

THE ROLE OF INDIAN KNOWLEDGE SYSTEM IN THE SUSTAINABLE DEVELOPMENT OF THE COUNTRY

Key words :

Sustainable Development, Indian knowledge system, organic farming, ecological harmony.

The Indian Knowledge System provides a comprehensive framework for sustainable development by blending traditional wisdom such as Yoga, Ayurveda, and Vastu with contemporary requirements. It emphasizes ecological balance, selfreliance, overall well-being, and collective welfare, while supporting the objectives of the Sustainable Development Goals (SDGs). Practices such as organic farming, water conservation, traditional medicine (AYUSH), and encouragement of local economies contribute to resilience and culturally grounded solutions for challenges related to poverty, public health, and environmental sustainability. This paper examines the historical foundations of sustainable practices in ancient India, with a focus on areas including agriculture, resource management, climate responsibility, and human wellbeing.

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INTRODUCTION

As a developing nation, India has contributed significantly to the idea of sustainable development, drawing considerable inspiration from its ancient knowledge traditions. The principles of the Indian Knowledge System (IKS) are closely connected with the Sustainable Development Goals, particularly those related to poverty reduction (Goal 1), good health and well-being (Goal 3), and sustainable cities and communities (Goal 11). This paper discusses how traditional Indian knowledge can help in achieving these goals by combining age-old wisdom with present-day approaches to sustainable development. The idea of Vasudhaiva Kutumbakam, mentioned in the Maha Upanishad, highlights the belief that the entire world is one family, reflecting the interdependence of all forms of life. Similarly, ancient Indian education and philosophy emphasized harmony between humans and nature, considering every element of the universe as living and sacred, as described in the Vedas. Cultural practices such as the worship of plants like Neem and Tulsi were not only symbolic but also encouraged environmental preservation and ecological balance. The Indian Knowledge System, built upon the concepts of Jnana (knowledge), Vijnana (science), and Jeevan Darshan (philosophy of life), developed through observation, experience, and logical reasoning. It offers practical and sustainable approaches for dealing with global challenges while maintaining harmony with nature. By promoting efficient use of resources, strengthening local livelihoods through crafts and organic farming, encouraging holistic healthcare through AYUSH, and emphasizing values such as self-reliance, Dharma, and Ahimsa, IKS provides meaningful solutions for issues like climate change, poverty, and inequality. Recent initiatives such as NEP 2020 and AICTE's IKS Cell are also working towards incorporating

these traditional ideas into modern education and policy, helping to build a more balanced and resilient future.

REVIEW OF LITERATURE

The Indian Knowledge System covers a wide range of disciplines, including astronomy, medicine, ecology, agriculture, and social organization. Studies by Jiri et al. and Sharma et al. describe it as an interconnected body of knowledge, skills, beliefs, and practices that guide human interaction with nature. This knowledge has been developed over generations and preserved mainly through oral traditions such as rituals, storytelling, songs, and community practices. It has been effectively passed down by elders, helping communities maintain a balanced relationship with their environment. However, knowledge produced through modern universities, research institutions, and scientific methods sometimes differs from, or even conflicts with, traditional and indigenous knowledge systems. Pradhan et al. (2017), in their study "A Systematic Study of Sustainable Development Goals (SDGs) Interactions," observed clear regional differences in progress towards SDGs in India. The findings highlighted that eastern and northeastern regions lag behind in areas such as economic development, health, and education, while southern states show relatively better performance. Priyadarshini and Abhilash (2019), in their work on promoting indigenous knowledge for sustainable development in India, found that tribal practices can significantly contribute to achieving SDGs. However, they also pointed out that socio-economic inequalities and limited policy support make it necessary to integrate such knowledge into mainstream education and strengthen tribal research institutions. Kumar et al. (2011), in their research on traditional ethnobotanical knowledge and indigenous communities, emphasized that local knowledge systems play an important role in addressing

issues such as poverty, healthcare, environmental sustainability, biodiversity conservation, climate action, and collaborative development efforts. Similarly, Nayahunda (2024) examined how indigenous knowledge systems are incorporated into climate change policies in South Africa and Zimbabwe, identifying both progress and gaps in policy frameworks related to sustainability and resilience. Sharma (2024) explained the conceptual understanding of the terms India (I), Knowledge (K), and System (S), while Kumari (2024) highlighted the relevance of IKS in promoting sustainable development. Together, these studies indicate that traditional knowledge systems can offer valuable insights and practical approaches for addressing present-day social, economic, and environmental challenges.

OBJECTIVES

1. To examine the role of the Indian Knowledge System (IKS) in reducing poverty and promoting health and overall well-being.

2. To understand the contribution of IKS towards the formulation and achievement of the Sustainable Development Goals. **METHODOLOGY** This study is descriptive in nature and is based on secondary data. It aims to analyze the Indian Knowledge System and its different applications in the Indian context. The required information has been collected from various published sources such as government and semi-government reports, official websites, books, academic journals, newspapers, and earlier research studies. The collected data has been organized and analyzed in order to draw meaningful conclusions for the study.

RESULTS AND DISCUSSION

1. **Contribution of IKS to Sustainable Development in India** The Indian Knowledge System (IKS) contains several principles that can meaningfully support the achievement of Sustainable Development Goals, particularly No Poverty (Goal 1) and Good Health and Well-being (Goal 3). Traditional practices and community-based approaches provide practical solutions that

remain relevant even in present times.

