Local Food Systems and COVID-19; A glimpse on India's responses

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ABSTRACT

COVID-19, the global pandemic, has brought India to its knees. As of 20 April, 2020, the virus has spread to almost all the states with 15,712 confirmed cases and 507 deaths. Panic-stricken country has come to a standstill with nationwide lockdowns, mandatory quarantine, home confinement, job losses and economic woes. However, these restrictions have a severe impact on the local food systems. Notably, the restrictions disrupted the agriculture and food supply chain that in turn made farmers to experience huge losses. Adding to that, immense post-harvest losses due to shortage of labours and transportation bottlenecks and price hikes due to panic buying and hoarding were observed. Facing unprecedented challenges, the government has introduced measures like free ration, essential food kits and economic stimulus plans to aid the people to survive the current emergency. This article discusses the impacts of COVID-19 on the local food system in India followed by the collective approach by the national and state governments along with the private sector to protect the lives and the livelihood of the vulnerable groups in India. It is expected that these actions could encourage effective solutions for greater food security and food sovereignty in countries currently suffering from the pandemic and for India itself.

Figure 1. Essential food kit items inspection by the Kerala State Civil Supplies Corporation (SUPPLYCO) officer in Kerala, India.

11/04/2020 Photo credit: Arun P James

Introduction

India, the second-most populous country in the world, is under tremendous pressure since the first confirmed case of coronavirus was detected on January 30, 2020, in the state of Kerala. As the pandemic was leaving deep scars around the globe, India was able to foresee the depth of the socioeconomic hit that could be caused shortly by the Pandemic. Fortunately, the government has so far handled the aftermath of the outbreak with the utmost presence of mind. The ordinary lives of every Indian took a turn when a nationwide lockdown was declared on March 21, 2020, for 21 days. Even though the Indian government has taken some measures to protect the lives of 1.3 billion people, the COVID-19 cases were increasing day by day. By April 20, 2020, India had 15,712 confirmed cases and 507 deaths. After the 21 days of lockdown, the government has extended the lockdown until May 3, 2020, and restrictions of the least affected areas will be reviewed after April 20, 2020. However, these draconian measures have a drastic effect on the lives of the ordinary people and local food systems.

Despite the fact that India had considerable economic progress over the years, hunger and poverty prevailed in the country. Out of the total population of 1.3 billion people, 190.7 million people are undernourished and 25% of the children experience hunger. Along with this existing backdrop of India, the sudden cease of economic activities nationwide will question the rising food insecurity and misery for the destitute. India, the world's largest democracy has a federal system of government created by the union of twenty-eight states and nine union territories. Even though the central government has greater power when compared to the states, each states' chief ministers have legislative, judicial and executive responsibilities similar to the Prime Minister. Nevertheless, the States as well as the central government, has taken exceptional measures to face the extraordinary challenge with courage and confidence. So as to have a closer look on the socioeconomic shock on the country, we have identified the immediate effects of the pandemic on the local food systems and the resilient measures adopted by the government to cope with it.

Impacts on Food Systems

Local Food systems are fragile in a country like India. About 91% of the total workforce is from the informal sector[1], they include agricultural, migrant, and other workers who entirely depend on daily wages as a mode of living. These vulnerable groups and their families will be the hardest hit during these unprecedented times. Even though the sudden imposition of the countrywide lockdown was a wise move to contain the spread of the coronavirus, local food systems were disrupted. The fear of the virus spread faster than the virus leading to the following consequences discussed below.

The worst part of the countrywide lockdown was that it coincided with the country's peak harvesting time of a variety of crops of the season. Summer vegetables and fruits were ripened and ready to pick; wheat, paddy and barley crops were ready for harvest but all the farmers' hard work went in vain due to the sudden halt of the country.

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[1] Informal sector is the unorganized sector that employs workers with no written contracts, paid leave and other benefits.

Following the lockdown declaration, **temporary workers in the cities had to leave** to get back to their villages as surviving in the city without regular salaries was implausible. As transportation froze, these people were left with no choice but to walk, most of them even barefoot resulting in chaos. The most noteworthy was the exodus of migrant workers from Delhi to other rural areas of the states like Uttar Pradesh, Bihar and Odisha. The home minister immediately advised state governments to ensure ample support including transportation, food and shelter for migrant workers who were forced to leave. Migrants who were unable to return to their domicile state owing to the countrywide lockdown were given shelters in disaster relief camps with enough food supplies. **This mass departure of the migrants to their homes instantly brought the farming activities to a standstill owing to the shortage of labourers.**

