

IMPACT OF COVID-19 ON THE RICE VALUE CHAIN (RVC) IN ASIA

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KEY MESSAGES

COVID-19-induced lockdowns have disrupted input supply, production, processing, marketing, and consumption segments of the rice value chain

The rice value chain is facing adverse impacts of constraints on mobility, access to inputs and services, markets, finance, labour, trade and services, demand and income

The rural-urban disconnect has increased price differences between producers and consumers, decreased cash flows and hampered businesses in the value chain.

Disruptions in the rice value chain will have negative impacts on SDGs, especially Poverty, Hunger, and Health and well-being

To mitigate impacts of COVID-19 on the rice value chain, ensuring access to input & output markets, minimizing supply chain disruptions, promoting digital services, financial support, social safety nets, open trade, and investing in rice research will be key

INTRODUCTION

COVID-19 is the biggest public health crisis of the 21st century so far. The policies and programs to contain COVID-19 also have had massive secondary social and economic effects globally. In Asia, COVID-19-induced lockdowns have disrupted the lives and livelihoods of more than four billion people including millions of rice value chain (RVC) actors. The magnitude of the impacts, however, varies across RVC segments, households, regions, and countries. We developed a conceptual framework to analyze the impacts of COVID-19 on the RVC (See the Figure). For this exercise, we used multiple sources of primary and secondary data such as reports, personal observations, and anecdotal evidences across Asian countries including telephone interviews with RVC actors such as input dealers, farmers, millers, traders, consumers, and policy makers in selected countries.

RISKS AND VULNERABILITY

Asian countries imposed different forms of lockdown, shutdowns and health safeguard measures to minimize the risk and vulnerability to COVID-19. Safety measures included stay-at-home orders, restriction on mobility, closure of borders, home quarantine, social distancing, and the use of personal protective equipments. Consequently, economic activities were either stalled or limited to only essential services required for sustaining life. These measures have had ripple effects on the RVC.

MAJOR DRIVERS OF DISRUPTION TO THE RVC

COVID-19-induced policies and programs have disrupted the upstream (input supply and production), midstream (processing, marketing and logistics), and downstream (retail and consumption) segments of the RVC. We found that the following drivers disrupted the RVC :
Restriction on the mobility of people and goods, limited or no access to inputs and services, shortage of labor and transport, shortage of farm machinery, limited or no access to markets, shortage of financial capital, travel and trade restriction, access to digital services, income shock, reduced food demand, and new government policies.

CHANNELS OF TRANSMISSION OF DISRUPTIONS IN THE RVC

A conceptual framework for the transmission of disruptions in the RVC is detailed in the Figure.

Input segment

Farmers in Bangladesh, India, Philippines, and other Asian countries reported disruptions in the supply chain¹ of material inputs (e.g. seeds, fertilizers and pesticides), mechanization services, irrigation, power supply (e.g. diesel and electricity), agro-advisory services (e.g. extension, climate, and market), loan, and rural institutional services. Farmers are not getting inputs at critical production times, which adversely affects rice production. The disruptions in the agricultural supply chains were transmitted through the closure of or restriction on businesses, logistical bottlenecks, and multiple drivers.

[1] - Input supply disruption takes toll on farming; The Finance Today, 28 April 2020, Siyam Hoque, Read article at this link - <https://bit.ly/2M5jB9q>

