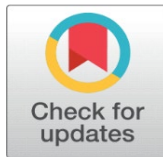
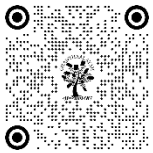


ENSURING FOOD SECURITY: INDIAN KNOWLEDGE SYSTEM AND LOCAL INNOVATION

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ABSTRACT

The studies of NITI Ayog (2016), which highlight a discrepancy between the nutritional situation in India and the expanding Indian economy, show how unstable the health matrix is in India. Complementing the same worry, FAO (2018) underlines in its report "The State of Food Security and Nutrition in the World" India's perilous health situation. According to the assessment, almost 15% of the Indian population is undernourished and suspiciously anaemic.

Considering the substantial challenges to food security in India, it is essential to recognize the potential for mediation via small-scale interventions aimed at alleviating hunger and malnutrition by enhancing food accessibility. These customs frequently originate from our robust traditional framework rooted on the principle of trusteeship. The study contends that public policy on the provision of delivery services to the local populations should draw insights from these local innovations, which offer valuable resources for addressing governance challenges.

This paper examines Anaj Bank, a locally devised plan to solve food security gaps. Offering a rapid response in contrast to centralized food systems, it describes the significant deliberate interventions of the bank that can help consumption smoothing during food-deficient lean seasons and act as a first line of defense against food security shocks.

Keywords: Food Insecurity, Food Security, Anaj Bank, Community Anaj Bank, Seed Bank

1. INTRODUCTION

1.1. THE URGENT FOOD SECURITY SITUATION IN INDIA

More than five decades have elapsed since India initiated the Green Revolution; its battle against hunger persists. Despite achieving 'Atma Nirbhar' status in food grain production and resolving the issue of food stagnation, India continues to struggle to ensure safe and adequate food grains for every home. India exemplifies a contradiction, as it ranks among the greatest exporters of food grains while experiencing significant hunger-related fatalities within the country during the past few decades.

India was ranked 94th out of 107 countries in the Global Hunger Index 2020 annual report by Concern Worldwide and Welt Hunger Hilfe, scoring 27.2. This ranking places India significantly behind other developing nations, such as Niger and Cameroon, as well as neighboring countries like Sri Lanka (64), Nepal (73), Pakistan (88), and Bangladesh (75). This paper underscores the inadequacy of food security measures in India. Even the minimum nutrient requirements are not met by 90% of infants in the country between the ages of six and twenty-three months.

According to the State of Food Security and Nutrition in the World study, India has the lamentable distinction of having the highest number of food-insecure individuals. The research suggests that food insecurity in India increased by 3.8 percentage points from 2014 to 2019. Compared to 2014, 62 million more individuals were experiencing food insecurity by 2019.

Consequently, India is confronting a dire predicament and grappling with severe food issues exacerbated by the recent worldwide COVID-19 pandemic. The epidemic exacerbated the circumstances for low-income households because of the disruption of local food distribution systems. The nationwide lockdown coincided with the peak harvesting period, affecting the availability of staple grains and causing a surge in food crop prices. Niti Aayog's Report (2020) on SDGs indicates that the score for SDG 2, which seeks to eradicate hunger and attain food security, declined from 48 to 38 this year.

Notwithstanding extensive food security initiatives like ICDS, Poshan Abhiyaan, the National Food Security Act, the Mid Day Meal program, and the Public Distribution System, over 194 million individuals experience hunger daily in India, according to the latest FAO study. This constitutes around 23% of the global undernourished population. Although several studies have recognized the contribution of these schemes to enhancing food security, George and H. McKay contend that there are concerns regarding mistargeting, under-coverage, corruption, and diversion that impact the implementation and functioning of the food safety network in India. The latest report by the Comptroller and Auditor General (CAG) highlights that less than 50% of the money allocated for addressing malnutrition in children, pregnant women, and breastfeeding mothers was utilized. The report on the Pilot Social Audit of the Mid Day Meals Scheme by the Society for Social Audit, Accountability & Transparency indicates that food in the majority of schools is prepared under unsanitary conditions, many schools lack access to safe drinking water, and some schools do not supply soap for handwashing.

