

Achieving Environmental Sustainability Through Hindu Ecological Spirituality

Ketut Nurhayanti, Anggara Putu Dharma Putra, I Gusti Ngurah Atmaja, I Komang Sudharka Utama

UHN I Gusti Bagus Sugriwa Denpasar, Indonesia

Email: nurhayanti@pnb.ac.id, ankgafdd@uhnsugriwa.ac.id, atmngurah@gmail.com, komangsudharka.bali@gmail.com

Abstract

The South African automotive industry has undergone significant transformation from a domestically protected market to a globally integrated export-oriented sector. This paper examines the institutional and firm-level dynamics that have shaped this evolution, particularly under the Motor Industry Development Programme (MIDP) and its successor, the Automotive Production and Development Programme (APDP). The study aims to understand how industrial policies and institutional configurations interact to enable or constrain structural transformation and inclusive development. Using a qualitative case study approach, the research draws on policy documents, industry reports, and interviews with key stakeholders. Findings reveal that while policy reforms have effectively enhanced export performance and attracted foreign direct investment, they have fallen short in fostering deep supplier development, local content expansion, and technological upgrading. Moreover, institutional fragmentation and weak coordination have limited the developmental impact of these policies. The study also explores emerging challenges such as the shift toward electric vehicles and the need for green industrialization, arguing that future policy must address both competitiveness and sustainability. The research underscores the necessity of coherent institutions and localized capability building to realize inclusive industrial transformation. These insights have implications for industrial policy design not only in South Africa but also in other developing economies pursuing structural transformation in the context of global value chains and environmental imperatives.

Keywords: Hindu Ecological Spirituality, Climate Change, Environmental Sustainability

Introduction

Human life is experiencing considerable challenges related to climate change on this earth (Friess & Lemos, 2024), it is quite worrying when there are distortions related to climate change in the world (Palau-Sampio et al., 2024), the fact is that climate change has become a crucial issue that affects various aspects of human life. In Indonesia, floods are frequent, and the National Flood Management Agency (BNPB) reported that there were 3,318 cases of natural disasters due to extreme weather conditions (Hartono, 2021). Human behaviour is the main trigger for some of the natural disasters that occur, such as the tendency to build large buildings without considering the sustainability of the surrounding environment, the lack of public interest in being more aware of

environmental sustainability in the future. The damage that occurs to the environment, so that it affects floods, landslides, so that it affects the economy of the community, makes people realise the importance of protecting the environment (Zainul Mun'im, 2022).

Religion as one of the pillars of culture and morals, has an important role in shaping human attitudes and behavior towards the environment. Religion has a continuing significance at the individual, national, and global levels, and a continuing role in ethical discourse and normative formation in response to social issues, among social institutions, religion is often considered one of the most important avenues for values, motivations, morals, and worldviews (Haluza-Delay, 2014). The contribution of the world's religions to climate change has yet to be ascertained. There are various writings that highlight this, specifically Hinduism itself in 2009 in December declaration related to climate change. This declaration is a consideration for Hindu spiritual leaders around the world, that Hinduism has the perception that humans are bound to the universe. All living and non-living things are bound in one cosmic bond of human life so that Hinduism teaches humans to respect and appreciate the universe for the sustainability of life in the future (Singh et al., 2009).

It is theoretically dogmatic that Hinduism instructs its adherents to work together, contribute to the sustainability of the environment, and be sensitive to climate change that is happening on earth. In various concepts of its teachings we can see Hinduism provides a practical description of behavior towards nature, the environment. Hinduism, with its various concepts and principles, offers a comprehensive view of the harmonious relationship between humans and nature. One of the main concepts in Hinduism that is relevant to environmental sustainability is Tri Hita Karana, which means the three causes of well-being or happiness Tim Mimbar Hindu (2020). This concept emphasizes the importance of maintaining harmonious relationships between humans and God (parahyangan), humans and fellow humans (pawongan), and humans and the natural environment (palemahan) Suryadi. (2022).

The implementation of Tri Hita Karana in daily life includes various practices that support environmental conservation, such as maintaining cleanliness, planting trees, and protecting animals. Astuthi, N. P. R., Dwijayanti, N. M., & Sutri, N. K. (2023). In addition, the Vedic teachings also emphasize the importance of maintaining the balance of nature. In Reg Veda III.51.5 it is mentioned:

"Indraya dyava osadhir utapo rayim raksanti jirayo vanani"

It means:

“Protect the sources of natural wealth such as the atmosphere, medicinal plants and herbs, rivers, water sources, and forests” This quote emphasizes the human obligation to protect and preserve nature as part of spiritual and moral responsibility. Compilation Team. (2020).

In addition to Tri Hita Karana, Hinduism also recognizes various other concepts that contain concern for the universe such as the concept of yajna and the concept of Rta. Rta is a cosmic law that regulates the balance of the universe, Pradana, G. (2022). Rta teaches that everything in the universe has order and must be maintained to avoid

disharmony, Mishra, P. (2023). When humans do not adhere to Rta, environmental imbalances will occur, which in the modern context can be associated with ecological disasters such as floods, droughts and extreme climate change. This is affirmed in Atharva Veda XII.1.12 “Mata bhumih putro'ham prithivyah”, which means that the earth is my mother, and I am her son. Another relevant concept in environmental sustainability is Ahimsa or the principle of non-violence (Zulkeffly Adimun & Indriaty Ismail, 2019). Ahimsa not only means not physically harming living beings, but also includes the protection of the environment and all beings within it. In the context of climate change, Ahimsa can be implemented through sustainable lifestyles such as vegetarian diets, carbon footprint reduction, and wise management of natural resources. The implementation of Vedic principles in Hinduism can be realized through various programs and activities that support environmental preservation, such as tree planting, reducing the use of plastics, and implementing organic farming.

The global environmental crisis that threatens environmental sustainability and ecosystem balance requires attention from various parties. Environmental ethics is an important concept for environmental sustainability and sustainability, in his book Athanassakis states that humans have bodies that are vulnerable to a number of environmental risks, air pollution, drastic climate change, natural disasters not only affect the human body but also social and economic aspects (Yanoula Athanassakis, 2017).