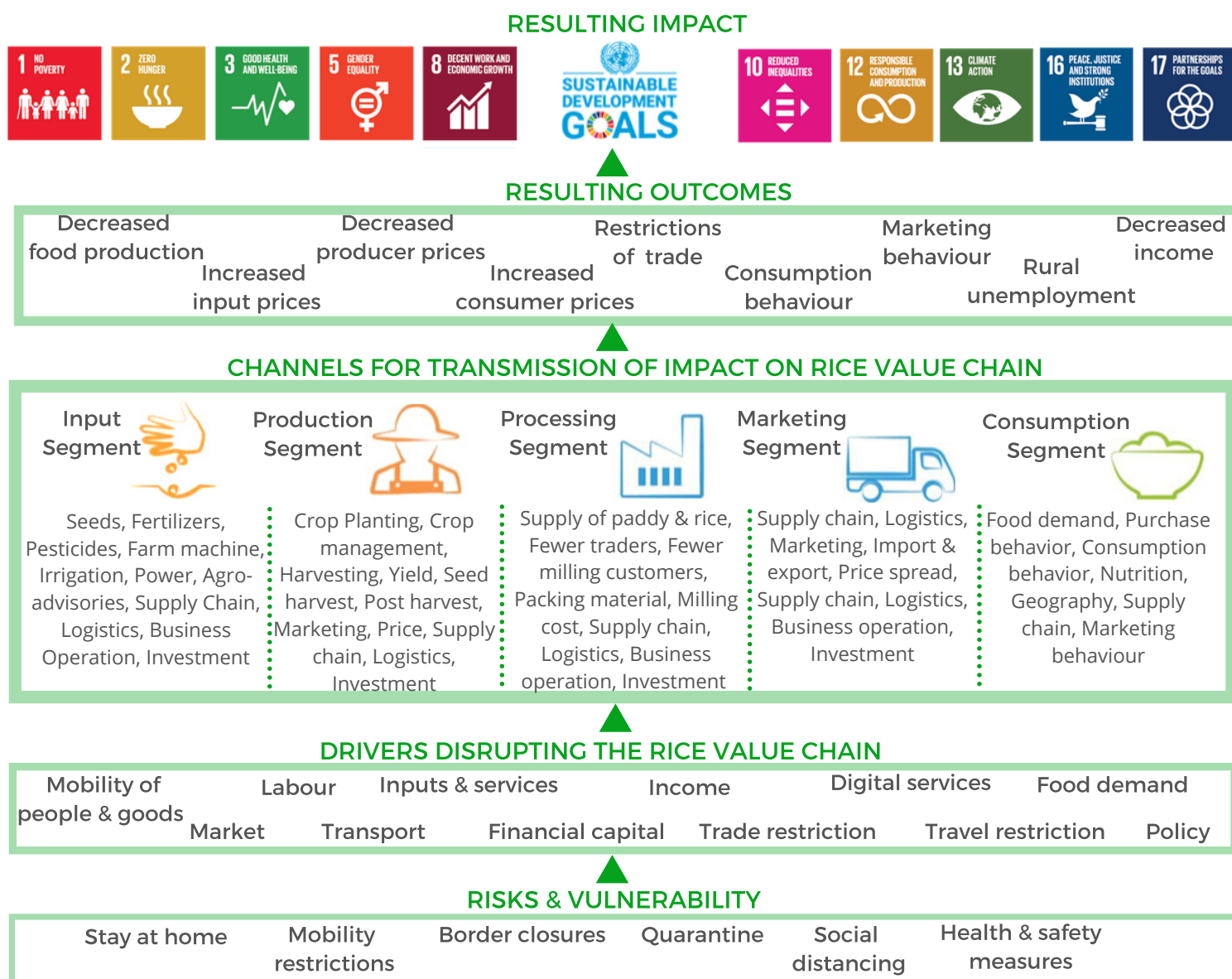


Figure : Conceptual framework for the impact of COVID-19 on the rice value chain

Production segment

Farmers across Asia are facing several challenges in both the ongoing dry season and for the coming monsoon season.

In telephone interviews, Bangladeshi farmers reported several challenges in rice production such as delayed planting and harvesting,² decreased cultivation of farm lands, poor crop management, lower yield, harvesting of quality seeds, higher production and marketing costs, lower producer price, delayed payment from traders, poor access to markets, and lack of financial capital to repay loans and invest in crop production. Farmers across Asia were disconnected from markets³ and could not sell

their products; many Indian farmers are struggling to sell their⁴ horticultural, livestock, and fisheries products resulting in huge income losses.

In Bangladesh, farmers in rural areas are selling vegetables⁵ (e.g. Tomato, Brinjal, and Okra) at 4-5 Taka/kg while their retail prices in Dhaka are 40-50 Taka/kg. The impacts are transmitted through the disrupted supply chain, logistical bottlenecks, and multiple drivers.

Processing segment

All types of rice (traditional husking, semi-auto, and auto mills) have reported disruptions in rice processing (i.e. parboiling, drying, milling, and trading).