2. Eradication of Poverty (Goal 1)

a. **Livelihood practices** IKS includes a number of sustainable livelihood activities such as organic farming, handicrafts, handloom, weaving, and small or cottage industries. These activities generate employment opportunities, especially in rural areas, and help strengthen local economies, thereby contributing to poverty reduction.

b. **Community-based initiatives** Indian traditions have always emphasized collective progress and mutual support. Systems such as Self-Help Groups (SHGs) and cooperatives help economically and socially disadvantaged groups by improving financial inclusion and encouraging entrepreneurship at the grassroots level.

c. **Skill development** Traditional knowledge includes skills related to herbal medicine, handicrafts, and sustainable use of natural resources. Reviving and upgrading these skills through proper training can enhance livelihood opportunities and increase income for local communities.

d. **Resource management** IKS promotes sustainable use of natural resources through traditional water conservation systems such as tanks and wells, environmentally friendly farming practices like crop rotation and organic cultivation, and forest conservation methods. These approaches help ensure long-term availability of resources, which supports economic stability and poverty reduction.

3. Good Health and Well-being (Goal 3)

Traditional Indian healthcare systems such as Ayurveda focus on holistic health by emphasising balanced diet, natural remedies, yoga, and disciplined lifestyle practices. Combining such traditional approaches with modern medical systems can strengthen preventive healthcare. Yoga contributes to both physical and mental well-being through postures, breathing exercises, and meditation techniques. Traditional Indian food habits also promote balanced nutrition and encourage the use of diverse and locally available

ingredients. Community-based practices such as shared kitchens (for example, Bhandaras and Langars) reflect collective responsibility for food security and social well-being. Traditional ecological knowledge also encourages harmony between humans and nature, which is essential for long-term health. Practices like organic farming and forest conservation help maintain a clean environment, which directly supports better health outcomes.

4. Formation of SDG-related Goals and Achievements in the Indian Context

Several government programmes reflect the principles of sustainability that are closely aligned with IKS values. a.

Schemes related to poverty reduction (Goal 1)

- MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act) provides assured wage employment to rural households and supports economic security while also creating useful rural assets.
- PMAY (Pradhan Mantri Awas Yojana) aims to provide affordable housing to rural and urban households, improving living standards and reducing poverty.
- NRLM (National Rural Livelihood Mission) promotes self-employment and entrepreneurship through community-based institutions, helping rural households improve income levels.
- b. Schemes related to health and well-being (Goal 3) • PMJAY (Pradhan Mantri Jan Arogya Yojana) offers health insurance coverage of up to ₹5 lakh per family per year for economically vulnerable households.
- National Health Mission (NHM) works towards accessible, affordable, and quality healthcare services, with focus on maternal health, child health, and prevention of communicable and non-communicable diseases.
- AYUSH systems (Ayurveda, Yoga, Naturopathy, Unani, Siddha and Homeopathy) promote traditional healthcare practices aimed at holistic

well-being.

5. Key Achievements

- a. Multidimensional poverty declined significantly from 24.8% (2015–16) to 14.96% (2019–21) and further to 11.28% (2022–23).
- b. Around 99.7% eligible households received employment under MGNREGA during 2023–24.
- c. About 95.4% households were living in brick or semi-brick houses during 2019–21.
- d. Nearly 41% households had at least one member covered under health insurance schemes.
- e. Under-five mortality rate declined from 36 (2016–18) to 32 (2018–20) per 1,000 live births.
- f. Around 93.23% children aged 9–11 months were fully immunized.
- g. About 87.13% tuberculosis cases were reported against the target.
- h. Nearly 97.18% deliveries took place in healthcare facilities.
- i. Maternal mortality ratio declined to 97 per 100,000 live births. Since 2018, India has also shown improvement in several other SDGs, including Quality Education (Goal 4), Clean Water and Sanitation (Goal 6), Affordable and Clean Energy (Goal 7), Industry, Innovation and Infrastructure (Goal 9), Sustainable Cities and Communities (Goal 11), Climate Action (Goal 13), and Life on Land (Goal 15).

6. Case Studies Showing the Role of IKS in SDGs

- a) Revival of traditional tank irrigation systems in Tamil Nadu has helped improve water conservation and ecological balance (SDG 6 and SDG 15).
- b) Promotion of organic farming in North-East India has supported sustainable agriculture and responsible consumption (SDG 2 and SDG 12).
- c) Use of Ayurveda in managing non-communicable diseases highlights the relevance of traditional healthcare systems (SDG 3).

7. Challenges in Using IKS for Achieving SDGs **Some important challenges need attention:**

- a) Lack of documentation – Many traditional

practices are not properly recorded, increasing the risk of losing valuable knowledge.

b) Integration issues – Bridging the gap between traditional knowledge and modern scientific practices requires strong policy support and interdisciplinary research.

c) Community participation – Active involvement of local communities is necessary for reviving and sustaining traditional knowledge systems.

SUGGESTIONS AND CONCLUSION

1) Traditional knowledge should be preserved through proper documentation and digital records.

2) Use of modern tools such as data analytics and artificial intelligence can support better environmental and development-related decision making.

3) Online platforms can help in sharing traditional knowledge and encouraging collaboration among practitioners.

4) Technology can be used to connect communities and promote exchange of best practices. By integrating elements of the Indian Knowledge System into development policies can support progress towards reducing poverty and improving health and well-being. Local knowledge provides solutions that are culturally relevant and sustainable. By combining traditional wisdom with modern development initiatives, India can address current challenges more effectively and ensure inclusive and long-term growth for society.

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