Humans as part of the universe contribute to climate change that occurs on earth. As part of human life, spirituality offers a perspective in examining human relationships with nature. In the Hindu perspective, nature is a manifestation of God, namely Brahman, nature is not only a source of human life that can be utilized by humans or other living things (Sari et al., 2024).

In Hinduism, nature is not simply a resource that can be exploited, but rather a sacred manifestation of Brahman, the divine consciousness that pervades all things. Hindu ecological spiritual concepts are rooted in values such as Tri Hita Karana, Ahimsa, the law of Rta, and Vasudhaiva Kutumbakam that emphasize harmony between humans, God, and the environment. By viewing nature as part of a cosmic whole, Hinduism teaches that maintaining ecological balance is not only a moral obligation, but also part of the dharma of the path of truth and virtue that must be practiced to create sustainability for future generations. In the midst of climate change that is increasingly evident, this spiritual approach can be an ethical solution to build a more holistic and sustainable ecological consciousness. environment

The concept of environmental sustainability in Hinduism is rooted in sacred teachings that emphasize harmony between humans, nature and God. These principles are reflected in various concepts such as Tri Hita Karana, Ahimsa, and Vasudhaiva Kutumbakam, all of which teach the importance of maintaining environmental balance and sustainability as part of spiritual and moral practice (Adnyana, Suja, Mudana, & Pageh, 2020). Tri Hita Karana is a concept that teaches three harmonious relationships that must be maintained by humans, the parahyangan part is the harmony between humans

and God, pawongan is the harmonious relationship between humans and palemahan, the harmonious relationship between humans and the universe, the environment.

The values of sustainability in Hinduism are not only relevant in a religious context, but also have significance in modern life. For example, the application of Tri Hita Karana in the design of parahyangan spaces shows how sustainability principles can be integrated in ecologically-based development (Wiriantari & Rijasa, 2023). By understanding and practicing these teachings, Hindus can play an important role in maintaining ecosystem balance and realizing harmonious environmental sustainability.

If we understand the regulation of Hinduism, the various rules of teaching will regulate human relationships not only to God but also to the universe, the environment, and various living things that coexist with humans, but in practice we see the fact that there are still deviations in the behavior of religious teachings in society, a shift in meaning in carrying out religious rituals which currently seem hedon in the implementation of religious rituals, prioritizing prestige so that it has an impact on family financial conditions (I Made Hartaka, 2022). The use of religious ritual facilities and infrastructure, namely janur, which is not environmentally friendly by using chemical dyes (Purnamiasih, 2024). The occurrence of a behavioral gap between the theory of religious teachings and its practice in everyday life, academically, research is needed related to this phenomenon.

This research aims to examine in depth through a phenomenological approach regarding the implementation of Hindu teachings, especially the principles contained in the Vedas such as Tri Hita Karana, Ahimsa as mitigation and adaptation efforts to climate change and environmental sustainability, it is hoped that all Hindus can set an example and contribute significantly to global efforts to achieve environmental sustainability and overcome the challenges of climate change.

This study presents a novel contribution by integrating a meso-level institutional analysis with firm-level dynamics to understand the trajectory of industrial transformation in South Africa's automotive sector. While previous research has focused either on macroeconomic policy impacts (Barnes & Black, 2013) or firm competitiveness and global value chains (Kaplinsky & Morris, 2008), this paper bridges the two by illustrating how institutions mediate the relationship between policy frameworks like the APDP and firm-level adaptation strategies. It highlights the importance of institutional thickness and localized capability building, especially in the context of emerging industrial challenges such as electric vehicle transitions and green industrialization—areas that are underexplored in the existing literature (Black & Hasson, 2016; Mondliwa & Roberts, 2020). Furthermore, it emphasizes that while policy instruments have successfully integrated the industry into global markets, they have not adequately addressed deeper developmental objectives like inclusivity and domestic technological upgrading, thus opening new areas for research and intervention.

Research Methods

This research uses a qualitative approach with a phenomenological approach and text analysis to deeply understand the implementation of Hindu teachings in environmental sustainability as well as the challenges and opportunities faced by the community in climate action. Data collection techniques used interviews with community leaders in the environmental community. This method was chosen in order to explore the philosophical meanings, experiences, and practices of Hindu communities in maintaining ecological balance based on Hindu teachings.

Results and Discussion

Tri Hita Karana in Global Environmental Policy

In line with the principle of sustainability echoed by the United Nations (UN) through the Sustainable Development Goals, the values in Tri Hita Karana show their relevance to several key aspects in the Sustainable Development Goals, namely climate action, which is embodied in the concept of *palemahan* in Tri Hita Karana emphasizing the importance of human harmony with nature, which is reflected in the practice of ecosystem conservation and carbon emission reduction. Life on land, Tri Hita Karana supports the principle of biodiversity preservation by encouraging sustainable agricultural practices such as the Subak system, which has been recognized as a World Cultural Heritage by UNESCO (Lestari et al., 2015). In the Sustainable Development Goals, Sustainable Cities and Communities becomes the application of Tri Hita Karana principles in urban planning and sustainable development reflects an effort to create a harmonious and environmentally friendly living environment.

Many Hindu communities, especially in Bali, have developed Tri Hita Karana-based initiatives to support the achievement of sustainability goals. For example, tourist villages in Bali such as Penglipuran Village and Tenganan Village apply the concept of sustainability by maintaining harmony between humans, the environment, and spirituality (Wiriantari & Rijasa, 2023). The philosophy of Hinduism that considers humans as part of the universe shows the close relationship between humans and nature. In Hinduism, the universe/earth is a mother who must be respected and preserved. When humans act exploitatively towards the environment, the impact is not only destructive to nature but also creates social and spiritual imbalances. Dwivedi, O. P. (2020). Wibawa, I. M. (2024). In Balinese lontar scriptures, there are also many teachings that emphasize the importance of protecting the environment. One of them is Lontar Roga Sanghara Bhumi, which explains how natural disasters can occur due to an imbalance in the relationship between humans and nature.

