

# A Study of Scientific Perspectives in the Indian Knowledge System in Augmenting Social Resilience

**Neha Tiwari**

School of Studies in Lifelong Education Extension and Social Work, Jiwaji University, Gwalior

Email: [tiwarineha298@gmail.com](mailto:tiwarineha298@gmail.com)

## Abstract

This paper presents prevalent scientific perspectives in Indian Knowledge System (IKS). With the wealth of scientific principles, thoughts and practices, it offers a unique framework that is helpful to overcome contemporary challenges. Resilience is one of the important practices as it empowers societies to adapt, cope up, recover, bounce back and thrive in the face of adversity. This paper explores the inherited scientific practices in Indian Knowledge System emphasising the integration of philosophy, ethics, science and social practices. This study establishes scientific underpinnings and their applicability to modern contexts by emphasising core tenets such as ecological harmony, holistic health practices, ethical governance, knowledge sharing and systems thinking. It argues that these principles serve as foundational strategies for fostering adaptive capacities, collective well-being, and socio-ecological balance. The research represents the core principles of IKS, including concepts such as *Panchamahabhuta* (five elements of universe creation), and *Pancha Kosha* (five sheaths of human existence), *Purushartha* (goals of life) while exploring their relevance in contemporary social contexts. By framing IKS as an interdisciplinary paradigm, this study argues that the integration of contemporary scientific approaches to IKS will augment social resilience, particularly in view of challenges such as climate change, resource scarcity, and social inequality. The research concluded with the vision of NEP 2020 having a dual focus on IKS and resilience and representing innovative solutions for fostering sustainability, social justice, and community well-being.

**Keywords:** Indian Knowledge System, Social Resilience, Scientific Practices, Sustainable future.

## Introduction

The Indian Knowledge System (IKS) represents an interdisciplinary framework of traditional wisdom enriched over centuries, rooted in the holistic worldview of ancient Indian society. It encompasses various disciplines such as philosophy, environmental science, rituals, governance, yoga, and spirituality. The classical texts of the IKS, such as the Vedas, Puranas, Upanishads, and Arthashastra, emphasise the deep connections and interdependence among nature, human life, and society. It reflects that human actions should be aligned with the rhythms of nature and the welfare of society, leading to harmony and balance. The texts encourage an approach to life that focuses on ethical conduct, community strength, and the holistic development of both individuals and society, promoting a well-rounded sense of well-being including physical, mental, social, and spiritual health.

Amid the complex global challenges such as climate change, pandemics, nutrition security, societal collapse and economic inequality, strengthening social resilience has become imperative in today's world. Social Resilience signifies the potential of a society to adapt, bounce back and thrive despite difficulties. The Indian Knowledge System (IKS), with its deep-rooted philosophical, scientific, and pragmatic traditions, offers a rich source of wisdom that enhances social resilience. Though ancient, its methodology was systematic, logical and based on scientific observations, which is why the relevance of the IKS remained intact. The scientific principles embedded in the IKS offer valuable guidance to modern societies for strengthening resilient social frameworks.

This paper presents the scientific perspectives of the IKS and its relevance in enhancing social resilience. This study examines the scientific approaches of the IKS and aims to blend traditional knowledge with contemporary resilience strategies for social progress. Through an interdisciplinary approach, the paper highlights the IKS as a transformative resource for fostering equitable and resilient societies. This paper will address the following research questions:

1. What are the inherent scientific values of the Indian Knowledge System in shaping a resilient future?
2. How can the values of the Indian Knowledge System be conceptualized to develop an interdisciplinary model for fostering resilience?

