmental outcomes. The case of Taro reflects a holistic approach to conservation one that respects cultural heritage, ecological principles, and spiritual practice. By embodying *Prāṇī-Dharma* values, the community illustrates how tradition can become a powerful tool in ecological stewardship while strengthening cultural identity. With a collaborative and planned approach, this relationship between tradition and conservation can continue to thrive for future generations.

The findings of this study reveal that white cattle breeding in Taro Village is not merely an ecological conservation practice, but also a tangible expression of spiritual values in daily life. The concept of *Prāṇī-Dharma*, which emphasizes the moral obligation to maintain environmental balance and protect all living beings, is clearly manifested in the care and reverence shown toward the white cattle. This practice reflects the principles of *Ahimsa* (non-violence) and *Karunā* (compassion), which advocate respect and empathy for all life as part of humanity's relationship with both the Divine and nature (Sharma, 2020). The people of Taro implement these values through eco-friendly cattle care and organic farming that enhances ecological sustainability.

The findings of this study indicate that the conservation of white cattle in Taro cannot be understood as a secondary, religiously motivated farming practice, but rather as conservation that has been constructed from its origins by religious obligations (religiously constituted conservation). The fact that informants refer to religious motives rather than economic incentives as the basis for their conservation obligations confirms that the source of conservation legitimacy is normative and sacred. This pattern aligns with the findings of Gadgil (2023) and Clifton (2023) that conservation born of a community's internal value system tends to be more stable because it is governed by a system of moral obligations rather than external regulations.

The field shows that the concept of *Prāṇī-Dharma* does not stop at being an ethical teaching, but operates as a mechanism for controlling ecological behavior through ritual discipline, customary taboos, and the internalization of religious guilt when violated. Thus, religion acts not only as a legitimizing frame but also as a causal driver, as demonstrated in cross-regional sacred ecology studies (Pradhan & Ormsby, 2020; Shiferaw et al., 2023), where sacredness functions as a social fence that prevents environmental destruction without state mediation.

Furthermore, the communal-ritualistic, rather than individual-utilitarian, nature of community involvement indicates that conservation sustainability in Taro relies on customary institutional structures and religious obligations, rather than on the market. This pattern aligns with Gadgil's (2023) ecosystem people model, namely, communities that maintain the ecology because ecological sustainability is a prerequisite for the sustainability of their religious world. This finding also distinguishes the Taro model from contemporary Indian cases, which, according to Sherma (2021) and Sharma (2023), often experience the

politicization of cows. In contrast, in Taro, the sacredness of cows functions as a binding ethic rather than an instrument of political identity.

From a theoretical perspective, this study contributes to the debate on the relationship between religion and ecology by showing that conservation can be formed not despite spirituality, but because of spirituality. This challenges the rationalistic assumptions in modern conservation that tend to position religion as an inhibiting factor. The Taro case shows the opposite: religiosity can function as a social technology that produces ecological sustainability through value-based disciplinary mechanisms.

In *The Sacred Cow: Hinduism and Ecology*, Catherine Robinson and Denise Cush explore the sacred role of cattle in Hinduism and the environmental ethics embedded within this tradition. The cow is revered not only as a religious symbol but also as a vehicle for conveying ecological messages, embodying ideals of purity, prosperity, and divine presence. Their treatment within Hindu society reflects broader environmental values, reinforcing the role of animals in the sacred ecology of Hindu belief systems.

White cattle hold profound symbolic meaning in both Indian and Balinese Hindu traditions, especially in connection with Lord Shiva and the sacred bull Nandi. In Bali, their use in ceremonies such as *Ngaben* and *Saraswati* positions them as spiritual agents, not merely utilitarian animals. Unlike earlier studies that focused mainly on economic or ritual aspects, this research highlights the practical application of *Prāṇī-Dharma* in a culturally specific conservation setting. Sherma (2021) notes the complexity of cow reverence in India, where religious devotion has led to social and ecological policies such as cow slaughter bans. However, Taro Village offers a more integrated model where reverence for white cattle is embedded in community-led sustainability efforts without the sociopolitical conflict observed in other contexts.

