



Review paper

## Nourishing Communities: The Intersection of Food Security, Health, and Education

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ARTICLE INFO	ABSTRACT
<p><i>Article history</i></p> <p>Received 19 July 2023 Revised 13 August 2023 Accepted 22 August 2023 Published 26 August 2023</p>	<p>Ensuring food security is a crucial aspect of human survival, but the contemporary world is marred by various crises such as international conflicts, external aggression, terrorism, war, autocracy, and pandemics. These issues plunge affected nations into states of chaos, marked by an uncertain future, poverty, unemployment, malnourishment, inflation, and instability. The impact on food security is not solely external; internal factors within a nation also contribute. The failure of administration to balance urgency and affluence proves detrimental to a nation's food security. Sri Lanka is currently grappling with food insecurity due to rapidly depleting foreign reserves, rendering the country unable to afford essential items like food, pharmaceuticals, and fuel. This dire situation leaves food either unavailable or unaffordable, particularly for the poor. Turning our attention to India, the consumer price index-based reading surged to an eight-month high of 6.07% in February. Retail inflation has exceeded the upper tolerance threshold of 6% set by the Reserve Bank of India (RBI). The RBI faces an ethical dilemma, torn between its accommodative stance in monetary policy over the past two years to revive the economy devastated by Covid-19, resulting in high inflation, and the need to address the immediate concern of making basic essential goods unaffordable for the poor.</p>
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### 1. Introduction

Agriculture sector played a key role in Indian economy during the covid-19 crisis. As per the reports of Ministry of Agriculture and Farmers welfare, the contribution to GDP in terms of the percentage share of Gross Value Added (GVA) of Agriculture and Allied sector to total economy of the country during the last three years is 17.6%, 18.4% and 20.2% in 2018-19, 2019-20 and 2020-21 respectively (Dreze, 2012). Despite this improvement

in agricultural productivity, why there is food inflation? Is this the real increase in productivity or the rising figures are due to the higher inflation? What are various measures taken by the government to overcome the food crisis, health crisis and educational crisis?

Food crisis and inflation are high because of lack of infrastructure, such as adequate cold storage facilities and in-time transportation (Kaiwar, 2016).



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Due to the high fuel prices, the cost of transportation increased. The cost incurred by the producer in order to fulfill the process of Production to Plate, ultimately burdens the consumer, with higher costs (Rubin, 2016). Even though the agriculture sector is the only sector which has survived in the pandemic, it did not make the consumers happy, since they are bearing even more prices to afford the essentials. Hospital expenditure during the pandemic made every household to withdraw their hard-earned decades of savings. These savings have been drawn out just to survive the pandemic in order to purchase the basic essential commodities, which are hardly available during lockdown. Lakhs of households with lack of employment and the rest of households with underpaid employment couldn't afford nutritious food (Siegel, 2018).

Health and education are crucial fuels for an economy to sustain in future. This can be achieved through better investment in human resource of a nation. Pandemic has proved that having a good health is very vital to survive, but in order to be healthy, one has to be supplemented with nutrition rich food and care. Pandemic has resulted in high levels of health expenditure especially out of pocket expenditure of poor households (Kaiwar, 2016). The attention span of the students has majorly affected due to lot of distractions around. Digital divide is another major concern in the economy, due to the income disparities and unavailability of digital devices, network connectivity and unaffordability of electronic devices. The examinations were not conducted for few batches because of the plight of pandemic, which resulted in not knowing the exact potential of the candidates. The sustainable development goals (SDG) deals with Good Health and Well-Being under goal 3 and Quality Education under goal 4. Member countries are striving really hard to reach these sustainable development goals in time (Rubin, 2016).