### Scientific Perspectives of Indian Knowledge System

Although contemporary scientific frameworks such as behavioural science, logical analysis, resilient perspectives and system approach provide structured ways to solve complex challenges, IKS based on centuries of empirical observation and philosophical exploration are admirable in providing a complementary approach to these methods. Scientific practices within IKS are deeply intertwined with social, cultural, environmental, moral and spiritual values. These practices are based on observation, experience, non-linearity, adaptability and an intimate connection with the natural world allowing for resilience. Some key practices including ecological management, farming, astronomy and calendar system, traditional medicine and oral knowledge transmission were prevalent in ancient times. These practices demonstrate a deep understanding of natural processes and phenomena, contributing a critical understanding of sustainable strategies, ecosystem conservation and universal scientific principles. For instance, the “*Panchakosha*” model (Yoganand, 1931) derived from the Vedantic philosophy emphasises the interconnectedness of five layers of human existence- *Annamaya Kosha* (physical body), *Pranamaya Kosha* (energy), *Manomaya Kosha* (mind), *Vijnanamaya Kosha* (intellect), and *Anandamaya Kosha* (spirit)-and their role in human resilience. The model aligns holistic frameworks suggesting that resilience is not just physical but also mental, emotional, intellectual, and spiritual. Nurturing all five sheaths strengthens resilience to navigate life's challenges and uncertainties, thereby promoting well-being and empathy.

Similarly, the dharmic principle of “*Lokasamgraha*” (welfare of the world) in Bhagavad Gita, aligns with the focus on collective action and equity in modern resilience frameworks, prioritizing the well-being of the whole over individual gain. By combining these frameworks, this study attempts to demonstrate synergies between ancient wisdom and modern science to build robust strategies for enhancing societal resilience in a rapidly changing world. Within the IKS, scientific frameworks may not always align with traditional Western science but employ rigorous methodologies based on direct observation, experiential learning, and a deep connection with the environment, society and culture.

### Core Ideas of Social Resilience

“Social resilience is the capacity to foster, engage in, and sustain positive relationships and to endure and recover from life stressors and social isolation. Its unique signature is the transformation of adversity into personal, relational, and collective growth through strengthening existing social engagements, and developing new relationships, with creative collective actions.” (Cacioppo, 2011)

Social resilience refers to the ability of societies, communities or individuals to cope up, adapt to and bounce back from adversities while preserving their essential functions. It encompasses the ability of individuals and institutions to respond effectively to both sudden and long-term changes. Social resilience is better than raw individualism. It is healthier to be part of a healthy ecosystem of people than it is to fend for oneself or only one's own family. Decentralized and distributed decision-making makes society more efficient and more resilient. In the end, resilience is better for the individuals involved. This involves managing sudden events like natural disasters, pandemics, or economic crises, as well as adjusting to gradual shifts such as climate change or changing socio-economic conditions.

Voss and others identified three distinct types of capacities that are essential for understanding the concept of social resilience. These are referred to as coping capacities (reactive or absorptive), adaptive capacities (pro-active or preventive) and transformative (participative) capacities (Keck, 2012, 13).

**Table 1: Three capacities of social resilience**

|                         | Coping Capacities                              | Adaptive Capacities           | Transformative Capacities                    |
|-------------------------|------------------------------------------------|-------------------------------|----------------------------------------------|
| <b>Response to risk</b> | ex-post                                        | ex-ante                       | ex-ante                                      |
| <b>Temporal scope</b>   | short-term                                     | long-term                     | long-term                                    |
| <b>Degree of change</b> | low, status quo                                | medium, incremental change    | high, radical change                         |
| <b>Outcome</b>          | restoration of the present level of well-being | security of future well-being | enhancement of present and future well-being |

**Source:** Based on Voss (2008), Lorenz (2010), Obrist et al. (2010a), Bene et al. (2012), Keck (2012)

In the rows of Table 1, four criteria are presented to clarify the specific meanings of these three terms. The first criterion distinguishes between ex-ante and ex-post responses to risks. The second, temporal scope, spans a continuum from immediate, short-term actions to long-term, project-based thinking. The third criterion addresses the extent of change in social structures, while the fourth relates to the outcomes linked to the three capacities.

The key components of social resilience- adaptability and collective and individual well-being- work together to help societies survive and thrive in the face of adversity.