Theoretically, this study contributes to the evolving discourse on religion and ecology by enriching our understanding of *Prāṇī-Dharma* as a lived ethic that promotes biodiversity and ecological stewardship. It offers new perspectives on how local communities integrate religious values with conservation efforts, which may be replicable in other culturally rich regions. Practically, the findings suggest that culturally rooted conservation grounded in spirituality and community participation can enhance ecological sustainability. The application of *Ahimsa* and *Karuṇā* in animal conservation presents a compelling model for protecting other species in Indonesia, where local belief systems can inform environmental policy (Sharma, 2020).

The concept of *Sarva Prāṇī Hitāñkarah*, meaning "welfare for all living beings," is a core Hindu teaching emphasizing kindness and protection for all forms of life. This principle is deeply relevant to the breeding of white cattle in Taro, where the animals are seen not only as sacred symbols but also as members of the ecosystem requiring protection and care. The *Mahābhārata*, *Manu Smṛti*, and the *Bhagavad Gītā* all affirm this obligation, stressing that every being deserves a life of dignity and that humans bear the moral responsibility to uphold this balance.

In Bali, this ethic is operationalized through both ritual and daily practice. White cattle are honored in religious ceremonies and cared for within organic farming systems. The community's commitment to this ethic illustrates how religious values can inform sustainable environmental practices, creating a living synergy between spirituality and conservation. The concept of *Sarva Prāṇī Hitāñkarah* thus extends beyond theology it is reflected in collective behavior, social systems, and ecological decision-making. In Taro, this principle guides how animals are treated, how land is cultivated, and how communities educate their youth. It reinforces a symbiotic relationship among humans, animals, and the environment, which lies at the heart of the Balinese philosophy of life.

The conservation of the Taro White Cow as a representation of the value of *Prāṇī-Dharma* cannot be separated from the spiritual ecological framework that places animals, forests, and humans in a single cosmological network. Studies on spiritual ecology in sacred forests show that sacred landscapes function not only as ecological spaces, but also as

transcendental arenas that connect humans with nature through religious practices (Shiferaw et al., 2023).

Thus, the existence of the White Taro Cow, which is kept in Balinese ritual spaces, reflects a similar relationship, namely the protection of sacred species in order to maintain ecological balance as well as the spiritual values of the community. Cross-regional research confirms that sacred forests and religion-based conservation practices make a real contribution to the preservation of biodiversity. Melaku et al. (2023) explain that sacred forests not only maintain ecosystem services but also open up new avenues of research on the relationship between spirituality and ecology. This context enriches our understanding that the conservation of the Taro White Cow is not merely a local tradition but part of a global phenomenon in which sacred values become instruments of biodiversity conservation. Kraft (2025) even highlights the process of "cathedralizing nature" as an effort to reorganize religious space while reinforcing its ecological function, which is parallel to the worship of white cows in Bali.

Beyond the spiritual dimension, conservation is also rooted in the practice of traditional ecological knowledge. A study in Odisha, India, shows that local communities treat sacred forests as biocultural spaces that preserve species, ritual practices, and community-based management (Pradhan & Ormsby, 2020). Similarly, in South Africa, traditional knowledge has been shown to maintain forest sustainability through customary practices and taboos (Sinthumule & Mashau, 2020). In the context of Taro, the Balinese Hindu belief system that emphasizes *ahimsā* (abstaining from harming living beings) and rituals of worship of cows are forms of traditional ecological knowledge that reinforce the preservation of these sacred animals.

Recent meta-analysis findings show that sacred forest-based conservation has a significant impact on global biodiversity protection (Sullivan et al., 2023). In other words, when certain species such as the Taro White Cow are protected in a religious context, there is added value in the form of genetic conservation, ecosystem resilience, and cultural heritage. These cross-regional studies show that conservation based on spiritual and religious values is not merely symbolic, but also strategic for biodiversity sustainability. Thus, the preservation of the Taro White Cow can be seen as an integral part of global conservation that combines religious, ecological, and local wisdom values.