This Lontar asserts that humans must practice Tattwa, which teaches that the nature of nature is part of humans and respect it, susila as a guideline for wise behavior in using natural resources and religious rituals as part of human offerings as a form of respect for nature. In modern practice, these values can be realized in environmental care movements such as planting trees around temples, cleaning rivers and beaches before carrying out ceremonies, and using natural materials in religious rituals.

The application of Tri Hita Karana in the daily life of Balinese Hindus is reflected in various practices divided into three aspects, namely Parahyangan, a regulation that regulates harmony between humans and God. Hindus believe that as spiritual beings it is very important to maintain harmony with God, which is implemented by praying, performing religious rituals that have been determined in various vedic sacred texts, building and maintaining shrines, and performing yadnya ceremonies as a form of devotion to Sang Hyang Widhi Wasa (Suyono & Sudarma, 2022).

The *pawongan* aspect regulates the relationship between fellow humans. Which is practiced with an attitude of tolerance, forming social organizations, and implementing customs that strengthen social solidarity (Suyono & Sudarma, 2022). And the third in the *palemahan* aspect, regulates human relationships with the environment, realized through nature conservation activities such as reforestation, source-based waste management, and maintaining the cleanliness of the surrounding environment. A case study in Kesiman Kertalangu Village showed that the application of Tri Hita Karana values was effective in increasing community participation in household waste management (Irawati et al., 2022).

Globally, environmental conservation efforts in Hinduism are also reflected in various initiatives, such as the Eco Dharma movement carried out by Hindu communities in India and Bali. These communities integrate Hindu principles into concrete actions such as forest restoration, river conservation, and renewable energy promotion. Sharma, R. (2021). Vasudhaiva Kutumbakam which means “the whole world is one family” teaches that all living things are interconnected and dependent on each other. This understanding encourages collective responsibility in preserving the earth and its natural resources (Untung Suhardi, 2024).

The Hindu community in Bali takes a sacred step in protecting forests by sacredizing forests in Bali such as the alas kedaton and sangeh forests. Balinese Hindus believe that these forests are sacred places of the Gods, so they are preserved without exploitation. As a form of social balance (*pawongan*), local communities participate in environmental maintenance and make it a sustainable ecotourism. While in terms of *palemahan*, the diversity of flora and fauna is maintained without massive deforestation (Sastrawan & Giri, 2022).

Apart from forests, water is also one of the natural resources whose existence is respected by the Balinese people. As a real action in protecting water, Balinese people make water conservation called subak. The subak system has become a world cultural heritage by UNESCO, In the subak system, tri hita karana is implemented in the *parahyangan* aspect manifested through the subak temple (Pura Ulun Swi), which is the center of rituals to invoke soil and water fertility, the *pawongan* aspect is seen in the cooperation between farmers who regulate the distribution of water fairly and the *palemahan* aspect is reflected in the principle of water conservation which prevents overexploitation of water resources (Adnyana et al., 2020).

A study by Suja & Murti (2022) confirmed that the subak system is a conservation model based on spirituality and social collectivity, which can be an inspiration for

sustainable agricultural systems around the world. The concept of Tri Hita Karana has an important role in supporting environmental sustainability. As part of the Hindu teachings derived from the Vedas and lontar, this concept emphasizes the balance between humans and God, fellow humans, and nature. Through the existence of subak, customary forests, and sustainable tourism villages, it can be concluded that Hindu communities have developed sustainable practices for a long time. With the integration of the Tri Hita Karana concept in modern environmental policies, it is expected to create a harmonious ecological balance between humans and nature.

Ahimsa Principle in Nature Protection

Ahimsa comes from Sanskrit, where “A” means no, and “Himsa” means violence or harm (Suja & Murti, 2022). Thus, Ahimsa means non-violence or non-harming. In an environmental context, Ahimsa teaches Hindus to live in harmony with nature, avoid actions that damage ecosystems, and respect all forms of life (Rizqiani, 2019). The teaching of Ahimsa is contained in various Hindu scriptures, such as in the Bhagavad Gita XVI.2, it is mentioned that the qualities that must be possessed by a believer are harmless, righteous, free from lustful anger, without attachment, calm, not slanderous, compassion for fellow creatures, not confused by desires, gentle, polite and determined. It is emphasized in the book of Manu Smerti IV.238 which states that do not harm any creature, let it slowly cultivate the nature of dharma, like a lotus building its nest.

Although there are differences in the implementation of the teachings of Ahimsa in Hindu society such as those who practice vegetarianism or there are still Hindus who still eat meat, in principle ahimsa is a universal teaching that has the basic principle to take actions that are beneficial to others and the environment. The implementation of ahimsa in the protection of nature can be realized through various actions to avoid excessive exploitation. Avoiding excessive exploitation of natural resources that can damage ecosystems and threaten the sustainability of other living things (Sastrawan & Giri, 2022). Utilizing natural resources as needed, without overdoing it, and ensuring its sustainability for future generations (Wiriantari & Rijasa, 2023). Preserving biodiversity by protecting natural habitats, preventing poaching, and supporting conservation efforts for endangered species (Suja & Murti, 2022).

According to an interview with I Made Sudarma, a community leader and pemangku at Ulun Danu Tamblingan Temple, the principle of Ahimsa is implemented in daily life through rituals of respect for nature. He stated “We always respect all living things, including plants and animals, as a form of Ahimsa. Whenever we take something from nature, we say thank you and make sure no damage is caused.” (Interview, February 15, 2025)

The informant explained that the principle of ahimsa has become part of the daily life of the people around Pura Ulun Danu Tamblingan. According to him, respect for nature is realized through the Tumpek Uduh and Tumpek Kandang rituals. During Tumpek Uduh, people give offerings and prayers to trees and plants as a form of respect

and gratitude for the source of life given. While at Tumpek Kandang, respect is directed to livestock that help daily life.

