



Indigenous Wisdom and Modern Sustainability: Philosophical and Religious Insights

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ABSTRACT

Man-made climate change was believed to be the crisis of the distant future till now. But we cannot deny the fact that we are already in the midst of a world that is in churn. Climate changes which were once simply described as global warming have gone far beyond the changes in temperature alone and have affected crop productivity, rainfall, river flows, and pest abundance. Droughts and floods are becoming more frequent. Changes in the river flow are threatening hydroelectric power, biodiversity and large-scale irrigation. Rising sea levels in the coming decades may inundate coastal communities and drastically worsen storm surges. Environmental sustainability is not easy. Provisioning services like products obtained from ecosystems such as food, fresh water etc., regularity services like climate regulations, natural hazard regulations, habitat services like maintaining the viability of gene pools, cultural services like spiritual enrichment, intellectual and aesthetic development, psychological well-being and social integration values need to be evolved to meet the challenges that threaten the very existence of human life on earth. A course of action that would ensure a safe environment for future generations has become the need of the hour. The Indian Wisdom, which is based on holistic and sustainable methodologies, has the ability to tackle modern issues related to sustainable development. Researchers that investigated



the sectors like environmental conservation, health, agriculture, and education, emphasizes how India's ancient wisdom can enhance contemporary sustainable approaches and pave the way for accomplishing the SDGs. The Indian wisdom, a rich source of holistic and sustainable methodologies cultivated over thousands of years, offers significant insights for confronting modern challenges in sustainable development. With around 8 percent of the world's biodiversity, India's ancient methods of environmental conservation, such as the Bishnoi community's efforts in safeguarding forests and wildlife, exemplify the necessity of living in harmony with nature. This paper explores the various ways and means to integrate Indian wisdom for sustainable environment practices and stressing the importance of traditional knowledge in meeting global environmental sustainability objectives.

Introduction

In the contemporary world, the environmental crisis is a pressing issue that demands urgent attention. Deforestation, water scarcity, pollution, and climate change are some of the most significant challenges we are facing in present era. Climate changes which were once simply described as global warming have gone far beyond the changes in temperature alone and have affected crop productivity, rainfall, river flows, and pest abundance. Droughts and floods are becoming more frequent. Environmental sustainability is not easy. While modern science and technology have provided us with solutions. On the other side, integrating traditional knowledge systems and practices can play a vital role in fostering sustainability. Indian knowledge systems, which have been deeply rooted in ecological wisdom, offer invaluable insights into sustainable environmental practices. Shiekh (2024) adds, “the Indian Knowledge System (IKS) is a structured transmission of knowledge, rooted in ancient traditions and practices that remain highly relevant today. It encompasses disciplines such as Ayurveda, Yoga, Vedic sciences, architecture (Vastu Shastra), and indigenous resource management techniques.” Chandel and Prashar (2024) contend that integrating Indigenous Knowledge Systems (IKS) will enhance the comprehension of the complexities of contemporary society. They explore the challenges associated with this subject and suggest areas for further investigation. This integration will foster greater understanding and appreciation of the rich and varied knowledge held by indigenous communities among different



stakeholders, as well as support the rejuvenation of traditional wisdom through the use of modern technology.

Ancient education system emphasized that life is present in all the elements of this universe. The relationship between humanity and nature has been a central theme in Indian philosophy and culture for millennia. The concept ‘the world is one family (Vasudhaiva Kutumbakam) from Maha Upanishid resonated the idea of global sustainability. The Indian knowledge system includes diverse areas such as science, spirituality, art, literature, and social norms, significantly influencing the development of Indian society and culture. Its foundation is rooted in the Vedas, which are regarded as some of the oldest scriptures globally. Indian Knowledge Systems (IKS) encompass a vast array of traditional practices, philosophies, and wisdom that have evolved over centuries, emphasizing harmony with the environment. India's rich cultural and intellectual heritage offers a treasure trove of wisdom for sustainable living. The texts encompass extensive knowledge on a wide array of topics, including medicine, astronomy, mathematics, politics, spirituality, and philosophy. They offer valuable perspectives on Indian life, emphasizing the significance of balance, harmony, and unity within society.