The primary contributor to food insecurity in India is the state of Uttar Pradesh. Uttar Pradesh constitutes 16.50% of the Indian population; hence, its subpar health indices are a worry for the whole nation. Niti Aayog's Health Index Report (2019) indicates that Uttar Pradesh is the lowest-performing state, decreasing its score from 33.69 in 2018 to 28.61 in 2019. The reduction in performance has been related to low birth weight, tuberculosis treatment success rates, and the degree of birth registration, among other factors.

Niti Ayog (2016) notes a disparity between fast economic expansion and nutritional status in India. To comprehend this, we may examine the Food and Agricultural Organization (FAO) 2006 food security matrix based on two parameters: caloric intake and anthropometric indicators like stunting and wasting. Numerous entities have previously attempted to map the scope and severity of food insecurity in India at the national, state, and local levels.

The National Sample Survey Organisation (NSSO) has identified reduced calorie consumption among families at national and state levels. The average rural calorie consumption in India decreased by 133 kcal from 1993-94 to 2015-16, but in Uttar Pradesh, it fell by 243 kcal during the same timeframe. A comparable decline is evident in the daily protein consumption at both national and state levels (Uttar Pradesh): 5.2 and 20.4 grams, respectively, from 1993-94 to 2015-16. The NSSO data indicates a consistent decrease in per capita cereal consumption from 1993-94 to 2011-12 in rural and urban regions. According to the Indian Council of Medical Research (ICMR) standards, 77 percent of the rural and 59 percent of the urban populations are undernourished. The Niti Ayog (2016) Report notes a disconnect between fast economic growth and nutritional status in India despite a direct correlation between economic development and nutritional improvement. To comprehend this, we may examine the Food and Agricultural Organization (FAO) 2006 food security matrix based on two parameters: caloric intake and anthropometric indicators like stunting and wasting. Numerous entities have previously attempted to map the scope and severity of food insecurity in India at the national, state, and local levels. Health and economic measurements are intricately linked; however, defining a clear relationship may sometimes take some work. The National Sample Survey Organisation (NSSO) has identified reduced calorie consumption among families at national and state levels. The average rural calorie consumption in India decreased by 133 kcal from 1993-94 to 2015-16, but in Uttar Pradesh, it fell by 243 kcal during the same timeframe. A comparable decline is evident in the daily protein consumption at both national and state levels (Uttar Pradesh): 5.2 and 20.4 grams, respectively, from 1993-94 to 2015-16.

Concerns about current affairs, including the environment, equity, power, commerce, nutrition, and health that impact food security, have reignited interest in food systems. It includes the knowledge that meeting the world's food

needs now and, in the future, will need more than just raising food production; it will call for concentrated attention to nutrition, dietary quality, and the effects of food systems on the environment.

2. COOPERATIVE ANAJ BANK: BACKED BY GOVERNMENT

In India, the history of Anaj Banks dates back to ancient civilizations, where grains were utilized in the barter system for sustainable life. Recently, Anaj banks have been established by external groups such as NGOs and government organizations. The Government of India implemented the Village Grain Bank Scheme in 1996-97 to protect against famine during natural disasters or lean seasons when disadvantaged families lacked the money to purchase rations. This concept was derived from the Government of Maharashtra, which launched the initiative to address the rising malnutrition among the state's tribal populations. In November 2004, the Department of Food and Public Distribution assumed responsibility for the initiative to enhance implementation and efficacy. As of 2012, around 21,751 Grain Banks were operational throughout twenty states in India. To submit, Cooperative Anaj Bank is a food grain bank where surplus grain production is collected from the farmers into a shared pool and managed by government employees who decide to store the grains, giving and taking back the grain credits.