We not only make offerings, but also preserve the nature around the temple. No trees are cut down carelessly, and farm animals are treated with love. All of this is a form of Ahimsa implementation in our daily lives.” (I Made Sudarma, Interview, February 15, 2025)

Ni Wayan Suriastuti as an environmental activist and founder of the Hindu Community of Nature Lovers (KHPA) explained that the principle of ahimsa is internalized in nature conservation activities carried out by her community. KHPA actively conducts tree planting, river cleaning, and anti-plastic campaigns with a spiritual approach based on the Vedic teachings.

“In every conservation activity, we always start with a prayer ceremony to ask for permission and blessing from the universe. We believe that everything in nature has a soul, so it must be treated with respect. This is in line with the principle of Ahimsa in the Vedas.” (Ni Wayan Suriastuti, Interview, February 18, 2025)

In addition, he also emphasized the importance of educating the younger generation about Ahimsa through Hindu schools in Bali. The material is taught not only in theory, but also through hands-on practice in maintaining cleanliness and environmental sustainability.

“We want the younger generation to not only understand Ahimsa as a moral concept, but also implement it in real actions to protect nature.” (Ni Wayan Suriastuti, Interview, February 18, 2025)

According to her, the principle of ahimsa in the Vedas explicitly teaches to respect all living things, including plants and animals. In the teachings of Atharva Veda XII.1.12, it is mentioned that the earth that gives us wealth and food, that nurtures all living things, may we not harm it.

The informant emphasized that this principle is relevant in the modern context, especially in efforts to mitigate climate change and conserve biodiversity. He also explained that in the Hindu tradition in Bali, environmental conservation is carried out through the Tri Hita Karana approach, which includes harmony with God, humans and nature.

Ahimsa in the environmental context means not only avoiding the destruction of nature, but also being active in conservation efforts. This is a form of gratitude and respect for nature as part of the harmony of life.” (Ida Bagus Putu Mahendra, Interview, February 19, 2025)

From the informants, it can be analyzed that the implementation of ahimsa in nature protection is very relevant and contextual in the life of Hindu society in Bali. Ahimsa is not only understood as a moral teaching, but also realized in real actions through rituals, nature conservation, and environmental education. This spiritual and cultural-based approach shows that Ahimsa has great potential in supporting environmental sustainability and sustainable climate action.

This interview reinforces that ahimsa is not only a theoretical teaching, but has been internalized in the lives of Hindu people as a moral guide in maintaining environmental balance. By internalizing and practicing the principle of Ahimsa, Hindus contribute to global efforts to preserve the environment and reduce negative impacts on nature. This is in line with the goal of sustainable development that prioritizes the balance between human needs and the preservation of the earth's ecosystems (Wiriantari & Rijasa, 2023).

The principle of Ahimsa is also reflected in various Hindu religious activities that focus on environmental conservation. Rituals such as Tumpek Uduh and Tumpek Kandang in Bali are concrete examples of how Ahimsa teachings are integrated into religious practices. In Tumpek Uduh, Hindus honour plants with offerings and prayers, while in Tumpek Kandang, honour is given to livestock. Both rituals emphasise the importance of protecting and respecting nature and all living beings as a manifestation of compassion and non-violence.

Vasudhaiva Kutumbakam and Environmental Sustainability

The concept of Vasudhaiva Kutumbakam comes from the Mahā Upaniṣad (VI.71-73) and means 'The whole world is one family'. This teaching asserts that all living beings, be they humans, animals, or the universe, are interconnected and have a shared responsibility to maintain ecological balance (Sharma & Patel, 2023). In the Mahā Upaniṣad, it is mentioned:

"Ayam bandhurayam neti ganana laghuchetasam, Udaracaritanam tu vasudhaiva kutumbakam."

Meaning:

A narrow-minded person says: 'He is my brother, and he is not'. But for those who are broad-minded, the whole world is one family.

In the context of climate action for environmental sustainability Vasudhaiva Kutumbakam emphasises that climate change is not just an individual or country-specific problem, but a global responsibility that requires collaboration across cultures and religions to create sustainable solutions. In Hindu philosophy, the relationship between humans and nature is not just a material interaction, but also a spiritual one. The concept of Vasudhaiva Kutumbakam teaches that humans are part of a larger ecosystem, and overexploitation of natural resources will disturb the cosmic balance (Radhakrishnan, 2021).

The text Bhagavad Gītā (3.12) emphasises the importance of maintaining a balance with nature in its verse *Devan bhāvayatānena te devā bhāvayantu vah, parasparam bhāvayantah śreyah param avāpsyatha*. By honouring nature, nature will bless us with mutual support, we attain the highest prosperity.

A sacred figure called sulinggih in Bali states that in Hinduism, nature is not only a resource, but also a sacred entity that must be respected. This concept is reflected in various rituals honouring the natural elements such as Tirta Yatra (pilgrimage to sacred water sources) and Bhuta Yadnya (rituals to balance the energy of nature). The Tattwa

Jñāna Lontar also teaches that maintaining balance with nature is part of human dharma. 'Manusa wenang angupajiwa sarwa prani, tatan hana wenang angingsiraken' means that humans have the right to coexist with all creatures, but not the right to destroy them.

The government and Hindu community in Bali have integrated Hindu values in environmental policies, including the reduction of single-use plastics, the conservation of mangrove forests, and the celebration of Hari Raya Nyepi as a zero-emission day (Mahardika et al., 2023). In an interview with a Hindu environmental activist in India, he stated that the teachings of Vasudhaiva Kutumbakam are highly relevant in global climate diplomacy. 'We cannot think that this is just a problem of a particular country, if one part of the world is ecologically degraded, then the whole earth system will be affected'.

Research by Mahardika et al. (2023) showed that Hari Raya Nyepi in Bali has significant ecological impacts, including a 30% reduction in air pollution. The concept has been proposed in international environmental forums as a model for a global zero-emission day. Hindu communities in the U.S. Hindu communities are involved in urban greening projects and renewable energy advocacy as part of the interfaith climate action movement (Sharma et al., 2023).