### Scientific Values of IKS: Contributing to Resilience

The IKS has a prime contribution to fostering social resilience as it provides a holistic framework for addressing social, environmental, and economic challenges, strengthening the ability of communities and societies to adapt, recover, and thrive which were prevalent in ancient societies. The Indigenous practices can be analysed and documented taking into account scientific principles from various disciplines such as anthropology, sociology, economy and environmental science. They are understood and preserved in a manner that honours both their cultural importance and practical utility which helps to enrich the coping, adaptive and transformative capacities within the societies. Here, the fundamental principles of IKS that enhance capacities of social resilience are highlighted:

**1. Resource Sustainability: Practices for Ecological Balance-** The IKS emphasises ecological harmony by exhibiting a holistic view of all dimensions of life viz. physical, emotional, social and environmental aspects. This approach is reflected by concepts of the “*Panchamahabhuta*” (five elements): *Prithvi* (earth), *Apas* (water), *Agni* (fire), *Vayu* (air), *Akash* (space); and the *Prakriti* (nature) (Basu, 1915). Recognition of the interdependence of nature and the importance of sustainability and resource management reflects an integrated perspective of life. Ancient Indian texts enforce that human well-being is intrinsically linked to environmental health, advocating for the maintenance of ecological balance and the prudent use of natural resources for the benefit of future generations.

Scientific Basis: IKS theory, aligned with modern ecological sciences

- highlights the interdependence of ecosystems, biodiversity and human activity
- refers to an eco-centric approach, in which humans are considered part of the ecosystem, which is central to environmental science.

Implications for Resilience: Traditional Indian practices like sustainable agriculture (e.g., crop rotation, organic farming) and water management systems (e.g., baoli: step-well) enhance food and water security and drought resilience. (More, 2021)

**2. Complete Well-being: Integrating Body, Mind, and Spirit-** Ayurveda, yoga, and meditation, an integral part of the IKS, emphasise the holistic integration of body, mind and spirit. These offer the importance of holistic health by addressing the physical, mental, and spiritual dimensions of well-being. The foundational principles of Ayurveda viz. “*Dinacharya*” (daily routines) and “*Ritucharya*” (seasonal regimens) (Khatri, 2022) provide preventive care, maintain balance and enhance individual and collective resilience through developing adaptive capacities and lifestyle practices.

Scientific Basis: IKS theory, in harmony with contemporary health practices viz.

- Yoga and meditation reduce stress, improve cognitive function, and enhance emotional regulation, which are essential components of personal resilience.
- WHO constitution states "health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." (World Health Organisation)

Implications for Resilience: Promoting mindfulness, meditation, and Ayurvedic principles in schools, workplaces, and communities can enhance resilience, reduce stress, improve mental health, lower healthcare costs, enhance preventive habits and create healthier populations.

**3. Ethical Governance: Guidance from *Arthashastra*-** *Arthashastra* is a seminal treatise on governance and statecraft, offering valuable insights into ethical governance as a way to ensure societal resilience. Kautilya advocates for rulers to adhere the principles of “*dharma*” (righteous duty) and “*Karma*” (responsibility) to maintain justice and ensure fairness in governance. The *Arthashastra* outlines transparency, justice and accountability which resonate with the modern framework of effective governance. These principles promote clear decision-making, fairness and responsibility ensuring that leadership is consistent with the best interest of the public. Ethical governance builds trust and unity within communities which serves as a key pillar of resilience that helps societies cope with challenges and grow. (Bhat & Shukla, 2021)

Scientific Basis: Integrating IKS theory with advanced ethical governance empowers

- Governance models that focus on equity, social justice, and sustainability by promoting transparent, inclusive, and accountable systems make societies more resilient to change.
- Participatory and deliberative democracy prioritizes inclusive dialogue and collective decision-making, ensuring that all community voices are represented.