To continue, preliminary reports show that **lockdown interrupted harvesting as well as post-harvesting activities in many parts of the country.** Some of the instances are as follows:

- The bumper harvest of wheat in the northern part of India hobbled due to shortage of labour and transportation bottlenecks.
- The western city of Pune where they grew grapes in abundance had to seek for student volunteers to harvest their crops. The farmers were forced to sell their produce for a lower price they were offered as the storage facilities were overflowing.
- There was a huge post-harvest loss of vegetables and fish stock as a result of zero business. Hindrance of transportation and fear of vigilant checks at state borders made it even difficult for the sales to happen.
- Asia's largest onion trading market in Maharashtra found it difficult to transport the freshly harvested onion across the states as the panic mode prevailing in the country made the workers and drivers to flee to their homes. Even local workers were afraid to come out to work on the farms.
- The poultry and meat industry was under immense loss due to the fake rumours of the association of COVID-19 and animals. False accusations regarding chicken and eggs as a major source of COVID-19 had an adverse impact on the poultry industry.
- The plummeting demand for meat and poultry resulted in an unimaginable plunge in their costs resulting in a loss of ₹ 22.5 million (USD 300,000) for the industry.
- In Haryana, the northern state near Delhi, had a plentiful harvest of cucumbers and bell peppers but they began to get rotten as there was a sudden disappearance of buyers and retailers. This happened in the initial days of the spread of the virus as people were reluctant to buy vegetables claiming that it was handled by many before reaching their tables.
- Karnataka, the largest coffee-producing state in India was unable to sell coffee as there were no traders and workers. Tons of cured coffee worth USD52 million was piled up in the warehouses due to the blockade in the supply chain. Most of the harvest of coffee had happened last December and was in the processing state when the domestic activities came to a halt.
- Intercropped pepper in most coffee estates are left untouched due to lack of workers.
- Food prices skyrocketed across the nation as the transportation services were halted and fresh supplies were unavailable. Urban residents all over India found it difficult

to buy groceries as the commodities became scarce in the beginning. The major reason was panic buying and hoarding among the people.

- Retailers took advantage of the lockdown situation by imposing exorbitant prices on existing stocks. Black marketeers was on the rise that sold essential commodities at an outrageous price.
- There was a huge surge in demand for processed foods like instant noodles, biscuits and snacks. But in the meantime, all food processing activities virtually stopped. Major food processing companies like Nestle, Britannia, ITC, Parle and PepsiCo are running at low capacity as labours moved back to their villages.
- Shortage of raw materials also resulted in low production rate. Most of the retailers lacked the manpower due to the absence of transportation workers to procure finished goods to supply it to respective shops
- Although food manufactures were exempted from the lockdown, they had to get specific exemption certificates from the authorities to continue production. This led to further delay due to bureaucracies that existed in the local and national level.
- Residential demand was on the rise as people were having meals at home, this even triggered panic buying to stock up essentials.
- Exploitation of the lockdown situation resulted the market to be volatile by selling non-branded supplies at a higher price. Even though the government gave repeated assurance through press conferences regarding food security, on the ground issues were different as mob rushed to stock up essentials.

On the contrary, in Punjab and Haryana markets were expanded to avoid overcrowding and to maintain physical distancing during the sales. Customers were given instructions throughout India to maintain a one-meter distance from each other. Innovations like mobile vegetables trucks were accepted widely, particularly in Kerala that gave easy access to fruits and vegetables in their doorsteps. This was a step taken by the local vegetable vendors as there were no customers in their shops. Whereas, agro e-commerce did not succeed in India during this pandemic emergency. This reflects the digital illiteracy among common people and also their disinterest to buy essential commodities online. Agro e-commerce platforms faced great hindrance as they lacked fresh supplies in their respective warehouses and transportation bottlenecks.

Strategies adopted in India to face the unprecedented challenges of COVID-19

India, having a denser populace comparatively, was forced to take immediate actions to curb the spread of the virus. As the majority of the population came under vulnerable group authorities feared a bigger problem than the pandemic which was hunger. The government officials expedited to take resilient measures for protecting the livelihood of many amid the virus.