As noted by Mundhe (2023), a fundamental element of the Indian knowledge system is its comprehensive approach to life. It recognizes the interrelatedness of all facets of existence – from individuals to communities, from humans to the natural world, and from the physical realm to the spiritual dimension. This holistic perspective is evident in various Indian disciplines like Ayurveda, Yoga, and Vastu Shastra, which aim to foster balance and harmony both internally and with the surroundings. The integration of Indian Knowledge Systems (IKS) with modern environmental practices provides a holistic approach to sustainability. These systems encompass ancient texts, traditional practices, and cultural values that promote harmony between humans and nature. It also involves looking at ancient texts, philosophies and cultural practices that have long promoted a harmonious relationship with nature.

Review of Literature

Shiekh (2025) explored Indian knowledge system and sustainable development and aimed to study the synergies between IKS and Sustainable Development Goals recommended by UNESCO and systematically presented various examples and case studies showcasing the integration of ancient wisdom to achieve SDG's (SDG 2: Zero Hunger, SDG 3: Good Health and Well-being, SDG 4: Quality Education, SDG 6: Clean water and Sanitation, SDG 12: Responsible Production and Consumption, SDG 13: Climate Action, SDG 15: Life on Land). Joshi and Pant (2024) explored that integration of IKS and



artificial intelligence can foster a deeper environmental focus and can contribute remarkably to global sustainable challenges via offering solutions aligned with the environmental practices and values. Mishra, Tripathi and Patro (2024) examined that integrating Indian Knowledge system into Higher education has the capacity and potential to create a more balanced, sustainable and enriched educational landscape for future generations.

Kumar (2024) explored various forging connections to integrate IKs into higher education and suggested that IKS offers frameworks demonstrating the connections between traditional practices, humanity, science, values, and cosmos and by integrating IKS with modern scientific advancement, more sustainable practices prioritizing human flourishing and environmental balance can be developed. Choudry and Pandey (2025) suggested that by integrating IKS with technological advancement, a more comprehensive and pragmatic approach to sustainable practices can be achieved. Nayak and Lonkar (2024) discussed that overall sustainable development of the world can be enhanced by integrating IKS into mainstream policy framework and educational programs.

Ancient India Environmental Moral Stand: Life Preserver

Right to life is one of the basic human rights and its fundamental awareness lies in Right to Health and other living creatures on the earth. Banwari (1992) believed that traditionally the concept of environment sustainability and preservation is the dharma of each individual in the society and must consider our environment as a part of one's life for our own survival and prosperity. It is also a part of cultural values, traditions, and moral obligation of human being to maintain the ecological stability. Atharva Veda and Rig Veda regarded nature to have a divine power and Man's paradise is on earth and it is our duty to protect our paradise. Many verses in these Vedas have been devoted to the praise of Mother Earth. The religious law of Hindu consecrated respect for nature and environmental coherence and conservation. Thus, India has a long legacy of protecting and worshipping the mother earth since Vedic times.

Muhammad Ali (1990) has insisted that the "Holy Quran" explains about all the creatures on earth and the nature are created for the service of man for his use. However, men should not forget that there are numerous living creatures that also have a right to exist. Similarly in Buddhism, Christianity and Islam, the fundamental principles are respect and love for living. Hence, it is apparently clear that religious teaching, political and societal norms treated man as part of nature not as a decomposer of nature.



A statement released by Intergovernmental Panel on Climate Change (IPCC), (2019) stated that the Climate change is likely to have negative impacts on human health with significant loss of life. As temperature increases towards the poles, insects and pests migrate and some insects carry diseases such as malaria and dengue fever. This could lead to 50 to 80 million additional cases of Malaria. With increase of a global warming heat waves cause severe ill to those who is suffering from heatstroke, heart attacks which will lead to an increase in the number of deaths.

In addition, Supreme Court of India in Vellore Citizens Welfare Forum v/s Union of India has elaborately discussed the concept of sustainable development, which has been accepted as a part of the law of the land (Surya, 2020).