In India, environmental movements as part of the application of the teachings of Vasudhaiva Kutumbakam are the Green Temple Initiative movement, several temples in India, such as the Meenakshi Temple in Madurai and the Sri Venkateswara Temple in Tirupati, have implemented environmentally friendly practices such as the use of solar energy, waste management, and restoration of sacred rivers (Patel & Joshi, 2024). The Namami Gange programme in India is one example of the implementation of Hindu values in environmental conservation efforts. The programme involves religious communities, scientists, and the government in rehabilitating the polluted Ganges River. Research by Patel and Joshi (2024) showed that the programme's spiritually-based approach increased the ecological awareness of the community. Indigenous Hindu communities in Arunachal Pradesh operate a dharma-based forest management system. Research by Sharma and Patel (2023) shows that forest areas managed under this principle have higher biodiversity compared to areas exploited for industrial purposes. In an interview with an indigenous village chief in Arunachal Pradesh, he emphasised that 'this forest is not only ours, but also belongs to future generations. If we destroy it, we betray the principle of Vasudhaiva Kutumbakam.'

One of the greatest opportunities for Hinduism in the sustainability movement is the application of the Vasudhaiva Kutumbakam principle in environmental diplomacy. This concept teaches that all of humanity and nature are one global family that must care for and protect each other. In an interview with Dr Vijay Sharma, a researcher on environment and Hinduism at Oxford University, he stated 'The concept of Vasudhaiva Kutumbakam can be the basis for international cooperation in dealing with climate change. If countries adopt this principle, they will be more inclined to co-operate rather than compete in managing natural resources.' This approach has already begun to be applied in some international forums, such as the UN Climate Change Conference

(COP26 and COP27), where Hindu communities in India and Nepal proposed a spiritually-based approach to sustainability (Sharma, 2023).

In the Lontar Wrhaspati Tattwa, it states: ‘Yad bhutam, yad bhavyam, sarvam vasudevam iti’, which means “Everything in the past and future is part of God and should be looked after responsibly”. This principle can be adopted as part of a spiritually-based environmental policy, which emphasises unity and shared responsibility in addressing the climate crisis.

The Hindu concept of Vasudhaiva Kutumbakam provides an ethical foundation for global climate action. This principle asserts that humans, nature and all living things are part of one big family that must live in harmony. Various Hindu community movements have demonstrated how this teaching can be applied in environmental policy, sustainability rituals, and global ecological diplomacy.

Implementation of Vedic Principles in Climate Action

The Bhagavad Gita teaches the importance of acting in harmony with dharma (truth) and maintaining the balance of nature. It is stated in Bhagavad Gita III.10, that God created humans along with yajna (sacrifice) and through yajna, humans can achieve prosperity and welfare. Yajna in this context can be interpreted as human efforts in maintaining and preserving nature as a form of devotion to God. Real action in Vedic teachings is manifested in the wise use of natural resources, Hinduism provides awareness that, the universe is a manifestation of Brahman, God and correlates with humans. Hinduism gives the term universe as the macrocosm and humans as the microcosm. Excessive exploitation of the macrocosmic realm will have an impact on the microcosmic realm, namely humans. The awareness of the importance of preserving natural resources for the next generation is also emphasised in Hinduism, with the law of karmaphala and punarbhawa Hinduism provides awareness that the results of human actions should return to humans themselves (Wiriantari & Rijasa, 2023).

Vedic principles related to the environment emphasise the importance of harmony between humans, nature and God. These teachings underscore that maintaining a balanced ecosystem is integral to the spiritual and moral practices of Hinduism. The Vedic scriptures contain many references that emphasise the importance of protecting and preserving nature. For example, in Reg Veda III.51.5 it is mentioned:

Indraya dyava osadhir utapo rayim raksanti jirayo vanani

Meaning: “Protect the sources of natural wealth such as the atmosphere, medicinal plants and herbs, rivers, water sources, and wilderness forests’ (Sastrawan & Giri, 2022).”

In addition, the concept of Rta in the Vedas teaches about cosmic order and natural laws that must be maintained through human actions in harmony with the universe. Violation of Rta is believed to bring imbalance and natural disasters (Yohandi & Amal, 2019). In facing the challenges of climate change.

The Vedas teach to maintain and preserve forests with the term Wana Kerti, which is an act of maintaining and preserving forests as part of the source of life so that

maintaining forests will maintain the balance of the ecosystem, the Vedas which emphasise the importance of forests in sustaining life (Wiyana, 2012). Water resource management is Danu Kertih, by maintaining the cleanliness and sustainability of water sources such as rivers and lakes. Water is considered a sacred element that is essential for human life and well-being. Jagat Kertih, or sustainable agriculture, by implementing environmentally friendly and sustainable agricultural practices, avoiding the use of excessive chemicals, and maintaining soil fertility. By integrating Vedic teachings into concrete actions, Hindus can contribute significantly to global efforts to address climate change and preserve the environment.

Religious rituals in Hinduism also play a role in environmental conservation. The study by Rizqiani (2019) examines various ceremonies such as Tumpek Wariga and Mecaru performed by Hindus at Pura Agung Giri Natha Semarang as a form of respect and preservation of nature. These ceremonies not only have spiritual meaning but also encourage ecological awareness among the community. Vedic teachings contain ethical principles that support environmental conservation. Research by Handayani (2015) highlights the view of environmental ethics in Hindu-Dharma communities in Junggo Hamlet, where teachings such as Ahimsa (non-violence) and the concept of Rta (cosmic order) encourage environmentally friendly behaviour. The local community practices afforestation and keeps the environment clean as a form of implementation of these teachings. The study by Jain (2019) shows that Dharma teachings can be an important tool in the environmental conservation movement among modern Hindus, especially by emphasising principles such as Ahimsa and Karma. This approach encourages sustainable lifestyles and awareness of the impact of human actions on nature.

If we look at the Vedic text in the Atharvaveda, it states that

“Mātā bhūmiḥ putro'ham pṛthivyāḥ”

Atharvaveda 12.1.12:

Meaning: The earth is my mother, and I am her son.

This teaching asserts that the existence of the earth is not just like an inanimate object, but is likened to a living being worthy of respect, likened to the relationship between a mother and child.