1. Social protection measures

   Kerala, one of the first hit states in India by the COVID-19 outbreak, was successful in setting an example for the rest of the country. Kerala's Chief Minister took immediate actions to reduce the risk of hunger and starvation of the poorest population. The major actions are as follows:

- The government announced free ration for all for one month, meaning that the government will provide 35 kg rice for below poverty line families[2] which constitutes 11.3 per cent of the total population in the state, and 15 kg of rice for others through the Public Distribution systems (PDS) and Kerala State Civil Supplies Corporation (SUPPLYCO).
- The government of Kerala has gone an extra mile by initiating the distribution of food kits consisting of 17 items as listed in Table 1 worth INR 1000 (USD 13), starting on April 8 for every household, irrespective of income status. It is distributed through the ration shops under the Public Distribution System. These food commodities are sourced from the suppliers registered under Kerala State Civil Supplies Corporation and National Agriculture Cooperative Marketing Federation of India. This project was funded by the Kerala Chief Minister Distress Relief Fund and has allotted about USD 45 million for this purpose. This scheme was implemented for the first month of the pandemic and the officials are planning to continue the scheme according to the severity of the situation thereafter.

Table 1 List of items in the essential food kit

Food Items	Quantity
1. Sugar	1kg
2. Tea	250g
3. Beans	1kg
4. Coconut oil	500ml
5. Sunflower oil	1L
6. Atta	1kg
7. Cornflour	1kg
8. Chilly powder	100g
9. Coriander powder	100g
10. Dal	250g
11. Turmeric powder	100g
12. Fenugreek seeds	100g
13. Mustard	100g
14. Urad dal	1kg
15. Chickpeas	1kg
16. Soaps	2no.
Source: This table is author 's compilation from various newspaper sources till 9th April 2020.	

- One of the measures to protect food security in the state was setting up of community kitchens all over the state. It was the first-ever move to provide cooked food for the needy. District administrators were given the duty to monitor the food assistance program whereas the local representatives took responsibility in distribution and logistics.

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[2] Below poverty line families comprise of five members living in a rural area and earning less than USD 21 per month.

- To ensure **nutritious meals for children under the age of 6**, the government has instructed **Anganwadi[3] centres** in the state to deliver free mid-day meals to the children registered under the **Integrated Child Development Services[4](ICDS)**. As per the orders from the Women and Child Development Department of the state, the Anganwadi teachers are delivering raw materials on a weekly basis to the families.

Followed by Kerala's initiative, Central Finance Minister in New Delhi, Ms Nirmala Seetharaman announced **1.7 trillion rupees (USD 22.6 billion) relief package** to take care of food security measures for the poor. It was funded by the Prime Minister's Gareeb Kalyan Scheme. Their action helped the poorest of the poor to cope with the hardship. In order to tackle food insecurity in the country, the minister announced the distribution of free provision of 5kg of rice or wheat per person, 1 kg of pulse per household along with free cooking gas monthly for the next three month**s. A second economic stimulus plan worth 1 trillion rupees (USD 13 billion)** is sanctioned to aid small and medium businessmen mainly in the agricultural and food sector. These large scale interventions were the need of the hour and the government was successful in providing the vulnerable groups such as farmers, daily wage earners, women, self-help groups and poor senior citizen the support necessary in this unprecedented times.

The above models were immediately adopted by other states like Tamil Nadu, Punjab, Haryana, Karnataka and Andhra Pradesh to deal with the serious issue of hunger. These measures were, in fact, additional to the 5 kg of subsidised food grains (wheat at Rs 2/kg and rice at Rs 3/kg) of monthly ration per household provided under the National Food Safety Act, 2013 for two-third of the Indian population who are below the poverty line.

Furthermore, the Defence Food Research Laboratory (DFRL), based in south India is a food research organization solely responsible to feed India under extreme conditions like disasters, conflicts and space missions. Their well-established infrastructure is designed to produce tonnes of ready to eat meals[5] with longer shelf lives within hours. After the outbreak of COVID-19, DFRL is working day and night to feed especially the health workers across India with nutritious meals.

Besides these actions, **technologically driven interventions** were adopted in Karnataka where young start-up engineers pooled in to make a food delivery application. With the help of this app, the government was successful in delivering 1 million meals to the needy who were starving in Bengaluru, India's busiest metropolitan city. **The techies automated the entire supply chain starting with dashboards to map income and inventory projections to make it possible to reach out to the poor who need food.**

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[3] Anganwadi is a type of rural child care centre in India

[4] Integrated Child Development Services (ICDS) is a government program in India which provides food, preschool education, primary healthcare, immunisation, health check-up and referral services to children under 6 years of age and their mothers.

[5] Read-to-eat meals are meals prepared in retort pouches which does not require any preparations other than heating. These meals include tomato rice, vegetable pulao, sooji halwa, khichidi and combination meals like wheat, rice and dal.