[2] Covid-19 pandemic puts paddy harvesting under threat in Bangladesh; Dhaka Tribune; 14 April 2020; Shohel Mamun. Read article at this link - <https://bit.ly/2M3P4Qi>
 [3] Containing COVID-19 impacts on Indian agriculture; ICRISAT; 18 April 2020; Peter Carberry, Arabinda Padhee; Read article at this link - <https://bit.ly/2LZiAGP>
 [4] Indian Farmers Struggle to Harvest, Sell Crops During COVID Restrictions; Voice of America; 8 April 2020; Anjana Pasricha; Read article at this link - <https://bit.ly/3ccGjyh>
 [5] Farmers bear brunt of corona outbreak; Daily Sun; 11 April 2020; ANM Mohibub Uz Zaman; Read article at this link - <https://bit.ly/2M3Nqyk>
 [6] Rice mills come to standstill despite exemption from lockdown; The Economic Times; 26 March 2020; Parshant Krar; Read article at this link - <https://bit.ly/2zz7RAU>
 [7] Covid-19: Cash crisis-hit rice mill owners unable to buy paddy; The Business Standard; 21 April 2020; Azizul Shonchay; Read article at this link - <https://bit.ly/2BaVqvo>

The major challenges faced by rice mills are closure of or restrictions on the operation of rice mills, shortage of labor, logistical bottlenecks in buying paddy and selling rice, decreased availability of paddy, decreased demand for milled rice, fewer customers of milling services, storage problem, shortage of bags and packaging materials, higher procuring and processing costs, shortage of technicians to repair and maintain mills, and shortage of financial capital.

Rice mills across Asia are either closed or are being operated on a limited capacity⁶ although they are considered essential services in most of these countries. They are also facing a serious cash crisis⁷ to repay loans and run businesses.

Marketing segment

All RVC actors (input providers, wholesalers and retailers) have reported significant disruptions in national and international marketing and trade. The disruptions were due to rural-urban disconnection, closure or restriction on operation of markets and businesses, logistical bottlenecks, shortage of packaging materials, higher marketing costs, higher cost of transaction for logistics and supply chains, lower demand for agrifood products, fewer traders, disruption of national and international trade of both inputs and outputs, and cash crisis to repay loans and invest in businesses.

The rural-urban disconnect caused scarcity and higher prices of food in urban markets⁸ while producers have been struggling to sell their products in the rural areas. We observed a large⁹ price spread between producers and consumers even in the peri-urban areas with producers getting only 20-25% of the retail price, which in normal times would be more than 50%. Interestingly, we also observed a shift in marketing behavior with the increased use of digital services in agrifood marketing¹⁰ and more people buying food from supermarkets and through online services¹¹ than traditional (wet) markets.

Consumption segment

We observed significant impacts on the consumption of food in terms of lower demand, changed purchasing and consumption behavior,¹² and increased food insecurity and malnutrition.¹³

The major drivers affecting consumption are declining income¹³, shortage of food supply, higher food prices in urban markets, limited access to markets, lower consumption due to less physical work, people less frequently going out for shopping, and no eating outside home. Due to lack of income, millions of poor are surviving on the public food relief programs, which are primarily cereal-based with a focus on survival rather than nutrition.

The existing 182 million of the very poor (according to pre-COVID-19 estimates) and also millions of others who are just above the poverty threshold in Asia, fear starvation more than the pandemic. Reports¹⁴ showed that poor households are adjusting their income shocks by consuming less nutrition-dense food and more cereals. Typically, Asian households spend about 40%¹⁵ of their total budget on food and they purchase about 80%¹⁶ of the food they consume.

The disruptions in food supply, the income drop, and food price hike will have a huge impact on food and nutrition security, especially for the poor. The existing large number of undernourished population in Asia (513 million according to pre-COVID-19 estimates) is projected to increase significantly due to the pandemic.¹⁷

RESULTING IMPACTS

We are already observing adverse impacts arising from the disruptions in the RVC. The true magnitude of the adverse impacts will be known in the medium to long terms.

In the short to medium terms, we have observed or are likely to observe decreased rice production, increased input prices, lower producer prices, higher consumer prices, export bans and other trade restrictions, changed consumption and marketing behaviors, rural unemployment, and decreased household income.

In the long-term, the disruptions of the RVC will substantially impact 9 SDGs. We fear that the pandemic will have significant negative impacts on SDG 1 (poverty), SDG 2 (hunger), and SDG 3 (health and well-being).