Implications for Resilience: IKS promotes decentralized governance through local structures like *Gram Sabha*, encouraging democratic participation and social cohesion, while emphasising social justice in governance, framing leadership as *Dharma* (righteous duty) and *Karma* (responsibility) to prioritize the collective welfare, minimizing inequalities and strengthening resilience.

**4. Knowledge Transmission and Lifelong Learning-** The Indian tradition has always placed great importance on knowledge and learning, with the system of the *Guru-shishya* (teacher-student) relationship emphasizing personalized, holistic education. In this system, the teacher not only imparts academic knowledge but also guides the student's moral and spiritual development, developing a deep, lifelong bond between them. Nalanda and Takshashila were important in promoting intellectual exchange in diverse fields such as philosophy, mathematics, medicine and astronomy. These institutions were centres of continuous learning, where ideas were rigorously debated and refined. The Indian tradition emphasized the dissemination of knowledge through both oral transmission and institutional education, which helped the society to adapt to changes and solve complex problems. This emphasis on education nurtured a thoughtful and receptive society and laid the foundation for continued progress and adaptability in the face of challenges.

Scientific Basis: IKS theory inspires a lifelong journey of learning through

- democratization of knowledge as a key driver of social resilience.
- encouraging local solutions to global problems and embracing innovative ideas to remain resilient in challenging circumstances.

Implications for Resilience: Combining traditional knowledge with modern education and ensuring educational access for marginalized groups fosters inclusive development and community resilience, enabling effective responses to challenges like climate change, technological disruption, and health crises while promoting social equity and participation.

**5. Systems Thinking in Ancient Indian Scriptures-** Ancient Indian texts are rich with systems thinking, which views life and society as interconnected, interrelated and interdependent. The “*Purusharthas*” (four aims of life): Dharma (righteousness), Artha (prosperity), Kama (pleasures), and Moksha (liberation) provide a framework for balancing individual aspirations with societal duties. The systems-based approaches found in IKS strongly align with modern

resilience theories, highlighting the importance of interconnectedness and holistic approaches to problem-solving. By applying these principles, IKS provides practical strategies for addressing complex, dynamic challenges, advocates for solutions that take into account multiple, often interrelated factors, and encourages adaptability in an ever-changing world.

Scientific Basis: IKS theory following the guidelines of system thinking provides

- psychological and sociological theories of human behaviour, which recognize the need for balance between individual desires, societal obligations, and personal growth.
- Social system theories that emphasize social cohesion, trust, and the collective good in maintaining the resilience of societies.

Implications for Resilience: The *Purushartha* inculcates resilience by encouraging Dharma (ethical conduct and social harmony), Artha (prosperity), Kama (personal fulfilment supporting the social fabric), and Moksha (spiritual liberation), all of which together highlight self-improvement, inner tranquillity, and the ability to adapt.

IKS fosters resilience through sustainable practices, holistic health, ethical governance, lifelong learning, and systems thinking. It offers valuable insights into addressing complex challenges and promoting adaptive, thriving societies.

### **Positioning IKS as a Valuable Interdisciplinary Model for Resilience**

We need to recognize the IKS as a holistic, multifaceted framework capable of fostering resilience in individuals and societies. The key elements highlighted- Panchamahabhuta (five elements of the universe's creation), Pancha Kosha (five sheaths of human existence), and Purushartha (four goals of life) are essential in providing a balanced and integrative approach to resilience. The depicted figure symbolizes an integrative framework combining the outer layer of the *Panchamahabhuta*, the intermediate layer of the *Pancha Kosha*, and the innermost core of the *Purushartha*. It highlights the intricate interrelationship between nature, the holistic dimensions of human existence, and the ultimate pursuits of life.

The *Panchamahabhuta* emphasises the foundational role of nature and sustainability, while the *Pancha Kosha* underscores a comprehensive understanding of physical, energetic, mental, intellectual, and spiritual dimensions of human life. At its core, the *Purushartha*- Dharma (moral values), Artha (economic values), Kama (psychological desires), and Moksha (spiritual liberation)- serve as guiding principles for achieving a balanced and harmonious life. This alignment nurtures resilience by harmonizing personal aspirations with social responsibilities, encouraging a value-driven life that contributes to the welfare of society.