4. Conclusions

White cattle breeding as a form of culture-based conservation. The breeding of white cattle in Taro Village is not solely driven by economic motives but represents a form of ecological preservation deeply integrated with religious tradition. The application of *Prāṇī-Dharma*, which emphasizes respect for all beings and balance with nature, is evident in the sustainable care and breeding practices of white cattle. This approach qualifies as a model of culture-based conservation, sustaining ecological health while preserving spiritual and traditional values.

White cattle as a symbol of sacredness in religious life. White cattle play a central role in Balinese Hindu rituals, symbolizing purity and divine presence. Their involvement in ceremonies such as *Ngaben* and *Saraswati* reinforces their sacred status in the spiritual lives of the Balinese. The white cattle are thus more than livestock they are spiritual emissaries within the sacred cosmology of the community.

Community participation in ecological and cultural sustainability. The continued preservation of white cattle depends significantly on community-wide engagement. This includes not only the religious and ceremonial roles of the cattle but also their contribution to sustainable organic farming. Conservation in Taro is therefore a communal responsibility, manifesting as a practical expression of reverence for life and nature.

The conservation of the Taro White Cow reflects holistic practices that integrate the values of *Prāṇī-Dharma*, biodiversity conservation, and religious heritage. Literature shows that Hindu ecology has emphasized the relationality of living beings since its inception,

reinforced by epic narratives (*Mahābhārata*) that emphasize ecological harmony, as well as reinterpretations of Hindu spirituality relevant to the modern environmental crisis. This religious-based conservation has political dimensions, cross-traditional ethics, and ecofeminist perspectives that affirm the role of feminine principles in nature. Furthermore, this practice contributes to global climate action, but also demands public health governance in the context of religious tourism. Ultimately, the existence of the White Taro Cow illustrates the position of local communities as ecosystem people who maintain ecological balance through religious practices, while also providing a global example that spirituality, ecology, and culture can be integrated to address sustainability challenges.

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Biographies of Authors

Ni Wayan Sri Rahayu, is a permanent lecturer at STAH Dharma Sentana, Central Sulawesi. She holds a Master's degree in Brahmawidya from Universitas Hindu I Gusti Bagus Sugriwa Denpasar. Her expertise focuses on the history of Hindu culture, particularly in the study of philosophy, belief systems, and local wisdom values within Hindu communities in the Indonesian archipelago.

- Email: niwayansrirahayu@gmail.com
- ORCID: 0000-0002-3160-7978
- Web of Science ResearcherID: N/A
- Scopus Author ID: N/A
- Homepage: <https://sinta.kemdikbud.go.id/authors/profile/6809215>

Puspo Renan Joyo, is a lecturer and researcher at the Institut Agama Hindu Negeri Tampung Penyang Palangka Raya. His scholarly focus is on religious studies and philosophy. He is actively engaged in various research projects in the fields of religion, philosophy, and culture, and has authored several articles and books

- Email: pusporenanjoyo@jahntp.ac.id
- ORCID: 0000-0002-3164-5069
- Web of Science ResearcherID: N/A
- Scopus Author ID: N/A
- Homepage: <https://sinta.kemdiktisaintek.go.id/authors/profile/6674886>

Ni Wayan Sariani Binawati, a lecturer at Universitas Hindu Negeri (UHN) I Gusti Bagus Sugriwa with a focus on religious studies and education. She holds a doctoral degree in religious studies and is actively involved in various socio-religious activities in Bali. She has authored several articles and books.

- Email: wayansarianibinawati@gmail.com
- ORCID: 0000-0002-6226-5982
- Web of Science ResearcherID: N/A
- Scopus Author ID: N/A
- Homepage: <https://sinta.kemdiktisaintek.go.id/authors/profile/6199609>