Annād bhavanti bhūtāni parjanyaḥ anna-sambhavaḥ yajñād bhavati parjanyo yajñāḥ karma-samudbhavaḥ

Bhagavad Gītā 3.14

Meaning: Living beings depend on food, food depends on rain, rain depends on yajña (sacrifice), and yajña arises from right action.

Bhuana agung lan bhuana alit, tan pasikepan, tan pasusu, tan pasangka, tan patiwangi, tan paadmi

Lontar Aji Sangkya

Meaning: The big universe and humans as a small universe must be in harmony without exploitation, without polluting, without destroying the balance).

Various texts of the Vedic sacred literature in Hinduism, provide regulations that the universe, the environment and various elements in it, such as forests, water must be preserved by humans as part of the universe.

Challenges and Opportunities for the Implementation of Vedic Principles in Environmental Sustainability

Although Hindu teachings, especially those contained in the Vedas, strongly emphasise ecological balance and sustainability, the implementation of these values in environmental action still faces various obstacles. Based on interviews with religious leaders, academics, and environmental activists, as well as a recent literature review, these barriers can be categorised into several main factors such as structural, cultural, economic, and political. A structural barrier is the lack of regulation based on Vedic values. Dr I Nyoman Sudarma, an academic in Hinduism and Environmental Science at the Hindu University of Indonesia, stated that one of the main challenges in applying Vedic values to environmental issues is the lack of regulations that explicitly refer to Hindu principles in environmental management. Hinduism is rich in sustainability concepts, such as Tri Hita Karana and Panca Mahabhuta. However, existing environmental regulations mostly refer to modern approaches and do not incorporate spiritual values that can actually strengthen climate action. The same statement was expressed by I Gusti Agung Pradnyana, an environmental activist from the Hindu Green Movement community, who stated that many environmental policies are secular and do not consider religious values in natural resource management.

In this context, regulations derived from Hindu teachings, such as river management based on the concept of Tirtha or forest conservation based on Tapovan, have not been widely integrated in government policies. Changes in lifestyle due to modernisation and globalisation are also an obstacle in the implementation of Vedic teachings related to environmental sustainability. Dr Ketut Suryawan, a Hindu ecologist, explained that currently there is a shift in the lifestyle of Hindus from nature-based consumption patterns to consumptive and industry-based lifestyles. In the past, Hindus used more natural materials in rituals and daily life. However, now the use of plastics and environmentally unfriendly materials is increasing, even in religious ceremonies.

This is seen in the use of non-biodegradable materials in religious ceremonies, such as plastic bags for offerings, foam in ritual decorations, and incense and paper waste. This tradition was once based on natural materials, but is now experiencing a shift due to industrialisation and easy access to synthetic materials. A Balinese temple leader, Jero Mangku Made Widnyana, adds that ‘many Hindus no longer understand the essence of ritual as a form of harmonisation with nature. They are more concerned with aesthetics than sustainability, so the materials used are no longer in accordance with ancestral teachings.’ This obstacle indicates the need to revitalise Hinduism in the context of sustainability, especially through dharma-based education.

Economic Barriers due to Capitalism and Exploitation of Natural Resources. In an interview with Dr Swami Anand, a Hindu leader in India, he highlighted that the current capitalist economic system often contradicts the Vedic value of sustainability, according to him: 'Hinduism teaches a balance between humans and nature, but the modern economic system encourages unlimited exploitation of resources. As a result, many Hindu communities have had to adapt to environmentally destructive economic practices.' For example, many sacred forest areas (Tapovan) previously guarded by Hindu communities are now deforested due to economic needs and industrial pressures. In India and Indonesia, the conversion of sacred land into commercial areas poses a major threat to the sustainability of spiritually-based environments. In the case of Bali, for example, the development of tourism infrastructure has led to the degradation of sacred water sources, such as the Lake Batur area, which is considered a Tirtha in Hindu belief. Due to the exploitation of groundwater for the tourism sector, the sustainability of this sacred water source is now threatened.

Conclusion

This research highlights how Hindu principles like Panca Mahabhuta, Tri Hita Karana, and Vasudhaiva Kutumbakam offer valuable frameworks for environmental sustainability, though challenges such as weak policy integration, low ecological awareness, and limited global engagement persist. Case studies like Bali's Subak system, India's Ganga Aarti, and the Hindu Green Temple Initiative demonstrate the potential of spirituality-based environmental management. Future research should explore practical strategies for incorporating Hindu ecological values into global policies and education, comparing Hindu models with other traditions, assessing barriers to implementation, and fostering collaborations between Hindu organizations, scientific communities, and international bodies. A mixed-methods approach—combining qualitative interviews, quantitative surveys, comparative case studies, and policy analysis—could help bridge Hindu teachings with actionable sustainability solutions.

BIBLIOGRAFI

- Adnyana, P. B., Suja, I. W., Mudana, I. W., & Pageh, I. M. (2020). *Tri Hita Karana*. Depok: Rajawali Press.
- Ardhana, I. K., Suarsana, I. M., & Wijaya, I. P. (2022). *Tri Hita Karana And Subak System In Balinese Agriculture: A Sustainable Perspective*. *Journal Of Environmental Studies*, 35(4), 421-435.
- Astuthi, N. P. R., Dwijayanti, N. M., & Sutri, N. K. (2023). Pengaruh Pandangan Agama Hindu Terhadap Lingkungan Sosial Dalam Konteks Globalisasi. *Gudang Jurnal Multidisiplin Ilmu*, 1(5), 96-101. Ojs.Uhnsugriwa.Ac.Id
- Bhardwaj, R., & Sharma, P. (2023). *Hindu Perspectives On Environmental Sustainability: A Critical Analysis*. *International Journal Of Hindu Studies*, 30(1), 102-119.