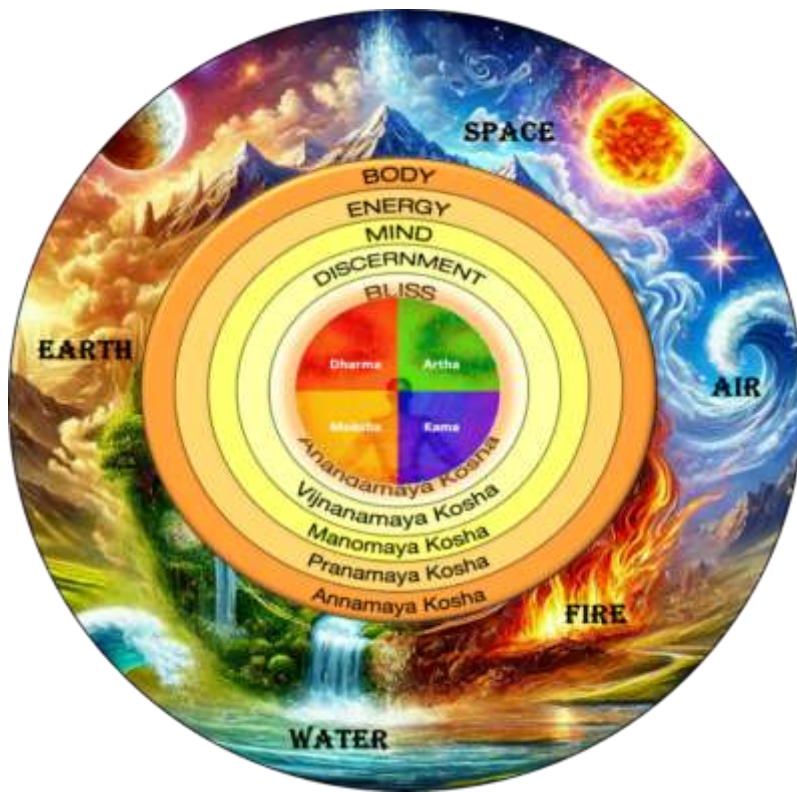


**Figure 1: Interconnectedness of Panchamahabhuta, Pancha Kosha and Purushartha**

This integrated perspective encourages resilience as not merely a reactive mechanism but a proactive, transformative process. It is grounded in internal strength, as represented by the koshas, and external support from nature. Together, these empower individuals to navigate life's challenges with balance and sustainability. The fulfilment of *Purushartha* reinforces the principle of “*Lokasamgraha*”, which signifies the welfare of the world. Deeply rooted in Indian philosophical traditions, *Lokasamgraha* emphasises interconnectedness, collective action and shared responsibility to ensure the individual well-being and society as a whole.

By promoting harmony, inclusivity, and mutual support, *Lokasamgraha* encourages the creation of resilient communities capable of adapting to adversity while prioritizing the collective good over individual interests. This integration of traditional wisdom with contemporary resilience frameworks highlights the universal relevance of *Lokasamgraha* in addressing complex social issues. This principle aligns closely with contemporary frameworks of social resilience, which focus on building equitable systems and fostering collaboration to address shared challenges.

### Relevance of IKS in the Light of NEP 2020

National Education Policy 2020 highlights knowledge, wisdom, and truth as the highest human goal of ancient Indian thought and recognises the aim of education as the complete realization and liberation of the self. It also notifies the great scholars of ancient India, the world-class institutions and their seminal contributions to world knowledge in diverse fields such as mathematics, astronomy, yoga, fine arts etc. NEP 2020 innovates Indian ideas and practices through our education system. Here, a few related aspects are described.