Understanding Indian Knowledge System

Indian knowledge systems whether from Hinduism, Buddhism, or Jainism, underscore the interconnectedness of all life forms. Unlike many Western worldviews that prioritize human dominion over nature, Indian traditions perceive the Earth and all its resources as sacred, living entities that deserve reverence and protection. Indian Knowledge System is rooted in a holistic understanding of the universe, where every element is interconnected. This perspective is evident in various traditional practices, including agriculture, water management, and community living. The Vedas, ancient scriptures of Hinduism, contain profound insights into nature and sustainability. The Indian knowledge system encompasses a broad network of beliefs and traditional practices intricately interwoven into the fabric of Indian society and culture. These practices significantly contributed to the development of the Indian lifestyle, fostering harmony and balance while instilling a profound sense of spirituality and community. Its impact is still evident in contemporary India, establishing it as a vital component of the nation's identity and heritage.

Indian Wisdom and Sustainable Environmental Practices

Traditional Agricultural Practices

Agriculture in India has historically been guided by ecological principles. One of the pillars of sustainable environmental practices in India is traditional agriculture. Techniques such as crop rotation, mixed cropping, and organic farming have been practiced for centuries, ensuring soil health and biodiversity. The use of natural fertilizers like cow dung and compost, along with water management systems like step wells and rainwater harvesting, exemplifies sustainable living. The use of indigenous seeds, which are well-adapted to local conditions, promotes biodiversity and resilience against climate



change. The concept of '*Jajmani system*' where communities share resources and labour, fosters cooperation and sustainability.

For instance, the ancient practice of *zero-budget natural farming* (ZBNF), promoted by Subhash Palekar, emphasizes the use of indigenous seeds, natural fertilizers, and minimal external inputs. ZBNF also emphasizes the importance of polyculture (growing multiple crops together), which helps reduce the risk of pest infestations and supports ecological balance. This technique mirrors traditional Indian farming practices, where farmers would grow a variety of crops, thereby fostering biodiversity and reducing dependency on external inputs. This approach aligns with the principles of sustainability by reducing dependency on chemical fertilizers and pesticides. Sharma et. al. (2022) argued that the ancient knowledge regarding crop cultivation, management practices, pest control, agricultural machinery and tools, soil and water conservation, the use of medicinal and aromatic plants for disease diagnosis, livestock care, management of stored grain pests, weed control, and the preparation of value-added products is currently being employed by farmers in their agricultural practices.

The *Vedas* emphasize the importance of soil health, crop rotation, and respect for nature. A famous verse from the Atharva Veda reads:

“The earth, the mother of all living things, gives us grains, vegetables, and fruits. We shall treat her with respect.”

Water Conservation

Water is considered a sacred element in Indian culture, plays a central role in sustainable environmental practices. Ancient Indian systems of water management reflect a deep understanding of the importance of water conservation, and many of these systems continue to inspire modern practices. Rivers such as the Ganga, Yamuna, and Narmada are not only worshipped but also form the basis of sustainable water management practices. In ancient India, "kunds" (stepwells) were built as a sustainable solution to store and conserve water. These structures were ingeniously designed to provide water through the year. The stepwell at *Rani ki Vav* in Gujarat is an excellent example of this. The structure is not only a marvel of engineering but also a reflection of the spiritual importance of water. These stepwells were designed with intricate carvings of gods and goddesses, signifying the reverence people had for water. In rural India, rainwater harvesting has been practiced for centuries. One example is the use of '*taankas*' in Rajasthan—small, underground tanks built to store rainwater. Similarly, in Karnataka, traditional systems like '*tanks*' and '*check dams*' have been utilized to manage water resources and



maintain the water table. These systems were designed to reduce dependence on external water sources and ensure that communities could access clean water throughout the year. *Sant Tukaram, a Marathi Saint*, wrote dohas that exemplify the relationship between humanity and nature. One of his dohas states:

“Let us respect water, for it is the elixir of life, nourishing all forms of creation.”

