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Indian Knowledge System for Sustainable and National Development

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***Abstract*— The educational and cultural landscape of India is undergoing speedy transformation through the assimilation of the Indian Knowledge System (IKS) and the National Education Policy (NEP 2020). IKS is a structured program of knowledge, rooted in ancient traditions and perform that stays highly relevant today. The Indian Knowledge System has a broad and intricate, encompassing areas i.e. Ayurveda, Economics, Yoga, Vedic sciences like archaeology, medicine, astrology, astronomy, public administration and so on. The Indian Knowledge System engages not only acquiring knowledge but also understanding its role in fostering social, economic, and global development. Where, the sustainable development is prioritizing the conservations of natural wealth and promoting the well-being of the Earth. The Sustainable Development Goals lay out an exclusively determined and complete docket for global development by the year 2030, wherever IKS can palys a significant role. Even though, the challenges in the path of success are still needed to be taken care by much of patience, time, labour and tackts. But, ultimately through integrating IKS in modern scientific advancements and policy frameworks, India has the opportunity to create sustainable development models that are not only effective but also inclusive**

Keywords- Indian Knowledge System, Sustainable Development Goals, and National Development

The educational and cultural landscape of India is undergoing speedy transformation through the assimilation of the Indian Knowledge System (IKS) and the National Education Policy (NEP 2020). IKS, that endorses equilibrium, harmony, and ethical living, which offers lasting principles that align with present sustainability goals. IKS is a structured program of knowledge, rooted in ancient traditions and perform that stays highly relevant today. The Indian Knowledge System has a broad and intricate, encompassing areas i.e. Ayurveda, Economics, Yoga, Vedic sciences like archaeology, medicine, astrology, astronomy, and public administration and so on. The Indian Knowledge System engages not only acquiring knowledge but also understanding its role in fostering social, economic, and global development.

The sustainable development is prioritizing the conservation of natural wealth and promoting the well-being of the Earth. The Sustainable Development Goals lay out an exclusively determined and complete docket for global development by the year 2030. Here, the "NITI Ayog" plays a role of nodal organization for achieving SDGs in the country, leading the 2030 agenda with the strength of cooperative and competitive federalism. Basically, the ideas of these two terms, "Indian Knowledge" and "Sustainable Development" are unified but have different angels of understanding. In the past, the current education system which was given by "Lord Macaulay" detached us from our ancestries. But some principles of IKS align closely with the SDGs, particularly goals such as (Goal 1, 3 and 11) which endures, eradicating poverty, promoting good health and well-being, and ensuring sustainable communities, respectively.

The three components of Indian Knowledge System

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India always belives in the concept of "Vasudhaiva Kutumbakam" (the world is one family), from the "Maha Upanishad", reflects the interconnectedness of life and resonates with the idea of 'global sustainability'. Ancient Indian education emphasized the existence of life in all elements of the universe, with the Vedas treating nature as divine. This worldview led to practices like worshiping plants such as Tulsi, Neem, and Peepal, which not only held cultural implication but also promoted ecological balance. In olden times, India has been a universal hub of knowledge, with renowned centres of learning like Nalanda and Takshashila. The Indian Knowledge System, comprising Jnana (knowledge), Vijnana (science), and Jeevan Darshan (philosophy of life) developed through meticulous observation, experiments, and analysis, offering sustainable solutions for contemporary global challenges.

Thus, the Indian Knowledge System gives innovation, sustainability, and national development through a holistic, time-tested structure to highlight harmony with nature, ethical living, and solutions of community-centric nature. This is the reason that the Govt. of Indian is actively incorporating IKS into contemporary education and promotes research to achieve these SDG's.

The agenda of SDG's

The 2030 agenda currently offers a holistic approach to expand strategies and calls for pursuing all dimensions of sustainable development through a balanced and integrated form. The traditional three dimensions of sustainable development were replaced and is now grounded in 5 "Ps":

- **People**: It is to end poverty and hunger, in all their structures and dimensions.
- **Planet:** Planet is to protect the degradation from of it.
- **Prosperity:** It ensures that all human beings can enjoy prosperous and fulfilling lives.
- **Peace:** It fosters peaceful and inclusive societies which are free from fear and violence.
- **Partnership:** Mobilize the means required to implement this agenda through a invigorated Global Partnershi, with the participation of all countries, stakeholders and all people.

Indian Knowledge System for Sustainability

IKS provides numerous eco-friendly solutions and ethical frameworks that are highly relevant to contemporary sustainability challenges, aligning closely with the United Nations Sustainable Development Goals (SDGs), before understanding its essence we should look upon the list of 17 SDG's as follows -

1. No poverty
2. Zero hunger
3. Good health and well - being
4. Quality education
5. Gender Equality
6. Clean water and sanitation
7. Affordable and clean energy
8. Decent work and economic growth.
9. Industry, innovation, and infrastructure
10. Sustainable cities and communities
11. Reduced inequality
12. Responsible consumption and production
13. Climate action
14. life below the river
15. Life on land
16. Peace, justice, and strong institution
17. Partnership for the goals.

