

# Post-COVID-19 ICT Roadmap: Agenda for Agriculture and Food Security

## How the Roadmap came to be

With the growing certainty that COVID-19 is here to stay, the ICT Division of the Government of Bangladesh is developing a roadmap to fight the pandemic and ensuing crisis and to find innovative ways to flourish in the 'new normal'. Agriculture and Food Security is one of the 18 priority sectors selected based on the impact of COVID-19 on the sector and its potential for transformation of the economy and society.

## Why the Agriculture and Food security

A study on national food security by BRAC revealed that during the 45-day lockdown period between March and May, the country's farmers faced a loss worth Tk. 565.36 billion (€5.9 billion, \$6.66 billion). People involved in agriculture experienced a net income loss of 80%, with 66% reporting that their income had reduced to zero. South Asian Network on Economic Modeling (SANEM) has estimated Bangladesh's overall poverty rate to spike to 40.9% following the outbreak, making an additional 36 million people who are currently 'non-poor' to be categorised as vulnerable. 43% of the vulnerable people will be involved in economic activities related to cropping, animal, and fish production, that is almost 15.5 million or 66% of those employed in the sector.

**"At the same time while we're dealing with [the] COVID -19 pandemic, we're also on the brink of a hunger pandemic."**

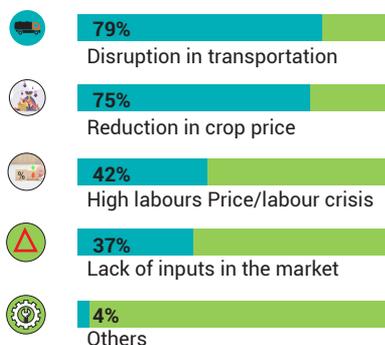
-David Beasley  
executive director, World Food Programme

## Impact of COVID-19

The unprecedented and aggressive nature of the COVID-19 outbreak has disrupted almost all aspects of Bangladesh's primary economic activities and impacted our food security status, especially the nutrition of pregnant women and children, and low income and marginalized population. The sudden halt in supply chain, import and export barriers, dire labour shortages, and unregulated market prices have led to decrease in consumption due to both unaffordability and unavailability. Reduced farm incomes, huge job losses in both rural and urban areas, and return of migrant workers from abroad have led to mass relocation to rural regions.

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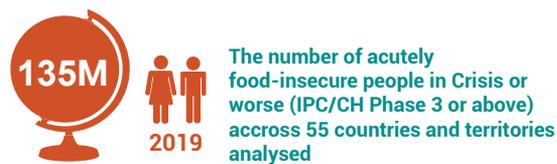


Source: Innovision 2020

## Constraints

Poor, fragmented, and dysfunctional access to information; disruptions in extension services; inefficient national coordination and planning systems involving the private sector, NGOs, and communities; lack of appropriate financial stimulus for the farmers and the poor traders, who are mostly part of the informal sector and hardly have access to banks; inadequate inter-ministerial coordination required to ensure logistics supply, procurement, and national distribution have halted any immediate pivoting that the players in the sector could have undertaken to minimize the intensity of the initial blow following the pandemic.

Despite more than a decade of investment in application of ICT in agriculture by the Government of Bangladesh and development partners, digital literacy among farmers still remains low and there is no comprehensive real time data for effective decision-making; the solutions that were in place were not enough to mitigate the impact of COVID-19. Disconnect between the e-commerce system and the farmers; absence of a commodity exchange system; lack of monitoring on market price resulted in catastrophic consequences where crops were left to rot in the fields and farmers had to drain milk on the roads.



## Numbers of acutely food-insecure people in crisis or worse (IPC/CH Phase 3 or above) millions) by key driver

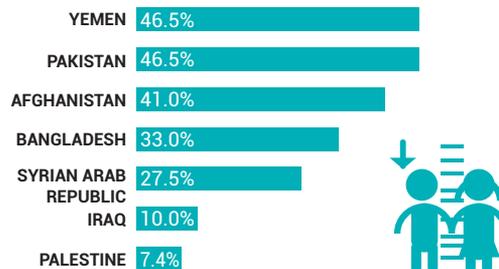


Conflict/insecurity Weather extremes Economic shocks

Source: FSIN, GRFC 2020

**2020**  
Conflict/insecurity, weather extremes, desert locusts, economic shocks and COVID-19 are expected to be the key drivers of acute food insecurity

## Percentage of children under 5 years who are chronically malnourished (stunted)



Source: FSIN, based on Smart surveys, DHS, HNO, HRP and NNHS.

## Action Agenda

Taking learnings from local and global best practices and to tackle: (i) the effects of the pandemic, and (ii) the existing systemic and regulatory shortcomings of the agro-sector and ICT in the agro-sector, the following five interventions have been identified for perusing to remerge stronger. One of the action agenda [ highlighted in (colour) ] is expected to have a domino effect in terms of market transformation for farmers.