[8] Prices of daily essentials rising in Chattogram; The Business Standard; 16 April 2020; Abu Sayem; Read article at this link - <https://bit.ly/3gvu7fo>

[9] Ensuring food security during lockdown; The Daily Star; 4 May 2020; Tanjir Hossain; Read article at this link - <https://bit.ly/2yLSDwe>

[10] Online Shopping: The New Reality; The ASEAN Post; 10 April 2020; Athira Nortajuddin; Read article at this link - <https://bit.ly/2XwjWhW>

[11] 386,723 businesses pivot to delivering groceries online in Dhaka; The Daily Star; 16 May 2020; Read article at this link - <https://bit.ly/2ASSVjP>

[12] COVID-19 Is Expected To Be A Key Driver Of Acute Food Insecurity; Forbes; 23 April 2020; Emanuela Barbiroglio; Read article at this link - <https://bit.ly/2TJc4s5>

[13] Dealing with food security in the face of COVID-19: Where Governments should focus; ASARECA; 2 April 2020; Ben Moses Ilakut; Read article at this link - <https://bit.ly/36AwkBX>

[14] The COVID-19 nutrition crisis: What to expect and how to protect; IFPRI; 23 April 2020; Derek Headey & Marie Ruel; Read article at this link - <https://bit.ly/2X3xtJG>

[15] Household food spending divides the world; Financial Times; 8 January 2019; Michael Kavanagh; Read article at this link - <https://on.ft.com/36zm78l>

[16] Urbanization, Diet Change, and Transformation of Food Supply Chains in Asia; Michigan State University; Thomas Reardon, David Tschirley et al.; <https://bit.ly/2M4uWNX>

[17] Risk of hunger pandemic as COVID-19 set to almost double acute hunger by end of 2020; World Food Program; Paul Anthem; Read article at this link - <https://bit.ly/36zbC4R>

Besides, huge negative impacts are foreseen on SDG 5 (gender), SDG 8 (economic growth), SDG 10 (inequality), SDG 12 (consumption and production), and SDG 16 (peace, justice, and strong institutions). Interestingly, we are already observing and anticipating positive impacts on SDG 13 (climate) from reduced air pollution, lower greenhouse gases emissions, and decrease in the use of natural resources.

RECOMMENDATIONS

The COVID-19 pandemic has disrupted all segments of the RVC. Therefore, mitigating the impacts of the crisis can not focus on just one segment of the RVC. Rather it requires a systems approach. We recommend the following actions to mitigate the impact of COVID-19 on the RVC :

1 - Ensuring access to inputs and services:

Ensuring the availability of inputs, mechanization services, and agro-advisory services to rice farmers for timely planting and harvesting as well as optimal management of crops.

2 - Minimizing supply chain disruptions:

Perhaps by establishing oversight committees led by respective Agriculture Ministries with representation from other relevant ministries to support the smooth operation of agricultural production, processing, and marketing activities. These committees should facilitate the mobility and availability of workers, remove logistical bottlenecks, and ensure free flow of goods and services.

3 - Ensuring market access:

The oversight committees should help identify options to improve smallholder farmers' access to markets to sell their products. This may involve declaring minimum support prices for rice and procuring adequate quantity of rice directly from farmers as temporary market support measures. Other measures may include allowing local markets to operate temporarily in large open areas and securing connection from rural areas to peri-urban and urban markets using improved and safe supply chain logistics.

4 - Financial support:

Providing financial support to all RVC actors to alleviate liquidity crisis. This may involve subsidy on inputs, low-interest loans, loan moratorium, and tax holidays.

5 - Digital services:

Promoting the use of digital services to provide agro-advisories such as weather, climate early warning, crop management, finance, and market. Also, digital services should be promoted to buy and sell agricultural products. For example in Vietnam, a "Rice ATM"¹⁸ has been developed and is used to provide free rice to the poor.

6 - Market and trade mechanisms:

Strengthening the monitoring of rice markets to control artificial food shortages and price hikes. Also, cooperation among countries should be strengthened to keep international trade channels open, which is important to maintain an adequate supply of rice at an affordable price.

7 - Social safety nets:

Implementing a comprehensive social safety net program to protect the vulnerable people from poverty and/or food insecurity. This may include providing food to the poor for free or at subsidized prices, maintaining adequate rice stocks, strengthening rice price and market monitoring systems.

8 - Investment in rice research:

Investing in rice research and innovation to improve productivity, profitability, and resilience of the rice agrifood systems and national food security.

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[18] - "Rice ATM" feeds Vietnam's poor amid virus lockdown ; The Financial Express Today, 15 April 2020, Reuters, Read article at this link - <https://bit.ly/2zzzCl9>