**1. IKS as a Framework for Social Resilience-** NEP 2020 highlights resilience as one of the four life skills and identifies IKS as a strategic asset in building social resilience by leveraging its sustainable, equitable, inclusive, and community-centric principles. Key contributions include:

- **Sustainability Practices:** Promoting Global Citizenship Education empowers learners to understand global issues and become active promoters of tolerant, inclusive and sustainable societies.
- **Community Empowerment:** Facilitating community participation in a vibrant public education system, preventive healthcare and beneficial technology integration, contributing to positive social changes.

**2. Integration of IKS into Mainstream Education-** The National Education Policy (NEP) 2020 looks forward to integrating IKS into the mainstream education curriculum to inspire a sense of pride in India's timeless legacies by promoting holistic learning. The policy also suggests integrating ancient and modern knowledge, addressing social and scientific needs, and incorporating indigenous and traditional ways of learning. This policy directive underscores:

- **Contextual Learning:** Introducing IKS to connect students with Indigenous practices, fostering an understanding of their scientific and cultural relevance and promoting strong ethics in India's young people.
- **Interdisciplinary Approach:** Encouraging a blend of traditional wisdom with modern educational practices, focusing on the multidisciplinary patterns of learning to ensure the unity and integrity of knowledge and cultivating a holistic approach essential for addressing contemporary societal challenges.

## Conclusion

This research paper on the scientific perspectives of the Indian Knowledge System explores the principles and applications of traditional wisdom in the context of contemporary scientific paradigms. The research emphasised the significance of incorporating India's rich and diverse knowledge traditions, including areas like philosophy, mathematics, medicine, agriculture, and environmental sustainability, into global discussions on knowledge systems. This interdisciplinary approach to IKS offers a nuanced and holistic perspective that can significantly augment social resilience by discerning how culture, science, and society are interconnected. This study sought to examine the scientific values of the IKS in shaping a resilient future and how these values can be applied to develop an interdisciplinary model that promotes resilience.

By analysing the epistemological structures and values within IKS, it revealed how traditional knowledge from Ayurveda, Arthashastra, Yoga and Bhagavad Gita etc., encompass scientific reasoning. The values of *Panchamahabhuta*, *Pancha Kosha*, *Purushartha*, *Lokasamgraha*, *Ritucharya* and *Dinacharya* have been identified. These are significantly synergized with modern concepts of ecological harmony, health and well-being, social justice and accountability, the democratisation of knowledge, social cohesion and community development. This integration of science with cultural and spiritual dimensions presents a unique model for addressing contemporary global challenges like climate change, health and economic crises. Though the social, environmental and ethical spheres are intertwined, resilience is not about responding to crises solely but also about fostering the proactive and transformative capacity for a sustainable future.

Further, the study conceptualises an interdisciplinary paradigm that underlines the significance of IKS in fostering a sense of social resilience. The concepts of *Panchamahabhuta*, *Pancha Kosha* and *Purushartha* collectively propose *Lokasamgraha* - a model signifying global well-being, sustainable practices and inclusiveness in promoting social resilience. As conceptualized through the lens of IKS, social resilience extends beyond the capacity to withstand adversity. This includes the ability to face challenges by drawing on our collective cultural, spiritual and intellectual heritage.

The National Education Policy (NEP) 2020 symbolises the IKS as India's rich ancient heritage, recognizing its value in shaping modern education. By incorporating IKS, the policy seeks to preserve and promote traditional wisdom, ensuring its relevance in contemporary society. Additionally, the NEP highlights resilience as a crucial life skill, acknowledging the importance of adaptability and mental strength in facing challenges. This dual focus on IKS and resilience underlines the policy's commitment to holistic education, fostering individuals for cultural knowledge and equipping them to thrive in an ever-changing world.

Moreover, this approach advocates for the importance of knowledge systems that are adaptable, inclusive, and responsive to the needs of both individuals and societies as a whole. It offers a framework for developing a social fabric that is robust because of disruption, wherein the resilience of communities is derived not just from external resources but from internal strength, unity, and collective wisdom.