## 2. Crisis in the past

Food insecurity is haunting the world for centuries. From the history we have learnt many lessons, in order to save ourselves from starvation and famine. One of the examples is Irish Potato Famine. This famine taught its next generations not to completely depend on one source of food alone. Potato is native to the Peruvian - Bolivian Andes, South America and were introduced to Europe by the Spanish invaders in

16th century. The people of Ireland have highly depended on the potato crop for nutrition and as their staple food. Unlike the tropical countries like India, Mozambique and Brazil, the European country's cold weather, especially Ireland which receives less amount of sunlight is not favorable for high cultivation activities (Agrawal, 2013). The colonial policies played a crucial role in food crisis. Rack renting and war expenditure of the colonials used to burden the people of India. They used charge taxes exorbitantly and the policies of Free Trade had facilitated more agricultural exports, instead of meeting the domestic needs (Dreze, 2012). Agriculture was majorly encouraged for commercial crop cultivation, instead of food crops. Indian exports of rice, wheat, jute, opium, cotton and indigo used to be the major drivers of economy. According to Mike Davis, export crops displaced millions of acres that could have been used for domestic subsistence and increased the vulnerability of Indians to food crises. Food insecurity led to malnutrition and immunity deficiency. Lack of immunity resulted in millions of people falling prey for scores of diseases. In order to sustain the unforeseen circumstances, we need to be equipped with good health and medication. This is possible only through government policies, public coordination, education, research and development (Marshall, 2001).

## 3. Recent and ongoing food crisis in the world around us

### 3.1 Afghanistan food crisis

After the takeover of Taliban on 15th Aug 2021, Afghanistan was stranded with political, economic and social predicaments. The reserves of Afghanistan were frozen by global powers and the new regime is striving to get the global recognition. But the civilians are the collateral damage who are facing acute food shortage, unemployment and inflation. Under the humanitarian assistance, India has extended its helping hand by entering into an agreement with United Nations World Food Programme (WFP) in order to dispense 50,000 tonnes of wheat (Kaiwar, 2016). India has sent its first batch of aid recently weighing 2500 tonnes of wheat commuted through India - Pakistan integrated check post (ICP) by 1000 truckloads. It is integral to consider that the conflict driven nations lag behind with instability, haplessness and depleting wealth which takes a lot of time to pull together everything to

survive and sustain in the long run (Grove, 2006). Diplomacy shall be the priority to overcome such situations without any loss of life and loss of country's wealth through discussions, instead of destruction (Siegel, 2018).

### **3.2 Russia and Ukraine crisis**

Since the Russians invaded Ukraine from February 24, 2021 people of Ukraine and Russia are stranded in between the war situation. According to the United Nations reports, nearly 6.5 million people were displaced due to war and are moving to the nearby countries. The war has entered into its fourth week and has not resulted in any sort of cease fire agreement despite several meetings. The evacuation process was also not successful at all. It is a different case for Indians who were living in Ukraine, since they were rescued by the Indian government under 'Operation Ganga'. West has imposed numerous sanctions on Russia for committing war crimes and violating United Nations Charter (Rubin, 2016).

Russia produces about 16% of the world's Natural gas and 12% of the world's Oil. It has the capacity to produce nearly 50% of the world's Palladium Catalytic converters, which is a vital component in car's exhaust system that helps in controlling emissions. Ukraine produces about 13% of global corn exports and 12% of global wheat exports (Peers, 2006). In fact, Ukraine has supplied nearly 90% of China's corn imports in 2019. North African countries which are highly dependent on Russia and Ukraine for Wheat imports are Tunisia, Libya, Morocco, Algeria and other several Arab nations. In Tunisian capital city, at a supermarket there is scarcity of wheat flour. Only three Packets of sugar were placed in a rack behind the sign that read as "One Kilo per customer." Wheat being the basic essential food for many countries, now fell in a dilemma with regard to the war between Russia and Ukraine (Siegel, 2018).

## **4. Millennium Development Goals**

The Millennium Development Goals (MDGs) are eight international strategic development goals set by the association of 191 United Nations member countries. These millennium goals were supposed to be fulfilled by 2015. Majority of these goals are related to the enhancement of health outcomes. The declaration regarding the Millennium Development Goals was signed in September 2000, in order to combat

poverty, disease, hunger, environmental degradation, illiteracy, and discrimination against women (Arnold, 2013). All the member nations have agreed upon the framework of 8 goals, 18 targets which are complemented by 48 indicators to measure the progress of the said Millennium Development Goals.