Private sectors also played a major role with the government to feed the needy. Major private companies like Wipro and SRK groups sponsored around 60,000 meals per day in government canteens to feed the poor. Free meals were given in Anna Purna Canteen in Hyderabad as well as in Amma Canteens, Tamil Nadu especially for students and migrant workers who were stranded.

2. Measures to keep the agriculture and food sectors alive

As the agricultural activities were at stake, the Indian Council of Agricultural Research (ICAR) became the focal point for managing activities in the country under the umbrella of the Ministry of Agriculture and Farmers Welfare and implemented the following actions.

- ICAR started to assess the possible impact on agriculture and allied sectors and provided measures to lower its negative effect on the local food system.
- **Crop-specific safety measures** regarding harvesting, post-harvest operations were advised to the farmers by ICAR experts.
- Special attention was given to rabi season crops like wheat and barley as their harvesting time is around the corner.
- Experts also advised farmers to postpone wheat harvest which was about to give record harvest after the great monsoon.
- Responsibilities were given to local field agencies to ensure hassle-free movement of agricultural produce and related machinery to reinstate farming activities.

Nevertheless, the government has assured India's food security by the buffer stock which is overflowing in the granaries of Food Corporation of India. Other measures by the central government are as follows:

- Official memorandum was released to support the poultry farmers who went into loss due to false association of poultry and the source of the virus. They were given monetary support of Rs 100 (USD 1.3) per bird as compensation for zero business.
- **Food safety inspectors at local levels were instructed to inspect perishable goods** such as vegetables, meat and fish products to prevent adulteration on a daily basis.

3. Other proactive measures

Many big multinational corporations and corporates like Tata group and PepsiCo, food delivery company like Zomato have stepped in along with the government to feed the daily wagers. Private-public partnerships aided the government to raise money to tackle the situation. Celebrities all over India had given immense contributions to sponsor daily meals to the destitute. Reserve Bank of India (RBI) has asked private and public banks to hold their loans and micro finances. **RBI took initiatives by introducing Long Term Repo Operations worth 1 trillion INR (USD 13 billion) to help banks to improve lending at low-interest rates.** Simultaneously, the public and private partnership has invested in many strategies for mass testing, medical research and hand-washing campaigns. These collective and proactive approach has proved so far to contain the virus.

Conclusion

On the whole, the COVID-19 pandemic is a crucial juncture in the Indian history. The evident trails from the rest of the world were helpful for the Indian officials to take preparedness and response measures at the right time to tackle the pandemic. The bold and decisive leadership of the central, as well as the state governments, has implemented remarkable strategies to protect the livelihood of millions. Along with the government, giant corporates and NGO's are in the frontline to make consensus to curb the spread of the virus. Undoubtedly, each Indian has taken the "Break the chain" slogan to their minds by staying home for a promising future ahead for the entire world. Evidently, the Indian government has taken huge steps to feed the entire nation and protect their lives and livelihoods amid the coronavirus outbreak. Hoping that this cloud also has a silver lining, in reshaping the society's potential for greater food security and food sovereignty, thus paving the way to efficient food systems.

Lessons learnt

Important lessons learnt from COVID-19 responses in India are as below:
1) As necessity is the mother of invention, certain measures like the supply of essential food kit by the government of Kerala is a great helping hand for all the people irrespective of the income group to survive emergencies like COVID-19 pandemic; supply of raw materials of mid-meal programs to the children under the Integrated Child Development Scheme. These measures improve accessibility and availability of food supplies thus ensuring food and nutritional insecurity.
2) Even though the economic activities ceased, agricultural and farming activities was exempted to ensure food security of the nation. Certain measures like Crop specific safety measures to ensure proper harvesting were advised by the national agricultural research institutes to farmers all over India; Local field agencies were instructed to ensure smooth movement of agricultural supply chain and distribution could help the farmers to protect their crops to minimise loss
3) Food inspectors nationwide were asked to ensure the safety of perishable products like meat, vegetables and fruits to safeguard the health of the consumers
4) Economic stimulus plans were sanctioned to protect the lives and livelihoods. The first relief package was worth USD 22.6 billion to provide a safety net for the vulnerable group followed by the second economic stimulus plan worth 13 billion to aid the small and medium businesses men in agriculture and food sector.
5) Public-private partnership at various levels were found to have an effective outcome. This collaboration will enable policymakers to improve the role of multi-stakeholders involved in the food system to safeguard the lives of the vulnerable groups.
6) Technological interventions such as food delivery applications enabled the government to reach the localised in a much more effective way. Thus ensuring efficient food systems to curb hunger.

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