The scientific perspectives in Indian Knowledge System provides a multidimensional, interdisciplinary framework that will be pivotal in enhancing social resilience. By re-envisioning science as an interconnected and holistic practice, we can foster greater sustainability, harmony, and adaptability in addressing contemporary global issues. The integration of

contemporary scientific approaches of Indian Knowledge System holds immense potential for creating resilient communities better equipped to face future challenges while preserving the rich legacy of knowledge that has been passing through generations.

## References

- Basu, B.D. (1915). Samkhya Philosophy. Vol. xi. The panini office, Bhuvaneswari.  
<https://ia600306.us.archive.org/7/items/thesamkhyaphilos00sinhuoft/thesamkhyaphilos00sinhuoft.pdf>
- Bene, C.; Wood, R. G.; Newsham, A. and Davies, M. (2012): Resilience: new utopia or new tyranny? Reflection about the potentials and limits of the concept of resilience in relation to vulnerability reduction programmes. IDS Working Paper 2012 (405).
- Bhat, V.R. & Shukla, T. (2021) Kautilya Arthashastra: Timeless Strategies for Modern Governance. IKS Division, Ministry of Education, New Delhi. [https://iksindia.org/uploads/ebook/Arthashastra\\_textbook.pdf](https://iksindia.org/uploads/ebook/Arthashastra_textbook.pdf)
- Cacioppo, Reis & Zautra (2011). Social Resilience: The Value of Social Fitness With an Application to the Military. American Psychological Association 0003-066X/11/\$12.00 Vol. 66, No. 1, 43–51.  
[https://www.sas.rochester.edu/psy/people/faculty/reis\\_harry/assets/pdf/CacioppoReisZautra\\_2011.pdf](https://www.sas.rochester.edu/psy/people/faculty/reis_harry/assets/pdf/CacioppoReisZautra_2011.pdf)
- Chakrabarti, K. (2001). *Classical Indian Philosophy of Mind: The Nyaya Dualist Tradition*. Motilal Banarsidass Publishers.  
[https://archive.org/details/classicalindianphilosophyofmindnyayathedualistmethodkisorkumarchakrabartimlbd\\_202003\\_25\\_H/page/n1/mode/2up](https://archive.org/details/classicalindianphilosophyofmindnyayathedualistmethodkisorkumarchakrabartimlbd_202003_25_H/page/n1/mode/2up)
- Fiksel, J. (2006). Sustainability and resilience: Toward a systems approach. *Sustainability: Science, Practice, and Policy*, 2(2), 14-21.
- Gadgil, M., & Guha, R. (1993). *This Fissured Land: An Ecological History of India*. Oxford University Press.
- Government of India, MHRD. Development of Panch Kosh.  
[https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp\\_content/S001610/P001798/M025841/LM/1513923609M6Q3DevelopmentofPanchkosha.pdf](https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S001610/P001798/M025841/LM/1513923609M6Q3DevelopmentofPanchkosha.pdf)
- Keck, M. & Sakdapolrak, P. (2013). What Is Social Resilience? Lessons Learned and Ways Forward. *Erdkunde*. 67. 5-18. 10.3112/erdkunde.2013.01.02.  
[https://www.researchgate.net/publication/235989714\\_What\\_Is\\_Social\\_Resilience\\_Lessons\\_Learned\\_and\\_Ways\\_Forward](https://www.researchgate.net/publication/235989714_What_Is_Social_Resilience_Lessons_Learned_and_Ways_Forward)
- Khatri, B. (2022). Dincharya and Ritucharya W.S.R. to Circadian Rhythm and Sleep. *World journal of pharmaceutical and medical research*, wjpmr, 2022,8(9), 53-56. <https://www.wjpmr.com/download/article/100082022/1661850549.pdf>
- Killjoy, M. (2023). *It's Time to Build Resilient Communities*. Vermilion Press.  
<https://ia800309.us.archive.org/13/items/it-s-time-to-build-resilient-communities-print/margaret-killjoy-it-s-time-to-build-resilient-communities-with-cover.pdf>
- Krishnakumar, S. (2022). A week with the Purusharthas. <https://www.indica.today/long-reads/a-week-with-the-purusharthas/>
- Lorenz, D. (2010): The diversity of resilience: contributions from a social science perspective. In: *Natural Hazards*. DOI: 10.1007/s11069-010-9654-y