The ancient text ‘*Manasara Shilpa Shastra*’ provides guidelines for constructing water bodies that harmonize with the landscape. In contemporary times, initiatives like the ‘*Jal Shakti Abhiyan*’ aim to revive these traditional practices to combat water scarcity. Indian culture has numerous rituals and practices that emphasize the importance of water conservation. The Ganga Aarti and other river worship practices are not only spiritual acts but also serve as reminders of the need to protect these vital water sources.

Respect for Wildlife

In Indian culture, animals are revered as symbols of different virtues and deities. In Jainism, the principle of Ahimsa (non-violence) is central to environmental ethics, and this includes respecting all living beings, not just humans. Jains have historically promoted wildlife protection by avoiding harm to animals in daily life and advocating for plant-based diets. The Puranas describe how deities took animal forms to protect ecosystems. The Matsya Avatar (fish incarnation of Vishnu) and the Varaha Avatar (boar incarnation of Vishnu) are examples of how animals have been seen as divine protectors of nature.

Sacredness of Nature

In Indian philosophy, nature is often seen as sacred. The Vedas, ancient Indian scriptures, contain numerous references to ecological balance and environmental conservation. For example, the *Rigveda* emphasizes the interconnectedness of all life forms and the importance of preserving natural resources:

"The earth is our mother, and we are her children" (Rigveda 1.89.1)

This verse highlights the deep respect for nature inherent in Vedic teachings. Similarly, the *Atharvaveda* advocates for the purity of water and the health of vegetation:

"May the waters flow pure and free; may the plants grow lush and green"

(Atharvaveda 12.1.1)



The Bhagavad Gita emphasizes the importance of performing one's duty (dharma) without exploiting nature. Lord Krishna advises:

“The one who is wise knows that there is no existence without the earth, and one must respect and protect the resources of the earth.” (Bhagavad Gita 3.14)

This verse signifies the ethical responsibility humans have in sustaining and protecting the natural environment. The idea of Ahimsa (non-violence) in Indian traditions also extends to nature, advocating for the preservation of biodiversity and the reduction of harm to all living beings.

Forest Conservation and Biodiversity

The reverence for forests in Indian culture is reflected in various folk traditions and rituals. The concept of '*Van Mahotsav*' (Tree Plantation Day) encourages community participation in afforestation. The Chipko Movement, where villagers embraced trees to prevent deforestation, is a powerful example of grassroots activism rooted in IKS. The Vedic mantra '*May all beings be happy*' underscores the ethical responsibility towards all forms of life.

Cultural Practices

Indian culture is replete with practices that promote sustainability. For example, the traditional greeting *Namaste* reflects respect and humility, values that extend to how individuals interact with their environment. Festivals such as *Diwali* and *Holi* emphasize community and environmental consciousness. Diwali, traditionally celebrated with oil lamps (diyas), promotes energy conservation. The concept of *joint families* in India fosters resource sharing and reduces waste. Living together in large families ensures efficient use of resources and nurtures a sense of community, which is essential for sustainable living.

Sustainable Urbanism

In traditional Indian urban planning, the construction of cities, homes, and temples took into account ecological factors. Vastu Shastra and Feng Shui, two ancient Indian architectural practices, focus on creating spaces that harmonize with nature. Indian architecture, particularly in ancient cities, was designed with sustainability in mind. The use of local materials, natural ventilation, and passive solar design are principles that can inform modern urban planning. The traditional "havelis" of Rajasthan, with their intricate jali work, exemplify how architecture can harmonize with the environment. The integration of green spaces in urban areas can draw inspiration from these traditional designs. The traditional Indian



courtyard houses used principles of ventilation and sunlight to reduce the need for artificial cooling or heating, thus reducing energy consumption.

Cultural Examples of Ecological Practices

Sacred Groves are areas of forests or woods set aside for religious or cultural reasons. These areas are often protected and have become rich in biodiversity. Many communities in India have protected such groves, believing that the spirits of their ancestors reside there. Indian festivals often celebrate nature and promote environmental consciousness. For instance, during "Pongal," a harvest festival in Tamil Nadu, people express gratitude to the Sun and Earth for their bounty. Such cultural practices reinforce the importance of sustainability and respect for nature. The doha by Kabir, '*Bura jo dekhian main chala, bura na milaya koi; Jo dil khoja apna, to mujhse bura na koi*' emphasizes self-reflection and accountability towards the environment.