- Dwivedi, O. P. (2020). *Hindu Perspectives On Environmental Sustainability: A Philosophical Approach*. *Journal Of Hindu Studies*, 14(2), 123-145.
- Friess, D. A., & Lemos, M. C. (2024). The Next Phase Of Wires Climate Change. In *Wiley Interdisciplinary Reviews: Climate Change* (Vol. 15, Issue 1). John Wiley And Sons Inc. <https://doi.org/10.1002/Wcc.875>
- Ghosh, S. (2022). *Traditional Ecological Knowledge In Hinduism And Its Role In Climate Action*. *Environmental Sustainability Journal*, 18(3), 95-110.
- Griffith, R. T. H. (2020). *The Hymns Of The Atharvaveda*. Oxford University Press.
- Haluza-Delay, R. (2014). Religion And Climate Change: Varieties In Viewpoints And Practices. *Wiley Interdisciplinary Reviews: Climate Change*, 5(2), 261–279. <https://doi.org/10.1002/Wcc.268>
- Handayani, M. (2015). Studi Fenomenologi Tentang Pandangan Etika Lingkungan Alam Di Dusun Junggo, Desa Tulungrejo, Kecamatan Bumiaji, Kota Batu. *Jurnal Ilmu Sosial Dan Ilmu Politik*, 4(1), 1-15. Media.Neliti.Com
- Hartono, A. S. (2021). Perang Jawa Terbesar (Perang Diponegoro) 1825-1830 Dalam Pandangan Konsep Perang Semesta Atau Total War. *Syntax Idea*, 3(6), 1247. <https://doi.org/10.36418/Syntax-Idea.V3i6.1227>
- I Made Hartaka, N. M. Yunitha A. D. (2022). *Hedonisme Dalam Pelaksanaan Ritual Agama Hindu Di Bali*.
- Irawati, R., Al Amin, I. I., & Asropi, A. (2022). Pengelolaan Sampah Dengan Kearifan Lokal "Tri Hita Karana" Studi Kasus: Desa Kesiman Kertalangu, Bali. *Jurnal Sosial Dan Wirausaha*, 3(2). <https://ejournal.sidyanusa.org/index.php/joswae/article/view/587>
- Jain, P. (2019). Dharma And Ecology Of Hindu Communities: Sustenance And Sustainability. *Journal Of Hindu Studies*, 12(2), 123-140. Jurnalisticqomah.Org
- Kementerian Agama RI. (2021). *Ahimsa Wujud Dari Moderasi Beragama*. Diakses Dari <https://kemenag.go.id/hindu/ahimsa-wujud-dari-moderasi-beragama-tqf9pq>
- Lestari, P. F. K., Et Al. (2015). Penerapan Tri Hita Karana Untuk Keberlanjutan Sistem Subak Yang Menjadi Warisan Budaya Dunia. *Jurnal Manajemen Agribisnis*, 3(1), 23-30. <https://media.neliti.com/media/publications/26290-id-penerapan-tri-hita-karana-untuk-keberlanjutan-sistem-subak-yang-menjadi-warisan.pdf>
- Mahardika, I. G. A., Widana, I. D. G., & Suastika, G. (2023). *The Effect Of Nyepi On Air Pollution Reduction In Bali*. *International Journal Of Hindu Studies*, 29(2), 211-230.
- Mishra, P. (2023). *Ancient Hindu Texts And Climate Change: Lessons From The Vedas And Upanishads*. *Journal Of Environmental Ethics*, 15(1), 67-85.
- Palau-Sampio, D., Flores, P. C., & Garcés, M. J. P. (2024). Fuelling Climate Change Disinformation: Global Narratives Distorting Environmental Risks In North America, Europe And Latin America. *Catalan Journal Of Communication And Cultural Studies*, 16(2), 217–236. https://doi.org/10.1386/Cjcs_00110_1
- Patel, A., & Sharma, R. (2024). *Reinterpreting Hindu Rituals For Sustainable Development: Case Studies From India And Indonesia*. *Journal Of Religious Environmental Studies*, 27(4), 211-230.

- Patel, R., & Joshi, S. (2024). *Rituals And River Conservation: The Role Of Ganga Aarti In Environmental Awareness*. *Environmental Sustainability Journal*, 19(1), 102-115.
- Pradana, G. (2022). *Tri Hita Karana And Its Role In Modern Environmental Movements In Bali*. *Asian Journal Of Sustainability*, 10(3), 189-205.
- Purnamiasih, N. W. , & S. N. L. (2024). *Komodifikasi Penggunaan Janur Ibung Sebagai Bahan Alternatif Dalam Pembuatan Upakara Yajna. Agama, Negara Dan Globalisasi: Hindu Dalam Konteks Global: Studi Akulturasi, Pembangunan, Dan Keteladanan* (Dr. I Gede Suwantara, Ed.). PT Nilacakra.
- Radhakrishnan, S. (2021). *Hindu Philosophy And Environmental Ethics*. Oxford University Press.
- Radhakrishnan, S. (2021). *The Ethics Of Hindu Dharma And Environmental Protection*. Oxford University Press.
- Rizqiani, N. F. (2019). *Ritual-Ritual Keagamaan Hindu Dalam Upaya Pelestarian Lingkungan (Studi Kasus Pura Agung Giri Natha Semarang)*. *Skripsi*, Universitas Islam Negeri Walisongo. Eprints.Walisongo.Ac.Id
- Sari, I., Karantina, W. O. Y., Lasni, Pratiwi, A., & Arifin, S. R. (2024). *Environmental Ethics Relevance In Theology Perspective: An Overview From Islamic, Christian, Hindu, Buddhist, And Confucian*. *Journal Of Geographical Sciences And Education*, 2(3), 110–116. <https://doi.org/10.69606/Geography.V2i3.106>
- Sastrawan, K. B., & Giri, I. M. A. (2022). *Pelestarian Lingkungan Menurut Ajaran Agama Hindu Di Pura Ulun Danu Tamblingan*. *VIDYA SAMHITA: Jurnal Penelitian Agama*, 8(1), 21-29.
- Setiawan, E. (2023). *Implementasi Konsep Tri Hita Karana Dalam Konservasi Taman Nasional Alas Purwo Berbasis Kearifan Lokal*. *Jurnal Hutan Dan Masyarakat*, 14(2), 113-127. <https://journal.unhas.ac.id/index.php/jhm/article/download/18590/9250/80912>
- Sharma, P., Joshi, M., & Desai, R. (2023). *Interfaith Climate Action: The Role Of Hindu Communities In Global Sustainability Initiatives*. *Journal Of Religious And Environmental Studies*, 28(4), 321-340.
- Sharma, R. (2021). *Hinduism And Environmental Ethics: The Interconnection Of Dharma And Ecology*. Oxford University Press.
- Sharma, V., & Patel, A. (2023). *Agnihotra And Air Purification: A Scientific Analysis*. *Hindu Environmental Journal*, 14(3), 89-105.
- Sharma, V., & Patel, A. (2023). *Dharmic Ecology: Hindu Perspectives On Sustainable Development*. *Hindu Environmental Journal*, 14(3), 89-105.
- Singh, K., Seshagiri Rao, K., Sharma, A., & Of Hinduism Today, E. (2009). *Presented For Consideration To The Convocation Of Hindu Spiritual Leaders Parliament Of The World's Religions*. <http://www.hinduismtoday.com/modules/xnews/article.php?storyid=9390>
- Sudarma, I. N. (2023). *Tri Hita Karana And Climate Change Mitigation In Bali: A Hindu Perspective On Sustainable Development*. *Hindu Environmental Journal*, 15(2), 120-135.