More, H. (2021). A Review of Indian Traditional Method of Rain Water Harvesting. International Journal of Innovative Research in Science Engineering and Technology. Volume 9. 2080-2086.

[https://www.researchgate.net/publication/357226990\\_A\\_Review\\_of\\_Indian\\_Traditional\\_Method\\_of\\_Rain\\_Water\\_Harvesting](https://www.researchgate.net/publication/357226990_A_Review_of_Indian_Traditional_Method_of_Rain_Water_Harvesting)

Obrist, B.; Pfeiffer, C. and Henley, R. (2010a): Multi-layered social resilience: a new approach in mitigation research. In: Progress in Development Studies 10 (4), 283–293. DOI: 10.1177/146499340901000402

Paramhans Swami Yoganand (1931). Panchkosh Vivek. Kesree Press, Belangang Agara.

<https://archive.org/details/in.ernet.dli.2015.343432/mode/2up>

Rastogi, Sanjeev. (2022). Panchamahabhutas and Ayurveda. *Science India*. Pp. 17-20.

[https://www.researchgate.net/publication/365996373\\_Panchamahabhutas\\_and\\_Ayurveda](https://www.researchgate.net/publication/365996373_Panchamahabhutas_and_Ayurveda)

Sarif, Nawaz (2024). Human Personality Development through the Lens of Indian Philosophical Psychology: A Retrospective Analysis. *International Journal of Scientific Development and Research* 9(6) Pp. 648 – 655.

<https://ijsdr.org/papers/IJSDR2406072.pdf>

Sharma, P. V. (1998). *Caraka Samhita: Text with English Translation*. Chaukhamba Orientalia.

Sivananda, S. (1958). *Practice of Ayurveda*. The Divine Life Society, Yoga Vedanta Forest Academy Press.

<https://archive.org/details/practice-of-ayurveda-swami-sivananda/page/4/mode/2up>

Voss, M. (2008): The vulnerable can't speak. An integrative vulnerability approach to disaster and climate change research. In: Behemoth 1 (3), 39–56. DOI: 10.1524/behe.2008.0022

Walker, B., Holling, C. S., Carpenter, S. R., & Kinzig, A. (2004). Resilience, adaptability, and transformability in social-ecological systems. *Ecology and Society*, 9(2), 5. <http://www.ecologyandsociety.org/vol9/iss2/art5/>

World Health Organization <https://www.who.int/data/gho/data/major-themes/health-and-well-being>

Nagarkar, Sneha (2020). The concept of Lokasamgraha in the Bhagavad Gita as understood from the Gita Bhasyas of Adi Sankaracarya and Madhusudana Sarasvati. <https://www.indica.today/long-reads/concept-lokasamgraha-bhagavad-gita-bhasyas-adi-sankaracarya-madhusudana-sarasvati/>

[https://www.thekundaliniyoga.org/vedanta/pancha\\_kosha\\_five\\_layers\\_of\\_human\\_existence.aspx#Annamay%20Kosh%20Food%20Sheath%20Outermost%20kosh%20of%20Pancha%20koshas](https://www.thekundaliniyoga.org/vedanta/pancha_kosha_five_layers_of_human_existence.aspx#Annamay%20Kosh%20Food%20Sheath%20Outermost%20kosh%20of%20Pancha%20koshas)

<https://www.education.gov.in/nep/indian-knowledge-systems>