Literature and Poetry as Environmental Advocacy

Indian literature has long addressed themes of nature and sustainability. The works of poets like John Keats and William Wordsworth resonate with the Indian ethos of nature reverence. In Indian literature, the "Bhagavad Gita" teaches the importance of duty towards the environment, stating, "Perform your duty equipoised, O Arjuna, abandoning all attachment to success or failure." This perspective can inspire contemporary environmental movements. Poets like Rabindranath Tagore, Sri Aurobindo, and Ravindranath Maharaj have written extensively about the relationship between humanity and nature. Tagore's poem "The Gitanjali" reflects the beauty and sanctity of nature:

"The earth is the face of God, and we are the children of the Earth. Let us not harm her, but nurture her as our mother."

This poetic expression captures the reverence for nature that runs deep within Indian culture, reminding us of the necessity to protect and preserve the environment.

Ayurvedic Wisdom

The epistemological foundations of Ayurveda unravel the salient features of the Indian Knowledge system because Ayurveda is a living tradition and most vibrant tradition of IKS. Manohar (2005) posited that Ayurveda is a system of knowledge that facilitates self-realisation and transformation of self. As a Vedic way of life, Ayurveda represents a gradual evolution from a state of ignorance to a state in which they become capable of taking informed decisions on the basis of accumulated knowledge



(Manohar, 2005). As an ancient Indian system of medicine, Ayurveda underscores the importance of living in harmony with nature. It advocates the use of medicinal plants and herbs, promoting biodiversity and conservation. Ayurvedic practices such as the use of neem (*Azadirachta indica*) for pest control and tulsi (*Ocimum sanctum*) for air purification demonstrate the practical application of traditional knowledge for environmental benefits.

Integrating IKS into Modern Education

‘Gurukul system’ an Indian model of education represents reflective bond between teacher and students and establishing a basis for productive learning and individual development (Acharya, 2024). Adopting the approaches based on student engaged learning has the potential to encourage analytical thinking, creativity, and a comprehensive understanding among students, equipping them more effectively to tackle contemporary challenges. To foster a sustainable future, integrating IKS into modern education is crucial. Educational institutions can incorporate traditional ecological knowledge into curricula, promoting awareness and respect for nature. Programs that encourage experiential learning through nature walks, community gardening, and traditional crafts can instil a sense of responsibility towards the environment in young minds.

Indian Knowledge System and Community Engagement

Government policies should reflect the principles of IKS by promoting sustainable practices at the grassroots level. Engaging local communities in decision-making processes ensures that policies are culturally relevant and effective. Indian knowledge systems (IKS) and community outreach can be integrated to foster holistic student development while keeping them connected to their cultural roots. This involves incorporating traditional knowledge into the curriculum, including ancient languages, literature, sciences, arts, crafts, and local traditions. The policy encourages interdisciplinary research that bridges modern scientific knowledge with traditional knowledge. Efforts to document, preserve, and digitize IKS aim to make it accessible to students and researchers. Traditionally, university-community linkage had been an integral part of education in India. Starting from the Gurukul education system and higher education institutions like Nalanda, Taxila and Vikramshila to more modern examples like Visva-Bharati, Aligarh Muslim University, Banaras Hindu University, Jamia-Millia Islamia University have focused on integrating education and communities.



Conclusion

The integration of Indian knowledge systems for sustainable environmental practices offers a wealth of wisdom that can guide contemporary solutions to environmental problems. From the Vedic reverence for nature to the practical examples of water conservation, sustainable agriculture, and waste management. India's cultural and spiritual traditions provide a holistic and ecologically harmonious approach to living sustainably. As the world confronts environmental degradation, returning to these time-tested practices could offer valuable solutions to preserving the Earth for future generations. Incorporating traditional Indian knowledge into modern environmental strategies can foster a more sustainable and balanced way of living. This integration, guided by both ancient wisdom and contemporary innovation, offers a path forward that is grounded in respect for the Earth and all its inhabitants.

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