The Ministry of Tribal Affairs (2002) terminated the initiative on January 1, 2004. However, it articulated its purpose: "The Anaj bank is distinguished by its unique provision of consumption credit benefits compared to other food security interventions."

When most food interventions are facilitated through production credit and revenue programs designed to enhance long-term food security. Consequently, they are unable to tackle immediate food insecurity. Anaj banks facilitate the allocation of savings from the harvest season to the lean season, therefore promoting a culture of saving among participants that self-insures for uninterrupted consumption.

3. ANAJ BANK – A COMMUNITY INITIATIVE

Anaj Bank is founded on the Gandhian principles of the oceanic circle and trusteeship, advocating for villages to achieve self-sufficiency in fulfilling their own needs. He asserted that such self-sufficiency is crucial to mitigating reliance on the colonial paradigm of development. His governance acumen, as demonstrated by the Anaj Bank, exemplifies indigenous creativity in administration. The contextual analysis of Anaj Bank indicates that decentralization can create new mechanisms that engage many stakeholders in social domains where their responsibilities are not predefined. Anaj Bank can promptly and efficiently address seasonal food shortages due to its integration within and supervision by the recipient network. Additional expenses such as transportation and distribution costs are absent, as Anaj banks are intended for local distribution. This may reduce the cost of services like savings, credit, and insurance, extending their accessibility to economically disadvantaged households, a scenario often absent with commercial providers. Due to decisions being made and implemented by the office bearers of Anaj Bank, there are fewer obstacles and greater operational flexibility compared to public programs such as the PDS.

Numerous individuals affiliate with this bank to preserve the existing quo while simultaneously safeguarding grain security against potential unanticipated issues in the future. The villagers primarily join the bank as the anaj bank fosters a culture of saving among the inhabitants, which was previously uncommon.

Traditional banking methods are profoundly different from those of Anaj Bank. Anaj Bank's clients or beneficiaries are not obligated to adhere to a formal contract, in contrast to the relationship between lenders and borrowers in a conventional system. The defaulter's case at Anaj Bank is not subject to legal procedures for debt collection, in contrast to traditional banking methods.

The Cooperative Grain Banks are different from the Community based Grain Banks. The main objective of both local institutes is to enable smooth consumption around the year by providing consumption credit facilities. However, both differ in their functioning and mechanism. The former includes the exogenous instruments, i.e., involvement of the government or NGOs in the management of the bank at large with or without community participation. In contrast, the latter includes the endogenous instrument, i.e., the beneficiaries themselves in managing and running the bank.

4. CASE STUDY OF INSTITUTIONALISED ANAJ BANK

The grain bank in Kashi (Uttar Pradesh) was established on October 13, 2015, to mitigate hunger among families and children below the poverty line. The first grain bank established by Vishal India Sansthan is a volunteer-led effort focused on community involvement. The narrative starts with contentment, affluence, and ethical superiority expressed as engagement. The framework is based on welfare approach which seeks to give those who are vulnerable. Like other banks, the Grain Bank issues passbooks to all account holders. Deposit withdrawal papers are also executed to procure or allocate grains. There are 248 deposit account holders, and 2,200 families have become withdrawal account clients. The grain bank's personnel find individuals via a survey whose homes seldom eat a complete meal. The target are families living below the poverty line, homeless families, widows, destitute persons, divorced women, and older women without access to food. An account holder qualifies for withdrawal if they encounter hunger from unemployment, famine, or natural disaster.

Users of deposit accounts may initially open their accounts by depositing 5 kg of food grains. Depositors get spiritual advantages such as contentment, prayer, virtue, sacrifice, and salvation. Deposit account customers are issued a passbook documenting the type and amount of grain deposited. Holders of withdrawal accounts and economically disadvantaged households can withdraw five kilos of grain weekly or monthly.