Target number twelfth deals with the development of further predictable, rules based, trading and financial system without any sort of discrimination which includes the commitment of a good corporate governance, development, resulting in reduction of poverty both within your country and between different countries (Agrawal, 2013). Target number thirteen deals with the addressing of special needs of the least developed nations with regard to the issues of tariff, quota, debt relief program for critically indebted poor nations, free trade agreements with the least developed nations, and a special treatment to the countries which commit to reduction of poverty by official development assistance (Dreze, 2012). Target number fourteen deals with the identification of the special needs of the small island developing states and landlocked developing nations under the 22nd General Assembly provisions and an action plan for the sustainable development of small island nations. If we look at the target number fifteen, which addresses the comprehensive problems of developing countries with regard to debt issues, through both within the nation and between the nations by making the debt sustainable for a long period of time. The next target that is the sixteenth target deals with the development of decent and productive employment for the youth which belong to the developing nations. Target number seventeen deals with the problems faced by the developing nations with regard to the accessibility of essential medicine at reasonable prices, by working out on a strategy of establishing the pharmaceutical companies. Last but not the least, target number eighteen deals with the private sector with regard to the introduction of new innovative technologies especially in communications and information technologies all over the world in order to increase network and connectivity (Marshall, 2001).

## **5. Sustainable Development Goals**

These goals are the agenda which has to be fulfilled by 2030. All the United Nations Member states has entered into this agreement in 2015, which acts as a

road map for the sustainable and stable future with peace and prosperity (Kaiwar, 2016). It is a global partnership between all the nations of the world including both under developed, developing and developed nations towards a bright future. All the goals work in tandem with each other. One leads to other goal and together form a whole package of deals which are crucial in the global sustainability and survival in future. So, within eight years we have to fulfil all the goals for the better functioning of the global agenda and to achieve fearless balanced future and to give the best to our future generations. Department of Economic and social Affairs under sustainable development has set up seventeen goals. These has 169 targets to reach by the end of 2030.

Goal eleven deals with making all the cities of the world and human settlements safe, resilient, inclusive and sustainable. In order to do these, we have 10 targets, 32 events and 881 action plans. Under the twelfth sustainable goal we have to ensure the consumption and production patterns sustainable. In order to deal with this, we have 11 targets, 10 events and 1115 action plans. Goal number thirteen deals with the immediate actions that needed to be taken in order to combat the climate change and its impact on the world (Grove, 2006). Under this we have five targets, 15 events and 1326 action plans. Goal number fourteen deals with the conservation of marine resources, seas and oceans in a sustainable manner to result in sustainable development. It has 10 targets, 47 events and 2146 action plans. The next goal deals with the life which survives on land. In order to encourage the existence of the life forms on earth, we need to restore, protect and promote the sustainable maintenance of terrestrial ecosystem, forests, minimize desertification and strive to combat land degradation, biodiversity loss and erosion (Rubin, 2016). We have 12 targets, 13 events and 849 action plans. Goal number 16 deals with the Promoting Sustainable development, inclusive societies, peaceful co-existence and access to justice to everyone and governance. In order to achieve it we have 12 targets, 20 events and 767 action plans. Last but not the least goal number seventeen deals with strengthening the partnership on global level for sustained development. In order to achieve it we have 19 targets, 110 events and 1559 actions (Arnold, 2013).

## 6. United Nations Food System Summit (2021)

The major concerns in this debate of thought regarding food security will be discussed as follows. First, to ensure access to safe and nutritious food for all. Accessing food itself is a huge deal in many countries in the world. Nearly 811million people are going to bed with an empty stomach daily. The countries administration should make sure that the people of the nation have the access to safe and nutritious food. Talking about the nutritious food, one should not depend on only one food source. He/she shall eat sufficient nutrition rich food in order to stay healthy and strong. Awareness of nutrition content in food can be expected only through educational practices. Every young generation has to get educated and unlock the treasure of knowledge. This is the only way we can ensure, the understanding level of the population, the significance of food and nutritional intake to better living (Siegel, 2018).