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Source: https://www.un.org/sustainabledevelopment/news/communications-material/

- **Environmental Harmony**: Ancient texts and practices emphasize living in balance with nature and the interconnectedness of all life. This worldview encourages resource conservation and environmental stewardship. Traditional water management systems, agricultural practices, and architectural designs were tailored to local ecosystems, ensuring resource efficiency and ecological balance. Examples comprises: a. Management of Water system: Ancient systems like stepwells, tanks, ponds and rainwater harvesting ensured sustainable water use in barren regions. b. Sustainable Agriculture: Crop revolution, organic farming, and the use of natural fertilizers (e.g., cow dung) like practices were integral to maintaining soil fertility and biodiversity. Such practices support SDGs such as Clean Water and Sanitation (Goal 6) and Life on Land (Goal 15).
- **Holistic Health**: Structure like Ayurveda and Yoga focus on natural remedies, preventive care, and lifestyle modifications, which offer reasonable and sustainable alternatives to modern medicine, mainly in rural areas. Some practices rooted in IKS, such as consuming Indian spices like turmeric, jaggery, dry ginger, and black pepper etc., and incorporating yoga and meditation, gained global attention for their role in boosting physical (immunity) as well as mental health.
- **IKS for Innovation and National Development**: The incorporation of IKS into modern frameworks is seen as a means for innovation and self-reliant national development through "Atmanirbhar Bharat".
- **Educational Reforms**: The National Education Policy (NEP) 2020 advocates for the inclusion of IKS in mainstream curricula to foster critical thinking, creativity, and a sense of cultural pride. Because, Indian epics like the "Shrimad Ramayana" and "Shrimad Mahabharata", along with texts like the "Upanishads" and "Panchatantra", served as ethical and realistic guides, teaching values like responsibility toward family, society, and the environment. Such stories, passed down through generations, played a crucial role in shaping ethical and sustainable behaviour. In the modern context, IKS's highlighting that experiential learning which can inform educational reforms. For instance, integrating environmental ethics and indigenous practices into curricula can foster a deeper understanding of sustainability among future generations.
- **Research and Development**: The IKS Division under the Ministry of Education finances interdisciplinary research projects on ancient sciences like water management, metallurgy, town planning, and applying this historical knowledge to contemporary scientific challenges.
- **Economic Growth**: Traditional industries and crafts, such as handloom weaving and wellness products based on Ayurveda, can foster local entrepreneurship and provide unique, high-value products in the global market, boosting rural economies.
- **Technological Applications**: Concepts from IKS are explored for their modern applications; for

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example, the structural elegance of Sanskrit grammar has potential relevance in computational linguistics and artificial intelligence (AI).

Government Initiatives for IKS Integration

The Indian government has established institutional support mechanisms to endorse the integration of IKS:

- **AICTE under IKS Division**: This division promotes research, education, and dissemination of IKS through various initiatives, including the establishment of IKS Centers in higher educational institutions (HEIs) and internship programs.
- **Value-added and elected courses:** NEP 2020 offers a value-added course (VAC) along with elected courses through higher education system. They are an extra educational offering that supplements a student's main degree program to enhance their skills, knowledge, and employability beyond the standard curriculum.
- **Grants for research and projects**: Dedicated funding and projects are put in place to encourage original research in IKS domains and attract top talent.
- **Public Awareness**: The government is running awareness campaigns and "Jan Bhagidari" (people's participation) programs to popularize authentic IKS knowledge among the citizenry.

By leveraging IKS, India aims to create a development model that is not only effective and innovative but also culturally rooted, ethical, and sustainable.

IKS for SDGs: **Challenges in Leveraging**

While IKS holds important promise for achieving the SDGs, numerous challenges need to be addressed:

1. Documentation and Dissemination: Many traditional practices remain undocumented, risking the loss of valuable knowledge. It is a big challenge in the roadmap of applying of the whole process.
2. Integration with Modern Systems: Bridging the gap between traditional and modern practices requires policy support and interdisciplinary research. This is another challenge which requires human labor along with financial burdons to come with a satisfactory result.
3. Community Participation: Reviving IKS necessitates active involvement from local communities, ensuring that interventions are context-specific and culturally appropriate.

Conclusion

The Indian Knowledge System (IKS) summarizes principle of sustainability, pliability, and community well-being in holistic manner, positioning it as a vital resource for addressing contemporary global challenges and achieving the Sustainable Development Goals (SDGs). IKS, the vast repository of ancient wisdom, developed over centuries, offers pioneering yet culturally rooted solutions for pressing issues in health, agriculture, education, research and climate action. Even though, the challenges in the path of success are still needed to be taken care by much of patience, time, labour and tackts. But, ultimately through integrating IKS in modern scientific advancements and policy frameworks, India has the opportunity to create sustainable development models that are not only effective but also inclusive.

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