Title	Kiosk-based mobile application through PPP and private sector led e-commerce models for Qurbani cattle trade	Developing an online marketplace for agro-machinery rentals for irrigation, ploughing, seeding, weeding, and harvesting	e-Commerce and social media (Facebook, WhatsApp) platforms connecting farmers to individual and institutional buyers in urban areas through displaced rural and urban youth	Localized agro-advisory and e-training platform for farmers including digital literacy	Launching of Digital marketplace and commodity exchange through PPP and private sector led models. Launching of commodity futures regulatory commission.
Why (To address:)	Health risk concerns when visiting haats and a certain decline in interest for cattle sacrifice for Eid-ul-Adha 2020	Acute labour shortage in agriculture, further intensified during COVID-19 lockdowns and the large chunk of young and tech-savvy urban population migrating to rural areas	Disruption in the supply chain of agro-commodities leading to possible exploitation by unscrupulous traders and large-scale youth unemployment from massive layoffs and return of migrant workers	Severe impairment of agro-extension services leading to lack of access to the right and timely advisory services (technical and financial) which can threaten food safety and security	Price volatility, information asymmetry, demand fluctuations, price controls and syndication in the agro-market systems
What	Mobile application virtually connecting all physical haats to customers	The mobile rental service, with the emigrated youth as providers	Local entrepreneurs armed with training can serve as aggregators and interface between farmers and low income population (unemployed RMG workers) who will help market the rural produce to households and businesses	Automated agro-advisory on best management practices based on local weather conditions, soil type, and farmer plantation dates; financial literacy and health risk mitigation training; adoption of 'new normal' practices in agriculture	A digital commodity exchange will connect the farmers with the buyers real time and across the country, with information on price and volume demanded and supplied of agricultural produce
Lead Agency	Ministry of Livestock	Ministry of Agriculture	Ministry of ICT	Ministry of Agriculture	Ministry of Agriculture
Actor	Cattle farmers, e-commerce partners, MFS/DFS partners, customers	Farmers, app developers, app service providers, agro-machinery entrepreneurs and importers	ICT Division, Ministry of fisheries and Livestock, Ministry of Agriculture, SME Foundation, NGOs, development partners, start-ups	Department of Agriculture Extension (DAE), Agri-inormation Services (AIS), NGOs, private sector working for BoP, Development partners	Ministry of Agriculture, Ministry of Fisheries and Livestock, Farmers, agro-entrepreneurs of all kinds, Agro-based industry, SEC
Coordinator	ICT Division	ICT Division	ICT Division	ICT Division	ICT Division
Facilitator	e-Cab	Private sector experts in commodity futures exchange establishment	Ekshop	a2i	Private sector experts in commodity futures exchange establishment
Partners	City corporations/ haat management, DLS, e-commerce platforms, Ministry of ICT/a2i, MFS/DFS partners (Nogod, bKash), Ministry of Information (MoI), BTRC, DGHS, Ministry of Road, Transport and Bridges (MoRTB), Cabinet Division, MoLGRDC	BADC, Ministry of Industries, Ministry of Commerce (MoC), PKSF PACE Project, PKSF RMTP 2 Project, USAID RDC Project, donors like USAID, DFID, IFAD	Ministry of Youth, PKSF, iSocial, BGMEA/ BKMEA, Truck Lagbe, E-Post, bKash/ Nogod, MoA, Department of Agricultural Marketing (DAM), Ministry of ICT/a2i,youth organizations line paikareesale.com, bhalo social enterprises, e-Entrepreneurs, Ministry of ICT/ Start-up Bangladesh	PKSF, ERD & Planning Commission, DGHS, Ministry of ICT/ a2i, Bilateral/ multilateral agencies, PPPA	Development partners/ IFAD/ PKSF, MoA, MoLF
Financing and modality	PPP; cost of services for e-commerce platforms, DFS/MFS, and e-CAB	DPPP for app development; cost of goods and services for agro-machinery sellers and manufacturers	Investment or micro-finance for e-entrepreneurs; investing in capacity building of transportation providers; none for MFS/DFS	DPPP; initial investment of online learning provider	PPP; initial investment of commodity exchange contractor; cost of goods and services of agri-businesses

Welsh, T. 2020, 'WFP chief warns of 'hunger pandemic' as COVID-19 threatens food security', Devex, 22 April, Retrieved: 08 July 2020, from <https://www.devex.com/news/wfp-chief-warns-of-hunger-pandemic-as-covid-19-threatens-food-security-97058>

'Experts: Bangladesh's food security not at stake, access to all needs to be ensured', 2020, The Dhaka Tribune, 13 April, Retrieved: 08 July 2020, from <https://www.dhakatribune.com/bangladesh/2020/04/13/experts-bangladesh-s-food-security-not-at-stake-access-to-all-needs-to-be-ensured>