The other important aspect of discussion was on building resilience towards vulnerabilities, calamity shocks and stress. India has faced so many natural and man-made calamities in the past. We are not sure that we would be free from natural disasters in the future, when we are looking at the problems of climate change, global warming and rising temperatures. So, we need to be resilient enough to handle any kind of situation in present as well as the future. We need to implement certain policies and practices that would cost us our future (Agrawal, 2013). The research and development play a crucial role in this scenario by discovery and new innovations which would help us and our future generations to live in a sustainable environment. Such summits and debates among the professionals would bring out the insight and critical inputs for the better surviving and living techniques (Grove, 2006).

## 7. Central Government Initiatives

### 7.1 Food security

According to the United Nations reports, India is the country which comprises around 195 million people who are undernourished and this constitutes a quarter of world's hunger burden as a whole. National Food Security Bill, 2013 plays a very crucial role in bettering the position of people living in India. The Integrated child development services scheme is spread all over the country and deals with the child related issues with care (Grove, 2006). The



development of the children in all perspectives is significant in building up a better future and building a better India. Mid-day meal scheme ensures that each and every child is provided with enough nutrition and education. The public distribution system is another segment of implementation of government welfare plan. It gives every household an opportunity to purchase the minimum essential commodities at a fair price.

## 7.2 Health and Education

Recent initiatives of central government such as Ayushman Bharat Yojana/ Pradhan Mantri Jan Arogya Yojana (PMJAY) have played their role during the corona virus era. National AYUSH mission deals with Indian ayurveda and yoga which acts as a central structure for the whole world. Not only these many initiatives play a very significant role in attaining the sustainable development goals in health. Education policies of the government include samagra siksha abhiyan, Beti Bachao Beti Padhao Abhiyan, National Education Policy and many more which deals with the education of children of India. MOOC (Massive Open Online Course), SWAYAM (Study Webs of Active – Learning for Young Aspiring Minds), National E – Library, etc., have played a significant role in the lives of students during the covid 19 lock down. Unavailability of study material and guidance physically has created a knowledge gap among the student's fraternity. These platforms have come to the rescue of students in their dire need, and supplemented to better learning outcomes (Arnold, 2013).

## 8. State Government Initiatives

### 8.1 Food Security

The state government has done a great job in improving the food security in the state through various schemes and initiatives. The initiatives taken with regard to farmers welfare such as Rythu Bharosa kendras for fulfilling the needs of farmers, which provide the facilities of crop procurement, sale of fertilizers, supply of seeds, Interest free loans, free supply of electricity for nine hours a day, crop insurance, and supply of new technology. By facilitating all these there is a scope for higher productivity and yield which is being supplied to the people below poverty line at a concessional rate through public distribution system. The e-crop portal

is also doing its intended job well in order to fulfill the needs of farmers. Navratnalu schemes are looking after all round development, in such a way that the dependents like the people who couldn't earn on their own, who are aged above sixty years or widows are being paid pension as a social security benefit, which ensures a better food security (Peers, 2006).

### 8.2 Health and Education

Coming to health initiatives like Arogyasri, Ysr Bheema and 108 Ambulance services, the state government has been striving really hard to reach the last mile assistance. They have handled the covid 19 test, track and treat policy very gently and helped in minimizing the daily caseloads. The vaccination programme has also played a very significant role in curbing corona virus cases. Education related initiatives are in tandem with the National Education Policy 2020 (Grove, 2006). Scholarship programs like Jagananna vasithi devena, Vidhya devena, Amma vodi, Goru mudha, Jagananna Vidhya kanuka, Nadu-Nedu initiatives has put the education system on the right track.

## 9. Conclusion

History always repeats itself unless we take a firm action by learning from the past mistakes and bettering the future. Knowledge plays a crucial role in avoiding catastrophes. Food wastage in India is exceeding to Rs 1 Lakh crore. According to UN Environment Programme's (UNEP) Food Waste Index Report 2021, one-third of the food produced for human consumption nearly 1.3 billion tonnes get wasted every year in the world. So better not waste the food.

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### Declaration of Conflict

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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