After finalizing the deposit sheet, the grain bank staff weighs and deposits the grains in the presence of the account holders. An immediate receipt is issued, and information like the amount, type, and date is documented in the passbook. The grain bank has used intelligent cards to enhance food security and mitigate hunger. This is designated for divorced persons, widows, older women over 70, and families in need for five days.

5. SEED BANK

The seed bank, a locally developed invention, promotes sustainability by directly linking food security to the preservation and enhancement of biodiversity. It is rooted in the Indian knowledge system, where the preservation and conservation of seed varieties constituted a cultural tradition aimed at sustainable agriculture and food security. Seed banks function in India at two tiers: community and institutional. The agricultural growth model implemented post-Green Revolution included high-yielding variety (HYV) seeds into farming techniques, rendering seed preservation an obsolete practice. However, by advocating for indigenous agricultural techniques, the government is facilitating the reintroduction of the system into practice.

In Indian tradition, seeds symbolize the course of life and fertility. Various seeds, such as sesame, are utilized in religious activities. This cultural veneration for seeds reflects the profound appreciation within traditional knowledge for the continuation and preservation of living forms. Ancient literature such as Vrikshayurveda provide profound insights into agricultural science, including seed handling and preservation. The advantage of desi seeds is their adaptability to local climate conditions and soil types, as well as their high nutritional content.

In certain regions of the nation, the tradition of seed banks has been revitalized under the guidance of farmer leaders, cooperatives, and NGOs. This provides farmers the opportunity to return to traditional knowledge of cultivating nutrient-rich food. These traditional practices provide the capacity to address contemporary concerns that have induced stress in human lives. The sustainable approach enhances climate resilience while minimizing carbon emissions.

Initiatives such as the National Mission on Sustainable Agriculture (NMSA) and the Parampargat Krishi Vikas Yojana (PKVY), aimed at advancing organic farming, elucidate the necessity for traditional seeds. Seed preservation fosters food sovereignty and cultural conservation.

6. DISCUSSION AND CONCLUSION

From the perspective of Anaj Bank and Seed Bank, food security is perceived as an identity and a means of articulating one's rights and entitlements. It possesses a broader social context. This study contributes to the literature by asserting that social assistance frameworks that allow for community discretion in managing and designing welfare service procurement and distribution more effectively target impoverished populations than those that exclude community involvement. Inducting traditional knowledge system and local innovation remains a necessary component in the modern age governance system. Compared to the heavily subsidized and costly Public Distribution System, Anaj Bank possesses a competitive advantage due to its acceptability. Due to decisions being made and implemented by the

office bearers of Anaj Bank, there are fewer obstacles and greater operational flexibility compared to public programs such as the PDS.

The future of cooperatives in India is promising but requires careful management. Cooperative societies and cooperative enterprises in many regions of the nation have demonstrated significant success in achieving SDG 1 (No Poverty) and SDG 2 (Zero Hunger/Food Security) and providing jobs for its members.

Nonetheless, as with other community-based organizations, Anaj banks and Seed banks are vulnerable to leakages, mismanagement, and domination by local elites. The Cooperative Movement in India encounters limitations due to a lack of spontaneity, insufficient funding, neglect of demand elements, inadequate collaboration among members, and overdue payments.

However, the potential of these local innovative traditional system in practicing sustainability and resilience is paramount. Anaj Bank can facilitate governance via a circular economy. Selected Anaj banks have already undertaken such experiments in a few villages of Jalaun. They offer to sell grains at elevated prices after distributing them as requested by their members during the lean season and then repurchase them at a lower price when the harvest occurs. This will create revenue that might assist members in addressing various needs or initiating a small-scale startup that employs residents, hence generating home-based employment. Various grain institutions (local, cooperative, or institutional) can extensively adopt such examples for broader implications of their advantages. On the other hand, the synergy Seed banks offers between modern conservation strategies and Indian Knowledge System (IKS) not only ensures food security but also protects India's agricultural heritage for future generations.

CONFLICT OF INTERESTS

None.

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