

Indigenous Knowledge System and Food Security

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The Indian knowledge system needs to recognize the traditional knowledge system which has been one of the important part of the real issues of the indigenous people. If we focus merely on repetitive hermeneutics, the renewed focus of the present regime will be futile in reinvigoration of the former. The Indian knowledge system has the ability to solve the real issues that we face today. In fact, the traditional or indigenous knowledge system has a direct link with the everyday issues of the people and environment in particular. These time-tested practices and approaches to the real issues of humanity need a special focus and it must be reinvented if we want to do any substantive justice to the Indian knowledge system. The time-tested knowledge needs to be rediscovered, documented and transmitted to the new generation to familiarize them with these ideas, traditions and approaches which are compassionate to all components of the ecosystem. This paper

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has attempted to contextualize the idea of indigenous knowledge system and food security concerns in the wake of climate change.

[**Keywords** : Indian knowledge system, Food security, Indigenous knowledge, Traditional knowledge, New education policy]

1. Introduction

The present approach to the study of Indian knowledge system is steeped in historicism and it's a mere repetitive hermeneutics. Though these epistemological traditions are not redundant and have key roles to play in the production of knowledge, their direct relevance in everyday lives of the countless ordinary people, and current ecological disasters deserve equal treatment. The knowledge and practices which had survived for centuries are on the verge of extinction. Many have already been lost. Reviving and rejuvenating these time-tested knowledge with direct implications in the lives of the people deserves serious epistemological intervention. The focus should be on the time-tested knowledge and practices, and their preservation which has potentials to reverse the anthropocentric development paradigm and prevent colossal damage to the ecosystem.

Most of the problems we witness in the present world are human creation. Sometimes after Europeans came the indigenous knowledge system was considered redundant. The Eurocentric understanding and evaluation of the Indian knowledge system created space for epistemic injustice of the latter. Understanding indigenous problems and challenges through European lenses was the biggest epistemic injustice committed upon the knowledge systems of the colonized societies. Colonial injustice is one of the causes of the decline of the indigenous knowledge systems. The other two important causes of the decline of indigenous knowledge are the industrial revolution and indigenous causes of looking down at traditional knowledge and social stereotypes against it which forced their rapid decline. Industrial revolution legitimized and universalized a particular paradigm of development, reducing others to be irrelevant to the needs of society. It also taught others what development is and virtually reduced the other conceptions of development as redundant. This article discusses the relevance of indigenous knowledge in the context of food security, agricultural production, and preservation of food grains, disaster prevention in an ethnographic approach. Worst forms of natural disasters are

occurring in different forms which demand a serious climate-focus intervention. The indigenous knowledge can offer a viable and most sustainable alternatives towards these endeavors.

2. Food and Knowledge

The decline of drought-resistant paddy and indigenous varieties of other food grains which were grown in most parts of India alongside the skills and knowledge to ward off food shortages occurred due to the imposition of a particular world-view to be universalistic and legitimate. The de-legitimization of the centuries old knowledge and skills has created trepidation among the people. The newer varieties of seeds replaced the centuries of older seeds. It also demanded the application of chemical fertilizer which gradually has made agriculture unsustainable. The soil has lost its biotic components and its water retaining capacity. Lakhs of acres of lands in different parts are remaining uncultivated and have been abandoned. Many farmers have been abandoning agriculture as a profession due to its unsustainability. The agricultural lands in the coastal areas of India and the Gangetic valleys in particular were highly fertile but unsustainable agricultural practices have made them unsuitable for cultivation.

The climate change is the outcome of massive injustice committed by the colonization. Most of the ecological imbalance in agriculture was created by colonialism in India. There are archival materials to suggest that the commercialization of birds was the first instance of how the ecological imbalance was created. The wild birds were caught in large scale and sold in the European market for various purposes. The insects eating birds were helpful for agriculture by reducing the negative impacts of insects on agriculture. The decline of the population of such birds created crises in agriculture and agricultural productivity declined. It is the first instance of how colonialism created disruption to the ecological system in agriculture. India started using pesticides from 1948 onwards in a wider scale and also started production of some of the pesticides from 1952.

Choudhary, Chitragada (2017) has rightly said that over the decades we have lost lakhs of varieties of native rice and other seeds. While we were kids we have seen different varieties of indigenously cultivated paddy but they are no more available today. It shows how quickly the indigenous varieties of food grains have been lost during our lifetime alone due to mechanization of agriculture and introduction of the green revolution in particular. The success of Green

revolution in India encouraged the Government of India to provide food grains at a highly subsidized rate through the fair price shops across India. The government started providing food grains to the poor to mitigate hunger through so-called Public Distribution System (PDS). India had severe scarcity food grains and the acute hunger among different segments of the population of different parts of India and it decided to mitigate it. Hunger and poverty was a major challenge for the government of India and many poorest states. There were many backwards pockets across the country which was facing acute hunger. The Government of India at that time decided to mitigate it and subsequently invested huge public resources in agriculture in Punjab and Western Uttar Pradesh. It was an experiment to revolutionize India's food production. India urgently needed to become self sufficient in food production which encouraged the idea of mechanization of agriculture and application of scientific instruments. It encouraged the Government of India to not only use machines in agriculture but also increased the application of chemical fertilizer and insecticides. The green revolution was a successful experiment of the Government of India that made India self-sufficient in food production. The successes of green revolution actually increased the confidence of India's political leadership. However, the success of green revolution produced many negative consequences in the longer run. It produced big negative Public Health consequences because of the excessive chemical fertilizer and insecticides both in green revolution area and beyond. This process of agriculture disturbed the ecological balance. The ecological imbalance is producing many unintended consequences and has made agriculture more unsustainable. The impact on public health is phenomenal.

However, what is more significant is the destruction of the traditional agriculture and century-tested methods of agriculture. The needs to produce more food grains encourage the adoption newer technologies in agriculture. It led to rapid decline of the centuries of tested knowledge. It all began with the arrival of the Europeans on Indian soil. The primacy of western knowledge system over the knowledge systems of the colonized became widely legitimized. It is about a particular way of production process which commands its supremacy over others. Industrial revolution had adverse impacts on alternative modes of production. Indians had preserved centuries of tested practices and knowledge in the field of agricultural practices and food grains preservation to ward off

multiple challenges during calamities. Rajeev Bhargava (2013) succinctly states that “...epistemic injustice as a form of cultural injustice that occurs when the concepts and categories by which a people understand themselves and their world is replaced or adversely affected by the concepts and categories of the colonizers. A deep problem today for the sufferers of epistemic injustice is that western categories both have an undeniable universal potential and they are fully intermingled with the specificity of western practices; worse, they bear a deep imprint of western domination and hegemony....that we can neither ignore western ideas nor fully show how they can be rescued from the pernicious effects of their own imperial imprint” (Bhargava, 2013 : 413).

The food and knowledge were highly embedded. The food had huge cultural significance. Our forefathers knew what they ate and how food grains were produced. We find a total disconnect with the process of food production and quality of food we eat. It is a disconnect between practical knowledge and present day education. The epistemic domination of the West is responsible for the present state of the indigenous knowledge and practices. The knowledge we acquire is totally disconnected from the reality as a result we are not able to shoulder the responsibility of what we do. Western epistemic domination subjugated the indigenous knowledge and practices and as a result the decline of the later has been much quicker than one can imagine.

The colonialism pillaged economic resources but what is more significant is the destruction of indigenous knowledge. The knowledge that we are talking about is not the learning of the languages and acquiring the ability to read and write. The knowledge we are talking about here is concerned the time-tested knowledge, practices, skills having practical implications in livelihoods, security, disaster mitigation and environmental protection. The knowledge system cannot be understood in isolation from other constituents. The Indian farmers had different varieties of seeds suitable for different climatic conditions. The different indigenous knowledge of Indian society always respected the environment and ecology. Different tribal communities had knowledge about traditional medicines and agriculture. They had also the skills to fight disasters and different diseases. The indigenous medicinal practices had identified and preserved numerous medicinal plants which is getting growing recognition at present. The demand for organic farming and organic

food grains have been rapidly increasing at present. Indian knowledge system view environment as an integral part of the development process. The ecology is seen as an integral part of human life and all sorts of economic activities. The government of India could build a consensus in G20 summit that our lifestyle is responsible for the present state of our earth. The Mission LiFE or Lifestyle for Environment draws its inspiration from India's rich historical legacy which believes that human beings have many things to do with what happens in the ecosystem or environment.

3. Significance of Indigenous Knowledge

The food production has unquestionably undergone a revolution thanks to the advent of contemporary technology in the agricultural sector and the mechanization of food production, which has significantly increased output to satisfy the demands of India's expanding population. This shift has ignored the rich store of traditional wisdom that is necessary to lessen the negative effects on climate change. The industrial revolution led to a sharp rise in the demand for raw materials, which in turn caused agricultural productivity to soar. It was often at the cost of environmental preservation and time-tested knowledge and practices. The under-appreciation of the long-lasting value of indigenous knowledge systems in helping people prepare for and lessen the effects of droughts and food insecurity. These priceless techniques, refined over many generations by native populations, include the production of staple crops as well as the conservation of organic grains in balance with the natural resources of their areas. These methods have been neglected in the aftermath of modernization and mechanization, despite their efficacy. Indigenous cultures have evolved perfect ways that are both environmentally sound and supportive of long-term sustainability. To guarantee their survival and continued use in modern settings, these practices must be preserved and disseminated.

An abundance of anthropological research has painstakingly documented these sustainable and ecologically friendly farming practices. They demonstrate the distinctive strategies used by indigenous people to balance food production with environmental conservation. Their creative methods for preserving food grains are especially remarkable, as they contrast sharply with the chemical-heavy approaches that predominate in contemporary preservation

practices and frequently endanger the health of customers. Indigenous knowledge systems provide a wealth of information and methods that can support resource management and sustainable agriculture. These time-tested practices show a deep comprehension of regional ecosystems and the complex interactions that exist between people and the natural world. This kind of wisdom is a source of resilience against the changing threats that climate change poses as well as the need to protect the ecology of our world.

4. Losing Food Grains is Synonymous with Losing Indigenous Knowledge

Losing traditional food grains which were time tested are synonymous with drifting away from the one's roots or indigenous knowledge systems. It has made our lives unsustainable and human footprints on the ecology have been beyond its bearing capacity. The indigenous knowledge had overlapping and collective concerns. Indigenous communities possess a wealth of knowledge and methods pertaining to food that improve food production, safety, and quality. This has a direct bearing on the crucial concept of food security. The application of indigenous knowledge and practices in food technology, which have been shown to be effective in ensuring food security, must be given precedence over outside interventions. Foods that are adapted to the local environment are especially important because they help in food availability, accessibility, and consumption, meeting the specific needs of the local and surrounding communities. It is evident that indigenous knowledge offers a plethora of invaluable contributions and enormous untapped potential in the field of food security.

In recent years, the government has started to recognize the importance of the traditional knowledge and the preservation of the multiple varieties of food grains in particular. The government has also started awarding the persons for preserving the traditional knowledge. A woman from Maharashtra named Rahibai Popere was awarded Padma Shri in recognition of her hard efforts to preserve hundreds of landraces that is wild varieties of food grains grown locally. It is a big contribution to the preservation of indigenous knowledge (Biswas, 2021). Kamala Pujari, a tribal woman from Odisha was also awarded Padma Shri for her contribution in preserving local paddies. Preserving hundreds of indigenous varieties of paddy, promoting organic farming earned her reputation.

Many scientists also don't know about many such varieties of seeds with medicinal value. Some scientists have been amazed to have discovered medicinal values in those seeds varieties. Similarly, there are thousands of locally grown millets across India which is vulnerable to extinction. The recent push of the Central Government to promote millets and mainstreaming them into the food habits is an encouraging step towards preservation of such millets varieties suitable to cultivation in local conditions.

Indigenous culture and knowledge are fundamental to a society's progress. They consist of the combined skills, technology, and knowledge derived from the intimate ties that local communities had with their environment. Since these have a major impact on food security as a whole, they merit adequate attention. Indigenous communities have historically used indigenous knowledge, skills, and institutional frameworks that have evolved over centuries and been passed down through generations. However, these locally sourced insights and practices are not receiving the same attention within the larger landscape of food security. There is a need to involve indigenous communities as collaborators and active partners in any efforts to improve food security. The recent Global Hunger Index ranks India at 111th position out of 125 countries is a worrying matter although we might have reservations about the methodology adopted to calculate hunger indicators of India. Indigenous knowledge can rescue us from many colossal challenges that we are confronting today and provide a sustainable solution.

5. Conclusion

The incorporation of time-tested indigenous knowledge into contemporary agricultural practices becomes both a practical and ethical imperative in the modern world, where mitigating climate change is of utmost importance. Embracing the sustainable practices and indigenous knowledge is a step towards preserving food security and ecological balance for future generations as we face an increasingly unpredictable climate and escalating ecological issues. The priceless traditional knowledge system that had supported indigenous populations for generations needs to be preserved. The integration of sustainable practices, namely in the preservation of food grains, presents a promising prospect for enhancing agricultural resilience and ecological responsibility. This is crucial in mitigating the problems presented by climate change and environ-

mental degradation. For the benefit of all people and the earth, it is essential that we acknowledge, preserve, and share this ancient wisdom.

The changes in the lifestyles of even the rural folks have drifted away from its original roots. Collective living of the village folks have globally declined and individuals lead reclusive lives. Even in the ocean of human population and bustling cities the reclusive lives of the individuals have increased to such a proportion that it has become a public health challenge. It is endangering for human civilization and we are amazed witness to the appalling devastations. The rapid decline of collectiveness and compassion for each other has been the primary cause of violence which the indigenous knowledge has the potentials to reverse.

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