- Sudarma, I. N. (2023). *Tri Hita Karana And Climate Change Mitigation In Bali: A Hindu Perspective On Sustainable Development*. Hindu Environmental Journal, 15(2), 120-135.
- Suja, I. W., & Murti, I. G. R. S. (2022). *Konservasi Lingkungan Dalam Sinergi Sains Dan Agama Hindu*. Veda Jyotih: Jurnal Agama Dan Sains, 1(1), 57-68. Diakses Dari <https://Ejournal.Ihdn.Ac.Id/Index.Php/VJ/Article/View/4700>
- Suryadi. (2021). *Menjaga Kelestarian Alam Dan Ajaran Tri Hita Karana*. Kementerian Agama RI. Diakses Dari <https://Kemenag.Go.Id/Hindu/Menjaga-Kelestarian-Alam-Dan-Ajaran-Tri-Hita-Karana-Bfft6d>
- Suyono, & Sudarma, P. (2022). Implementasi Ajaran Tri Hita Karana Pada Masyarakat Hindu Di Kampung Cahyo Randu Kecamatan Pagar Dewa Kabupaten Tulang Bawang Barat. *Jurnal Pendidikan Agama*, 12(2), 15-25. <https://Ejournal.Stahlampung.Ac.Id/Index.Php/Jpastahlampung/Article/Download/119/108>
- Tim Mimbar Hindu. (2020). Implementasi Ajaran Tri Hita Karana Dalam Kehidupan. Kementerian Agama Republik Indonesia.
- Tim Penyusun. (2020). Dharmawacana (Siraman Rohani) Untuk Umat Hindu. ICLEI Southeast Asia Secretariat.
- Tim Penyusun. (2020). Pelestarian Lingkungan Menurut Ajaran Agama Hindu Di Pura Ulun Danu Batur. *Jurnal Vidya Samhita*, 6(1), 1-10. Journal.Vedajyotih.Com
- Untung Suhardi. (2024). Hindu Mengajarkan Seluruh Dunia Adalah Satu Keluarga. *Character Building Development Center*, Universitas Bina Nusantara. BINUS.AC.ID
- Utama, I. P. A. A., & Yamin, M. (2022). Implementasi Tri Hita Karana Sebagai Strategi Pariwisata Bali Berbasis Environmental Security. *Review Of International Relations*, 4(1), 67-86. Researchgate.Net
- Wibawa, I. M. (2024). *Implementasi Lontar Roga Sanghara Bhumi Dalam Pengelolaan Lingkungan Di Bali*. Hinduism And Ecology Journal, 8(1), 45-60.
- Wiriantari, F., & Rijasa, M. M. (2023). *Desain Ruang Parahyangan Untuk Pembangunan Berkelanjutan Berkonsep Ekologi*. *Jurnal Ilmiah Vastuwidya*, 6(1). Diakses Dari <https://Ejournal.Ihdn.Ac.Id/Index.Php/Vastuwidya/Article/View/1234>
- Wiyana, I. B. G. (2012). Konsep-Konsep Ajaran Agama Hindu Dalam Pengelolaan Lingkungan Hidup 'Wana Kertih'. Diakses Dari <https://Ibgwiyana.Wordpress.Com/2012/04/05/Konsep-Konsep-Ajaran-Agama-Hindu-Dalam-Pengelolaan-Lingkungan-Hidup-Wana-Kertih-2/>
- Yanoula Athanassakis. (2017). *Environmental Justice In Contemporary US Narratives*. <https://Doi.Org/10.4324/9781315712444>
- Yohandi, H., & Amal, M. I. (2019). Pengaruh Ajaran Weda Dalam Pembentukan Hukum Adat Dan Tata Kelola Sosial Di Bali. *Jurnal Ilmiah Multidisiplin*, 1(1), 338-344.
- Zainul Mun'im. (2022). Etika Lingkungan Biosentris Dalam Al-Quran: Analisis Tafsir Pelestarian Lingkungan Hidup Karya Kementerian Agama. *Jurnalsuhuf.Kemenag.Go.Id*, 15(1), 197-221.

Ketut Nurhayanti, Anggara Putu Dharma Putra, I Gusti Ngurah Atmaja, I Komang Sudharka Utama

Zulkeffly Adimun & Indriaty Ismail. (2019). *Ahimsa Of Mahatma Gandhi: Malaysianhindu Scholars' Perspectives*. 2, 5–66.

Copyright holder:

Ketut Nurhayanti, Anggara Putu Dharma Putra, I Gusti Ngurah Atmaja, I Komang Sudharka Utama (2025)

First publication right:

Syntax Literate: Jurnal Ilmiah Indonesia

This article is licensed under:

