Responding to the impact of the COVID-19 outbreak on food value chains through efficient logistics

**Collection of contributions received**

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# Topic note

The COVID-19 pandemic has developed into the greatest global health, social and financial challenge of the 21st century. It is impacting not only people’s lives, livelihoods and nutrition but also food trade, food supply chains and markets.

The pandemic falls into a period that was already seeing an increase in the number of hungry people in the world, coupled with a global economic slowdown[[1]](#footnote-1). The recession, which is being forecast as one of the immediate results of the pandemic, will exacerbate these problems and calls for swift multi-disciplinary responses to avoid that the health crisis will trigger a subsequent food crisis.

With the pandemic reaching its peak at different points in time across the world and hitting some places with more severity than others, some countries are already slowly reducing their containment measures. These recovery phases come with their own challenges but could at the same time provide invaluable insights for countries that are still facing the full brunt of the disease.

To support countries in assessing their local situation and to help decision makers design coherent and effective policies to mitigate the impact of COVID-19 on food production, trade and consumption (access), FAO has prepared a collection of policy briefs, which present policy recommendations grounded on qualitative and quantitative assessment of the pandemic’s impacts on these areas.

All policy briefs can be accessed here: [www.fao.org/2019-ncov/resources/policy-briefs/en](http://www.fao.org/2019-ncov/resources/policy-briefs/en/).

Forming part of this series is the Policy Brief “Responding to the impact of the COVID-19 outbreak on food value chains through efficient logistics”[[2]](#footnote-2) prepared by the Agricultural Development Economic Division and the Nutrition and Food Systems Division of FAO.

This brief highlights that the measures implemented around the world to contain the COVID-19 pandemic have entailed a severe reduction not only in goods and services that rely on transport, but also in the migration of labour both domestically and internationally. To avoid that these measures have a negative impact on food systems and might result in food shortages, this brief summarizes some practices that could be useful for governments and the private sector to maintain critical logistical elements in food value chains, while prioritizing the health of consumers and workers.

With this online consultation we invite you to share examples, best practices and case studies of how the impact of the COVID-19 containment measures on food security and agriculture are being managed in your countries from a logistical point of view.

Please let us know if and how the measures to maintain a functioning food supply chain from “farm to fork” are being applied locally and nationally, and if any unexpected challenges have been encountered along the way.

Your input will be used to further refine FAO’s policy tools and to learn about examples of good practices that could be used to guide the response in other parts of the world.

To help us with the subsequent analysis of the consultation’s outcomes, we kindly ask you to address these guiding questions:

1. Can you share examples on how the bottlenecks listed in the policy brief have been addressed and with which result?
2. What has been the impact of measures to face the COVID-19 pandemic on the exports of food and cash crops?
3. What has been the impact of measures to face the COVID-19 pandemic on the imports of food ingredients, inputs, packaging and other goods related to the food value chain?
4. How have logistics from the national to the local level been impacted by the pandemic and response measures?
5. What have been the implications on informal cross-border trade?
6. What challenges related to the food value chain have emerged during the relaxing of COVID-19 containment measures?
7. Are there any additional areas not yet included in the brief that warrant particular attention with regard to logistics affecting the food supply chain?

We thank you very much for your valuable comments and look forward to learning from your experiences.

Marco V. Sánchez

Deputy-Director and Officer-in-Charge (day-to-day matters)

Agricultural Development Economics of FAO

# Contributions received

## [Mahesh Chander](http://www.fao.org/fsnforum/fr/member/mahesh-chander)****,**** Indian Veterinary Research Institute, India

Hello all,

Covid-19 Pandemic & lockdown has been an unpredented experience for most of us, the measures required were extraordinary too. The Government of India came up with advisories, guidelines to lessen miseries & easing farming operations. The Government order in this regard explains the measures taken in India.

<https://www.mha.gov.in/sites/default/files/MHA%20order%20dt%2015.04.2020%2C%20with%20Revised%20Consolidated%20Guidelines_compressed%20%283%29.pdf>

My following blogs on Covid-19 lockdown in context of Extension & Advisory services expalin the various measures taken or could have been helpful.

<https://www.aesanetwork.org/covid-19-what-can-eas-doto-support-indian-farmers/>

<https://www.aesanetwork.org/blog-117-covid-19-how-eas-can-support-livestock-and-poultry-farmers-during-lockdown/>

<https://www.agrilinks.org/post/covid-19-crisis-india-how-extension-advisory-services-can-help>

Looking forward to learn more about the covind handling via guiding questions marked for this discussion.

Thanks

Mahesh Chander

Principal Scientist, Agricultural Exension

ICAR- Indian Veterinary Research Institute

## [Mahesh Chander](http://www.fao.org/fsnforum/fr/member/mahesh-chander)****,**** Indian Veterinary Research Institute, India (second contribution)

Hi all,Flowers are no food, but grown by farmers, used by all of us.With temples closed, weddings postponed, and other ceremonies and celebrations stopped, the Indian fresh flower industry was worst hit - who would buy flowers and why? The flower farmers are devastated watching flowers rotting on the farms and causing huge losses. Is there solution to this?

Farmers’ problems were further aggravated by rumours spread via Social Media channels particularly Whatsapp, linking animal products consumption to Covid-19, which was unfounded and baseless. Minister of Agriculture & other higher officials issued statements in Media that chicken & meat are safe for consumption showing up photos & videos eating these items.

Thanks

Mahesh Chander

## Lizzy, Nigerian women agro allied farmers association, Nigeria

For us Farmers in Nigeria, We have gone to farm with what we have.

Up till now we are yet to receive imputs in form of seeds, fertilizers and herbicdes, which will support our farming season. The impact of not supplying farmers what they wantbmay result to poor harvests and low out puts.

Farmers are also waiting for support as palliatives which did not come. These may be reasons or excuseses for poor or lower harvests as at harvest time.

## Santosh Kumar Mishra, Population Education Resource Centre (PERC), Department of Continuing and Adult Education and Extension Work, S. N. D. T. Women's University, Mumbai, India

1. Can you share examples on how the bottlenecks listed in the policy brief have been addressed and with which result?

The bottlenecks addressed by the FAO (Food and Agriculture Organization of the United Nations) in the Brief (titled *Responding to the impact of the COVID-19 outbreak on food value chains through efficient logistics*; published on web link: <http://www.fao.org/3/ca8466en/CA8466EN.pdf> on April 4, 2020), has debated some of the situations that can hinder supply of and access to adequate food to the beneficiaries (across the region of the globe). The COVID-19 pandemic is caused by the SARS-CoV-2 virus (referred to as the COVID-19 virus). *However*, it seems that all food-supply chains have not been looked into, the reasons being non-availability of data/information owing to the world-wide COVID-19 epidemic (and resulting lockdown). The governments around the world have implemented measures to curb spread of the COVID-19.

1. What has been the impact of measures to face the COVID-19 pandemic on the exports of food and cash crops?

National governments around the globe have taken appropriate measures to ensure adequate production and supply of food chain. Nature of measure taken depends on locally prevailing situations of the economy. In cities around the world, reports of panic buying and food hoarding have proliferated since the COVID-19 pandemic began.

1. What has been the impact of measures to face the COVID-19 pandemic on the imports of food ingredients, inputs, packaging and other goods related to the food value chain?

On the supply side, global grain stockpiles are healthy but could quickly be depleted as the virus disrupts food production and distribution. And shortages of animal feed, fertilizers, and pesticides have increased both the costs of farming and the risk of bad harvests. *Further*, in the post-outbreak era, what can food sector players do to make their supply chains both responsible and resilient? Solutions should run along below lines:

1. Go-to-market versatility: Existing go-to-market channels like bars and restaurants have closed down and expectations are that it will take 12-18 months before societies fully recover from COVID-19. Companies, therefore, need to invest in capabilities, especially focusing on online/digital solutions.
2. End-to-end supply chain management: As sourcing ingredients/merchandise becomes harder for businesses, one alternative is to work with a wider pool of suppliers, including regional ones, and keep larger strategic stocks. A broad product range is more expensive to maintain, but spreads risks. An alternative is to simplify recipes and/or remove problem products from the portfolio, resulting in a leaner, more manageable product range, less risk and lower costs. That would also free up time and resources to invest in the development of innovative new products that combine a healthy lifestyle with minimal environmental impact. Meanwhile, it’s important to invest in relationships with supply chain partners. Supplier and customer loyalty and resilience are pivotal to ensure business continuity and to thrive post-COVID-19.
3. How have logistics from the national to the local level been impacted by the pandemic and response measures?

From harvesting fruits and vegetables in India to operating meat plants in the USA, labor shortages are becoming increasingly apparent as cross-border travel restrictions in much of the world disrupt the normal seasonal cycle of migrant farm workers. And transportation shortages are making it more challenging to get produce to market.

It is important to note that nobody knows the timetable for the lifting of COVID-19 containment measures. But when the lockdown is over, businesses that have used the downtime well – by embracing supply chain innovation, diversification and collaboration, preferably also integrating sustainability goals– will come out fitter for the future.

1. What have been the implications on informal cross-border trade?

Farmers need to reconfigure their supply chains away from bulk wholesale to (currently closed) restaurants, hotels, and schools, and toward grocery stores and home delivery. But that takes time, not least because commercial and consumer food products are prepared and packaged differently. In the meantime, fresh produce has had to be destroyed. *Furthermore*, some major food-producing countries have already imposed export bans or quotas in response to the pandemic, as Russia and Kazakhstan have done for grain, and India and Vietnam have done for rice. Meanwhile, other countries are stockpiling food through accelerated imports, as is true of the Philippines (rice) and Egypt (wheat). Such food protectionism may seem like a good way to provide relief to the most vulnerable segments of the population, but simultaneous interventions by many governments can result in a global food-price surge

1. What challenges related to the food value chain have emerged during the relaxing of COVID-19 containment measures?

While the COVID-19 pandemic has led to falling growth, rising unemployment, widening fiscal deficits, and soaring debt in advanced and emerging economies alike, the appearance of new infection hotbeds in developing countries will mean an even starker trade-off between saving lives and protecting livelihoods. Moreover, developing countries are already facing a sudden stop in capital and remittance inflows and a collapse in tourism, while the terms of trade and currencies of the many oil and primary-commodity exporters among them are crashing. Even before COVID-19, many low-income countries were at serious risk of debt distress. And many of these economies are also highly vulnerable to a spike in food prices.

Nomura’s Food Vulnerability Index ranks 110 countries based on their exposure to large food-price swings, taking into account their nominal GDP per capita, the share of food in household consumption, and net food imports. The latest reading shows that of the 50 countries most vulnerable to a sustained rise in food prices, nearly all are developing economies that account for nearly three-fifths of the world’s population.

In fact, surging food prices would be a global problem, because they are highly regressive everywhere. Even in developed economies, a jump in food prices would drive a bigger wedge between the rich and poor, exacerbating already severe wealth inequality. No one should ignore the age-old connection between food crises and social unrest.

Multilateral institutions have mobilized quickly during the crisis to provide emergency loans to a record number of developing countries, while G20 creditors have agreed to a temporary suspension of debt-service payments from poor countries that request forbearance. But because the risks posed by surging food prices do not apply only to the most vulnerable economies, temporary debt relief may need to be extended to other countries as well.

1. Are there any additional areas not yet included in the brief that warrant particular attention with regard to logistics affecting the food supply chain?
2. With the pandemic threatening to wreak even more economic havoc, governments must work together to address the risk of disruptions to food supply chains. More broadly, some modicum of global policy coordination is essential to prevent food protectionism from becoming the post-pandemic new normal. *However*, following areas warrant particular attention by policy makers with regard to logistics affecting the food supply chain:
3. Harvests: As spring arrives, crops are rotting in the fields. Europe’s asparagus growers, for instance, are dramatically short of staff, with migrant workers from Eastern Europe unable to come to their farms due to border restrictions - or simply afraid to risk infection.
4. Logistics: Food transport, meanwhile, is steadily turning into a logistics nightmare. Where produce does get harvested, border controls and air freight restrictions are making international transport of fresh goods extremely difficult – and expensive.
5. Processing: Food processing plants are scaling or shutting down due to containment measures or staff shortages, with their suppliers scrambling to adjust their output. In Canada, for example, poultry farmers collectively acted to reduce their output.
6. Go-to-market: Companies that normally sell a significant portion of their output through out-of-home channels (for example soft drink producers) are seeing their sales slashed.
7. Sourcing: Supermarkets, while scoring stellar sales figures, are understaffed and under-delivered. Because of sourcing problems, products based on wide range of ingredients are becoming increasingly difficult to make and are therefore disappearing from store shelves.

## ****Lal Manavado,**** Independent analyst/synthesist, Norway

Enhancement of Food System Logistics in Response to Medical Emergencies

This contribution consists of three integral parts. The first outlines the purpose of the suggested enhancement and what that objective entails, and they represent the necessary conditions for achieving our objective. In the second part, we discuss the concrete steps needed and emphasise the importance of a rapid response. The contribution concludes with some notes on its implementation.

It will be obvious that the kind of enhanced logistics in a food system needed to cope with the food requirements of the public under any medical emergency such as the present Corona infection are identical in their characteristics. It is necessary to understand that what may differ in their nature is only the type of precautions the personnel who run the food system logistics ought to take. Since such measures are best prescribed by competent medical microbiologists, we need not take up that problem here.

Even if we should limit ourselves to food system logistics, we cannot overlook several logical facts we have to bear in mind:

 • The purpose of enhanced food system logistics is to ensure the best possible food supply to end-users under a given medical emergency with the restrictions it entails.

 • But the usefulness of undertaking such an enhancement depends on there being a sufficient quantity of food already available for distribution.

 • Thus, useful enhancement of food system logistics and the availability of a sufficient quantity of food are logically inseparable as the two sides of a coin.

Therefore, we need a holistic, pragmatic approach here to ensure the best possible solution under the present circumstances. It is tempting to point out the obvious, viz., that such measures are difficult to undertake under a crisis, and we should have had them in place before such has arisen. However, this is of little use; so, let us see what the best we can do now. The first step we need is to determine how best we may ensure an adequate food supply to the public as soon as possible.

No government seem to have in place a food and agriculture policy segment to be activated under a medical emergency for rapid response. As a rapid response is essential, implementation of such a policy segment should be the responsibility of a central directing authority that may delegate the relevant logistic functions to a set of operators chosen for their efficiency, willingness and ability to undertake coordinated quick action.

These operators may include a variety of civilian and military operators who will act in unison under the direction of a central authority and/or its regional representatives. In situations like the present one, central government seem to be the most appropriate for the purpose. It and the operators it may chose should bear the following critical factors in mind:

 • Quickness of response is of the essence.

 • Therefore, no time should be lost on data collection and analysis, nor yet on research.

 • For all practical purposes, information on the kind and quantity of needed food may be obtained from local food sellers, ware houses, wholesale merchants, consumer bodies, etc. As this is not an exercise in precision, such information would be a reliable enough target for logistical purposes.

 • In addition to the existing storage facilities, it might be necessary to requisition extra space for food storage and deploy additional personnel to manage them. Such storage units ought to be restricted to dry foods and should be distributed to suitable outlets as fast as possible.

 • In order to deal with inadequate infra-structure, extensive use of military transport is highly recommended.

 • Coordinated military and civil transport should be used to carry fresh food items quickly to the targeted areas for rapid local distribution.

 • Attempts to establish cold storage facilities in areas where none exists are deprecated, for such efforts are time consuming and may be of very limited real use.

 • Central authorities may rapidly establish agreements with foreign suppliers/donors of food while the appropriate international organisations like the UN should do their best to provide timely financial help to expedite such procurement and its transport.

 • Local authorities to whom the government has delegated the function should set up local stores of food and transport in order to distribute essential food items to the needy people of the area on subsidised prices or free of charge. This may already have become a vital necessity in large cities with slum populations.

 • As the logistic capacity of where it is most needed is limited, i.e., in less affluent countries, it may be necessary to introduce food rationing and stringent anti-hoarding measures to support the logistics. Indeed, one has personally experienced difficulties in procuring some essential dry foods while living in an affluent country at the beginning of the present pandemic.

 • In less affluent countries, transport may become a significant obstacle to rapid deployment of food supplies. While the central authorities may be able to requisition some local vehicles, international help may be needed to procure the necessary fuel and more vehicles for the purpose.

So far, we have discussed two aspects of the logistics involved in the selling sub-system of a food system. However, as we have noted earlier, this part of food system can operate only as long as food is produced by its yielder/harvesting sub-system. Fisheries represent a harvesting sub-system operating in nature i.e., sea and bodies of fresh water. Yielder sub-system often depends on a supplementation sub-system that provides fertiliser, biocides, irrigation, etc., which supplements the deficits in ecosystems services on which agriculture depends.

Therefore, in order to ensure the usefulness of the enhancements in logistics we have discussed so far, it is also necessary to improve the logistics as they are required by the yielder/harvester and supplementation sub-systems of a food system. The very first contributor to this discussion has pointed out the problems caused by its neglect. We must now look at how to enhance the logistics of food production/harvesting:

 • Quick procurement of seeds for planting, animal feed, fertilisers, etc., for timely distribution to farmers.

 • Similar procurement of necessary fuel spares for farm machinery, etc., for distribution.

 • It is very important that no new crops or domestic animals are introduced to food producers at this juncture. What is needed is a rapid and steady production of essential food and this can hardly be achieved by introducing new things to the farmers in less affluent countries who are not ‘expert’ agriculturalists. Practical people need pragmatic support to do what they can do best at present. When appropriate, the authorities may support a moderate increase in the areas of cultivation.

 • Authorities may have to face a reduction in the number of people engaged in food production owing to Corona infection. In order to overcome this difficulty, military and civilian volunteers may be recruited to replace them under the direction of agricultural extension workers and local farmers.

 • Procurement of the items listed above may require financial assistance from international bodies like the UN and other relevant donors. Under no circumstance should donors demand changes in the kinds of food produced or the methods of production currently in use.

Successful implementation of the proposed strategy viz., enhancement of food system logistics as an important aspect of the policy of ensuring the best availability of essential food items at an affordable price during the present crisis has to meet the following requirements:

 • Rapidity of implementation; should the current pandemic continue, the danger in a fairly rapid decrease in food production and slowing of food preservation, storage and distribution may be anticipated. This will have disastrous consequences in loci of deprived populations like slums, rural areas, and even cities of high population density. This might lead to a geometric increase in the numbers of the hungry, and hunger is the most potent factor that compels people to override their scruples as historical examples illustrate. Therefore, it is essential to act immediately before the available food supplies run below the critical level.

 • In order to ensure timely results, actions involved in food production, preservation, storage and the required logistics should only aim at a quantitative increase rather than any qualitative change, for time is short and the consequences of failure are grave.

 • Skilled actors simultaneously performing different scrip’s to entertain the public can only confuse the people. Likewise, independent sources undertaking diverse efforts to enhance the food system logistics would only result in delay and waste.

 • Authorities should understand that commercial food production, preservation, cooking (industrial food) and selling entities employ logistics to ‘maximise’ their gains. During the present crisis it behoves the governments elected by the people to override commercial motivation of the private sector and place public welfare as its most important goal. Doing so may require any combination of the following actions:

 • Taking control of the commercial food production units (farms of every kind) to the extent that the requisite part of their output is directed to be delivered to outlets where it is most needed. Such output should be delivered in their uncooked form as flour, meat, fish, vegetables etc. Commercial entities may utilise this opportunity to show their sense of social responsibility by gladly volunteering to do this.

 • Government should actively seek help from the military and national volunteer organisations to assist it in implementing the actions suggested here. All involved in this work should be directed by the central authority of the national government which may be delegated to appropriate local bodies. No independent operators should be allowed to act outside the strategic plans listed here. Total coordination of all actions is an absolute necessity under the present circumstances.

 • All logistical support directed at yielder/harvesting and supplementation sub-systems should be under the operational direction of local agricultural extension officers or skilled local farmers/fishermen. Here, it is important to keep out the outside experts from offering unsolicited and inappropriate advice.

 • We cannot offer any generic description of the optimal food outlet as conditions vary so much. It may even be necessary to establish rough and ready food depots in some areas neglected by larger commercial enterprises like outlet chains. Some of the possible outlets targeted by enhanced logistics may be any of the following:

1. All local cooperative shops.
2. Independent retailers.
3. Emergency food outlets organised by the local authorities, volunteer groups, etc.
4. Military units deployed locally to distribute free food parcels for the poor.

 • It is highly recommended that the expertise in logistics in the military is fully and productively utilised as it is far superior to that of the civilian bodies.

 • While we have always advocated a wholesome and varied balanced diet commensurable with local food culture as our ideal, this becomes somewhat academic when the conditions are grave. Therefore, we now emphasise the need for a quantitative sufficiency of food at an affordable price. However, we do not support such sufficiency to be achieved with any ready-made foods, hence our previous insistence on the distribution of raw materials to be cooked at home.

In conclusion, we must emphasise once more the urgent necessity of undertaking these enhancements of food system logistics as soon as possible in order to avert a looming disaster; it is not just a matter of nutrition, for we should never underestimate the power of mass hunger to override our moral and social scruples. The resultant behaviour would tear the current social fabric fragile as it is in many places, plunging the world into another dark age. Its progress would be rapid, for it would escalate geometrically. Hence the urgent need for action now and debate can be safely left to the posterity.

We have not sketched nuts and bolts of implementation because there are too many variations in logistical needs. Even in the affluent countries, where the tools needed for logistics are in place, their current deployment is far from being optimal. In less affluent countries, suitable vehicles, storage facilities and of course, the whole of food production may have to be supplemented. Thus, nobody can afford to be complaisant, and need to act. Here, a well coordinated international action to fill the short falls in food supplies and equipment in many countries will be necessary. It is hoped such assistance will be forthcoming without time being wasted in fruitless and acrimonious discussions and/or inept waste of time in data collection, analysis and research. Critical times call for prompt and appropriate action, and these can only spring from a holistic synthetic approach.

Best wishes!

Lal Manavado.

## Mahesh Chander, Indian Veterinary Research Institute, India (third contribution)

How have logistics from the national to the local level been impacted by the pandemic and response measures?

1.When the wheat harvesting season was approaching in April, farmers faced problems of non availability of harvesters and labourers even though restrictions on farming operations were lifted by the government. In most of the Northern Indian states, farmers hire harvesters from Punjab, but initially there was relectance on the part of operators to lend harvesters, coupled with labour shaortages harvesting was delayed. With persuations, advisories and confidence building measures taken by government, harvesting could be done, minimizing th eloss to great extent.

2. Seeds, plant protectants, fertilizers all were exempted from restrictions but the stockists were reluctant in opening their shops/stores, which initially affected the farmers.

## Mahesh Chander, Indian Veterinary Research Institute, India (fourth contribution)

Are there any additional areas not yet included in the brief that warrant particular attention with regard to logistics affecting the food supply chain?

The Covid-19 lockdown opened the oppoertunity for trying something new which could be new normal post covid. There could be some discussion on new initiatives which were thought f and tried by different organizations. For instance, we started in a very limited way, a programme: HARVEST YOUR OWN VEGETABLES, wherein, we asked consumers to harvest their requirement of vegetables from the farm ([www.aesanetwork.org/field-notes-10-harvest-your-vegetables-at-a-kvk-farm](https://www.aesanetwork.org/field-notes-10-harvest-your-vegetables-at-a-kvk-farm/)). Likewise, there were several initiatives taken by communities and Farmer Producer Organizations which came to the rescue of farmers by channeling their farm produce to consumers. The government allowed farmers to sell their produce directly to consumers by amending the APMC act which was restrictive previously (<https://economictimes.indiatimes.com/news/economy/agriculture/states-told-to-let-farmers-sell-directly-during-lockdown/articleshow/75132852.cms?from=mdr>) Some FPOs used apps for uninterpreted vegetable supply during lock down (<http://agrospectrumindia.com/news/26/607/fpo-uses-app-for-uninterpreted-vegetable-supply-during-lock-down.html>). Many ideas cropped up to ease of marketing of farm products (<https://thewire.in/agriculture/farmers-covid-19-lockdown-india-relief-measures>).

Thanks

Mahesh Chander

## Judith Hitchman, Urgenci International Community Supported Agriculture network, France

Community Supported Agriculture is an important part of local sustainable food systems. Because there are basically just producers and consumers involved in the logistics, adaptation to Covid-19 has been universally authorised by public authorities. In many cases the adaptations have involved home deliveries, which is obviously more time consuming. In other cases it has involved drive by pick ups. Yet another solution has been time-phased and distanced pick ups from usual distribution points. Because it is prepaid no cash transactions are involved in the logistics, which also makes it safer and simpler.

There has been huge surge in interest of several hundred % in local vegetable box schemes and CSA, the logistics of production are significantly under stress, more than those of logistics. There are currently long waiting lists.

## Perica Ivanoski, Ministry of Agriculture, Forestry and Water Economy, North Macedonia

This crisis can be regarded as a sudden onset disaster for which a rapid response approach is necessary. The impact was immediate and widespread, but at the same time, the information on what policy instrumets would work the best in the current circumstances in order to mitigate the impacts was very limited. Having the strategic importance of the agriculture for the food security it was necessary for policymakers to be vigilant and timely undertake active measures to support the opertors in the sector to continue producing and distributing the goods in dramatically changed environment. The main challenge in the very moment was the administration to shift its normal organizational structure into a crisis management mode in order to become capable to cope with the health risks while supporting the sector. In my view the national and international organizations including FAO needed a lot of time for undertaking the initial actions althought the crisis appeared a few months before in China. It has been treated as a local incident with underestimated global impact.

I think that the main lessons is to prepare ourselves better for similar situation in the future which might be experienced even very soon as second COVID-19 wave, now with having ready contingency plans and protocols for optimal acting of the participants in the sector in given conditions. In addition, it has emphasizied the importance of the alternative marketing channels based on the modern technologies and short supply which can also improve the current unfortunate small-scale farmers' position in the overall distribution of value in the chain.

Here is the link to my snap analysis made in the very beggining of the crisis about the impact of the outbreak to the Macedonian agriculture https://www.linkedin.com/pulse/analysis-impact-global-coronavirus-pandem...

And the link of the article on crisis management toolkit of measures and instruments for policymakers to response on the consequences of the COVID19 in agriculture and food supply also prepared when there ws no similar documents publicaly avaliable

<https://www.researchgate.net/publication/340863064_Policy_response_for_mitigation_of_COVID-19_impact_on_agriculture_and_food_supply_-_a_crisis_management_toolkit_for_policymakers>

The real impact assesment is more or less similar as the forecasted and shall be carried out in the comming period.

## Jose Maguiña Villón, Bolivia

The whole country of Bolivia was under quarantine from late March up to the end of May. Currently most of the country continues in such condition. The city of Santa Cruz de la Sierra is the one most affected by the pandemics and, therefore, its population is suffering major constraints to have acces to food in terms of quantity and quality, specially the poor ones. By middle May local authorities allowed food suppliers to have easier access to markets in certain areas as to have better health control of people, markets and products.

Santa Cruz is also the main supplier of meat for the country. A severe reduction of the demand by the closure of restaurants and the marketing constraints established by health authorities affected very much the production activities but, in a bigger degree, its processing and marketing. Authorizations to move cattle have to be obtained from local officers but managers can not move themselves either to their farms nor to the authorities offices because of the quarantine. Transporting trucks have the same impairements and auction centers , the same as other marketing places.

To overcome these limitations and facilite the operation of the beef meat chain the following solutions were adopted: (1) allow the free movement of cattle from farm to farm; (2) allow transporters and farm managers to request and obtain moving autorizations on line to take cattle out of the farms , to move them to the cities and to have acces to urban markets as well as to processing plants; (3) adopt a new auction metodology to sell and buy alive cattle in the major market of the city using media systems like facebook and whatsapp (In a week time the value of the transactionc recupered normal levels as they were before the pandemics). So far the chain is fully operational although the demand still remains constrained.

Jose Maguina, M. Sc., Instituto para el Desarrollo Rural de Sudamerica, IPDRS.

## Mahesh Chander, Indian Veterinary Research Institute, India (fifth contribution)

Can you share examples on how the bottlenecks listed in the policy brief have been addressed and with which result?

To handle the bottlenecks, the Indian Council of Agricultural Research (ICAR) issued state specific guidelines about harvesting and threshing of rabi (Summer season) crops along with the advisories on handling post-harvest operations like storage and marketing of the farm produce more efficiently. Krishi Vigyan Kendras (KVKs), the outreach arms of ICAR, tapped full potential of different Information and Communication Technology (ICT) tools to address farm challenges during the lockdown and supported farmers and farm women. The Division of Agricultural Extension, ICAR, has documented & published selected successful interventions by the KVKs & innovative practices being followed by farmers nationwide, which proved quite helpful to the farmers in combating the adverse effects of COVID-19 lockdown. The compilation entitled “Innovative Agri - solutions during COVID-19” in the form of an e-book could be useful to motivate many others to think creative workable solutions to the problems arising due to Covid-19 like situations.This e-book includes more than 100 selected experiences from every part of India.

<https://www.icar.org.in/sites/default/files/Innovative_Agri-Solutions_COVID-19-2020-1106.pdf>

Thanks

Mahesh Chander

## Adebayo Depo, Togo

Original contribution in French

2) Quel a été l'impact des mesures adoptées pour faire face à la pandémie de COVID-19 sur les exportations de denrées alimentaires et de cultures de rente ?

Les mesures adoptées dans notre pays le Togo, a permis d'assurer un minimum d'exportation. Néanmoins notons que la situation reste critique puisque même si les mesures sont soulagées ici il faut aussi que le pays destinataire accepte aussi de suivre cette dynamique.

3) Quel a été l'impact des mesures adoptées pour faire face à la pandémie de COVID-19 sur les importations d'ingrédients alimentaires, d'intrants, de conditionnements et d'autres biens liés à la chaîne de valeur alimentaire?

Les importations terrestres quant à elles ont continuées. La mesure a assuré que les approvisionnement se fassent toujours du moins des pays qui ont bien voulu continuer.

4) Comment cette pandémie et les mesures d'intervention ont-elles affecté la logistique, du niveau national au niveau local?

Les transports ont été interdits entre les localités, mais une exception a été faite sur la chaîne de valeur ce qui permettait de faire les approvisionnements. Néanmoins, la situation logistique joue sur la disponibilité des produits.

5) Quelles ont été les répercussions sur le commerce transfrontalier informel?

Le commerce transfrontalier informel a pris plus de la valeur, puisque c'était le seul moyen de pouvoir aller de part et d'autre sans pouvoir se faire prendre.

English translation

2) What has been the impact of measures to face the COVID-19 pandemic on the exports of food and cash crops

The measures adopted in our country, Togo, ensured a minimum of exports. However, it should be noted that the situation remains critical since even if the measures are relieved here, the recipient country must also agree to follow this dynamic.

3) What has been the impact of measures to face the COVID-19 pandemic on the imports of food ingredients, inputs, packaging and other goods related to the food value chain?

Land imports continued. The measure has ensured that supplies are always made at least from countries that have agreed to continue.

4) How have logistics from the national to the local level been impacted by the pandemic and response measures?

Transport was prohibited between localities, but an exception was made on the value chain which made it possible to obtain supplies. However, the logistics situation affects the availability of products.

5) What have been the implications on informal cross-border trade?

Informal cross-border trade gained more value, since it was the only way to be able to go to both sides without being caught.

## Christian Häberli, World Trade Institute, Switzerland

First, allow me to share the “relatively good news” in these difficult times (don’t we all need a break from bad news?).

The Covid-19 fallout on agrifood trade is so far quite limited! The WTO Secretariat has established a new Website “Covid-19 and world trade”

(<https://www.wto.org/english/tratop_e/covid19_e/trade_related_goods_measure_e.htm>).

For perhaps the first time, it consists not only of government notifications (actually, extremely scarce). Most measures listed in the field of merchandise trade were actually notified or found by other organisations and in internet searches. By 12 June 2020, and of a total of 199 Covid-related entries, only six trade restrictive measures concern foodstuffs, in the form of export bans or quotas, or export licensing (in order to ensure local food availability). As many measures are actually facilitating trade (tariff waivers, VAT elimination, exemption from weight control of food transporting vehicles). All measures are temporary, and at least one has already been lifted (adjournment of new export licensing).

Other news is less good, under a global welfare enhancement free-trader philosophy – and in a poor and mainly importing developing country perspective. “Go local” is not only a necessity, or a simple “confined consumer” preference; it now comes under the ominous name of “shortening supply chains” and is actively promoted by governments wanting to add local value, at the expense of their consumers and of more efficient producers abroad. This rings a bell for those having to reckon with, for example, “America first” or “strategic sovereignty for facemasks” politicians. For staple food, and regardless of their WTO-compatibility or impact on foreign suppliers, such trade and investment measures may well increase what some other idealists call “food sovereignty” but which, in more sober terms, might well end the vital contribution of trade to global food security.

Another hurdle for food aid providers has had a too long life. Despite the calls by the Directors-General of FAO, WHO and WTO, food export bans apply even to the procurement of international food aid by the WFP or the ICRC. When you remember the G8 and G20 endorsements and commitments for a (WTO) prohibition of such bans, back in the food crisis 2007-09, you wonder what kind of pandemic is needed if even Covid-19 cannot bring governments to listen to the world’s best economists that these export restrictions are bad for their own farmers.

Governance is hard to come by in a crisis. Nevertheless, perhaps we can still learn lessons before the next global crisis hits our screens?

## ****Sonali Phate,**** Kamalnayan Jamnalal Bajaj Foundation, India

Kamalnayan Jamnalal Bajaj Foundation in Wardha district of Maharashtra, India has extended training, seed and monitoring support to 7000 farmers since 2013  The most crucial step was to develop direct consumer linkages and profitable market linkages for the farmers covered. The focused efforts were made to develop forward linkages at district, block as well as village level to fulfil the objective.

Every year we used to organize Grain Festival at Wardha town for developing direct consumer linkages for the farmers practicing natural farming. This year the event could not be organized due to COVID - 19 restrictions. The positive signs that we could notice this year are quite encouraging. The consumers directly contacted  farmers participated every year in the Grain Festival for purchase of grains and pulses and other processed products. The team of Bajaj Foundation facilitated decentralized cleaning, grading and transportation processes. They also intervened in deciding marketing rates. The farmers supplied the demand at door steps during locked down situations.

The efforts resulted in strengthening direct consumer linkages for 4344 farmers. They sold 19 varieties of agriculture produce and recorded total business of Rs.4.75 Cr. Besides seed of amount Rs.18 .50 lakh has been exchanged by Bajaj Foundation among the farmers to resolve the seed availability issues.

Market for perishable commodity that is vegetables and fruits has been established for farmers by arranging mobile vegetable selling vehicle  The people have been convinced for purchase of poison free vegetables.

Such kind of efforts need to replicated with the support of Gram Panchayat or village institutions to overcome the impact of COVID - 19 outbreak on food value chains.

## ****Samuel Opoku Gyamfi,**** Climate Smart Agriculture Youth Network, Morocco

First of all, the entire country of Morocco was place on lockdown from Mid-March. Presently, the country has gradually started lifting the restrictions by dividing the country into two geographic zones depending on case density per region.

With regards to local food production, I can say that the Moroccan Government put in excellent measures to ensure that there was more than enough adequate supply during the lockdown period. Even during the period of Ramadan, where most households buy more food items, there was enough food for the period. The Moroccan government took hold of the sector, provided incentives to enable food and dairy producers to produce enough quantity of food without compromising on quality.

There were still bottlenecks. This year's overall yield in cereals was very low. The government in response to this, is considering an application to scrape import duties for cereal products since the country is given little choic than to import more cereals.

Other areas like fruits and vegetables actually enjoyed great success. There was enough for the Moroccan market. There is the demand to export fruits to some EU Countries. The only bottleneck was that most of these exports were done by road. The restrictions and the administrative delays in treating some processes may have increased costs of these exported products. It also may have had dire consequences of perishable goods. Allbeit, local prices of food across Morocco was well regulated by the government as it supersvised strictly and applied sanctions to ensure that local retailers did not hike food prices.

In all, the positives of the Moroccan response could serve as best practice that could be emulated by other countries.

## ****Lal Manavado,**** Independent analyst/synthesist, Norway (second contribution)

Does Free Food Trade Enhance Global Food Security?

According to Mr. Christian Häberli, the answer to our question seems to be resounding “yes!” We quote below the relevant part of his contribution to the present discussion:

“Other news is less good, under a global welfare enhancement free-trader philosophy – and in a poor and mainly importing

 Developing country perspective. “Go local” is not only a necessity, or a simple “confined consumer” preference; it now comes under the ominous name of “shortening supply chains” and is actively promoted by governments wanting to add local value, at the expense of their consumers and of more efficient producers abroad. This rings a bell for those having to reckon with, for example, “America first” or “strategic sovereignty for facemasks” politicians. For staple food, and regardless of their WTO-compatibility or impact on foreign suppliers, such trade and investment measures may well increase what some other idealists call “food sovereignty” but which, in more sober terms, might well end the vital contribution of trade to global food security.”

We note with some disquiet two terms he has used here, “ominous” and “vital contribution.” There are two points we need to clarify before we can ascertain whether Mr. Häberli’s claims are justified. We shall now take them up in turn.

First, what do we mean by global food security? Obviously, it is the presence in the real world certain state of affairs pertaining to food. When it obtains, people in the world are enjoying a sustainable supply of wholesome food they require for a varied and balanced diet at “an affordable price”in accordance with their own food culture.

As we have said time after time, all human cultures have developed their own food culture in accordance with the climatic, geographic and soil conditions of where they live. Furthermore, even animals display food preferences; for instance, camels in South Central Arabia used to display a distinct preference to thorn bushes rather than gorging themselves on more nutritious Lucerne.

Most humans derive pleasure and enjoyment from their food, and meal times are often social occasions. Of course, there are aberrations like drunkenness and ‘working lunches’, but these are in a disagreeable minority. Many cultures are proud of their culinary traditions, and food culture includes the most suitable crops and animals to a given area.

Food culture and culinary enjoyment are an integral part of the culture of a people; hence, it is a part of their cultural patrimony and nobody has any right to traduce it for spurious reasons motivated by personal gain.

Secondly, throughout the world, vast majority of the people need to buy their food; this requires them to have a sufficient income for the purpose. If they do not, “free trade in food” may make the food “accessible” to them in shops in large enough quantities, but food in the shop and no money in the pocket will hardly contribute to food security.

In most poor countries and in the poor areas of those countries where some social groups are affluent and others not, the following conditions obtain:

* A significant percentage of those poor are engaged in agricultural pursuits. Cheap food imports would deprive them of their already meagre livelihood.
* High unemployment is common among the poor social groups.
* Their education and acquired skill levels are low.
* Under these circumstances, “free trade in food” will only benefit the affluent social groups provided that such trade does not contravene the country’s food culture.
* Hence, “free trade in food” makes no contribution whatsoever to the food security of the poor unemployed or those engaged in agricultural pursuits.
* As it will be shown below, it will indeed make them even less secure with respect to food while the affluent seem to display a higher incidence of obesity among them precisely due to “free food trade” in highly processed factory foods either as direct imports, or using monoculture in a host country to manufacture such.
* “Free food trade” permits the establishment, operation and sales of factory foods in poor countries by the multi-national firms. They resort to monoculture and capital-intensive food production in order to ‘maximise’ their profits. This will deprive poor farm workers employment opportunities because the capital-intensive methods depend greatly on mechanisation and on very little human labour. Moreover, such farm workers are not adept at using the equipment used in the kinds of factory farms now operating in poor countries. Personnel employed there come exclusively from cities.
* Therefore, it is clear that “free trade in food” will have the most deleterious effect on the already precarious food security among the millions of the poor distributed throughout the world.
* As the sustenance farmers in poor countries or in the rural areas of the affluent ones are squeezed out of their livelihood by the “free food trade” it would increase the people’s migration into cities adding to the social problems it entails., If one is willing not to depend on impressive documented ‘facts’ and visit the slums circling “economic miracles cities” where millions survive, one will clearly understand that they can never earn enough to experience any food security.
* And such cities are in countries where “free food trade” is rife.
* Furthermore, spread of monoculture consequent to “free food trade” has significantly contributed to global climate change due to deforestation it entails, soil salination owing to imprudent use of fertilisers, extinction of pollinators and other beneficial animals due to extensive use of biocides, etc. Even though it was ignored, it was noted long ago when Amazons forest was cut down to ‘create’ grazing land for cattle for US ‘Hamburger’ market.
* The local food culture of a place has risen through trial and error for a long period. True, some such traditions are harmful, but a majority of them involve animals and plants best suited to a locale and have least deleterious effects on our environment. “Free food trade” poses an unacceptable threat to this good practise.

Thus, “free food trade” as it is practised today does not contribute to an enhanced food security to the already deprived, nor does it contribute to public health with respect to rising NCD’s. Moreover, it contributes to the already serious environmental degradation.  Hence, “free food trade” as it is practised today is to be deprecated, and opposition to it encouraged.

Best wishes!

Lal Manavado.

## Christian Häberli, World Trade Institute, Switzerland (second contribution)

This interesting FSN debate on Covid-related interruptions along the food value chain shows the need for more research: Are the measures taken pro-trade or trade restrictive, and why? How can national policy responses include cooperation and efforts to regulate the overseas production of MNEs.

This Webinar at the World Trade Institute (WTI) on “[The COVID-19 Pandemic and Trade in Agricultural and Food Products](https://www.wti.org/institute/news/722/pandemic-and-the-global-economy-a-virtual-workshop-series/)” will examine issues and challenges raised by recent experience:

26 June 2020 (Friday), 16:30 European Standard Time

Chair: [Peter Van den Bossche](https://www.wti.org/institute/people/410/van-den-bossche-peter/), Director of Studies WTI

Panelists:

[Joseph Glauber](https://www.ifpri.org/profile/joseph-glauber) (Senior Research Fellow, International Food Policy Research Institute (IFPRI), Washington, D.C., and former Chief Economist of USDA)

[Christian Häberli](https://www.wti.org/institute/people/44/haberli-christian/) (WTI Fellow, University of Bern)

[Lee-Ann Jackson](https://www.wti.org/institute/people/450/jackson-lee-ann/) (Head of Division, Agro-food Trade and Markets, OECD)

[Alan Matthews](https://www.tcd.ie/Economics/staff/amtthews/) (Professor Emeritus of European Agricultural Policy, Trinity College Dublin)

The format is part roundtable, part general discussion. Participation requires registration. To register, please email communication@wti.org

(Virtual) space is limited!

## lazare Musongi, Centre de formation des jeunes pour le développement durable, Democratic Republic of the Congo

Original comment in French

Je suis convainçu que cette pandémie continuera à sévir le monde pendant plusieurs années.

La situation sécuritaire alimentaire et de la nutrition dans le monde,et en afrique en particulière reste un cheval de bataille

Les politiques africaines doivent revoir leurs strategies sur les investisements, les productions, les transformations et les marchés des produits alimentaires, surtout de prémières nécessités .

Il est urgent que les dirigeants Africains puissent repenser sur:

* la bonne gouvernance;
* le partage équitable des ressources naturelles;
* la justice

Certes le COVID-19 serait partie de notre environnement comme le SIDA, la tuberculose; en dehors des getes barrières , je propose 3 regles d'or dans notre façon d'être et de faire:

* l'adaptation ( parcequ'on doit apprendre de vivre avec);
* l'atteinuation ( parcequ'il faut reduire la propagation);
* la résilience ( car la vie ne s'arrête pas avec le COVID-19, il faut resister pour continuer à vivre).

English translation

I am convinced that this pandemic will continue to plague the world for several years.

The food and nutrition security situation in the world, and in Africa in particular, remains a priority.

African politicians must review their strategies on investments, production, processing and markets for food products; especially basic necessities.

It is urgent that African leaders rethink the following:

* good governance;
* equitable sharing of natural resources;
* Justice

COVID-19 would certainly be part of our environment like AIDS, tuberculosis; apart from barrier gestures at the indivudual level I propose 3 golden rules to guide action:

* adaptation (because you have to learn to live with it);
* mitigation (because it is necessary to reduce the spread);
* resilience (because life does not stop with COVID-19, you have to resist in order to continue living).

## ****Lal Manavado,**** Independent analyst/synthesist, Norway (third contribution)

Duration of the Current Corona Infection and Emergency Preparedness Policy Pertaining to Food and Agriculture

In our previous contribution to the present discussion, we assumed that all of us were adequately and scientifically informed about the possible duration of the present pandemic. Unfortunately, this does not seem to be the case. Its possible duration is critically important to an effective policy formulation and implementation. This supplementary note addresses this aspect of the issue we have covered in our previous contribution.

It is with much regret that we have to report that the ‘media’ in the ‘most advanced’ countries have made claims on the duration of the present Corona infection based purely on the assertions of ‘newspaper and television pundits’. These individuals as a group lack any professional training in virology; general physicians and specialists in other medical fields are not professionally competent to make sweeping statements on the possible duration of the present crisis. Needless to say, that the comments from those engaged in other disciplines are irrelevant to our discussion.

We have now identified whose views we have to take into account and whose claims we may dismiss with profit. Let us now consider the possible duration of the present health emergency with reference to fundamental principals governing the behaviour of pathogens in general, and Corona virus in particular.

Strategy of every pathogen is governed by two principals:

* The actions of the pathogen should enable it to disseminate itself as widely as possible in order to improve its chances of survival.
* It suture survival also requires a significant increase in the pathogen population.
* However, if it were to multiply and spread without hinder, it runs the danger of exterminating its potential hosts and would thereby face extinction itself.
* Moreover, a high mortality rate among its hosts, man in the case of Corona virus, will automatically reduce its chances of wider dissemination.
* Thus, it is not in the best interest of the virus to retain its virulence as it passes from man to man.
* Nature has enabled the pathogen/virus to evolve a safety measure against it exterminating a host, viz., as it passes from person to person, it looses some of virulence by the process known as attenuation. That is the infection it causes becomes less and less serious. Anyone familiar with the vaccines for viral diseases like rabies and polio would know that this is how those vaccines were developed using animals to attenuate the viruses involved.

These principals apply with undiminished force to Corona infection. Therefore, it is virologically unlikely that the present health problem would last for years. We have heard this claim from local TV pundits who have no background in infectious disease. Such spurious claims are not only irresponsible, but contribute also to the exacerbation of the current situation. Freedom of speech exercised by those free of relevant knowledge is to be deprecated.

Consider now the situation in Sweden. Counter-measures against Corona infection there were determined by an epidemiologist. These are statistician of diseases with no particular training in infectious diseases. Unfortunately, an anti-Corona strategy based on statistics can lead to disastrous results for some vulnerable groups unless a holistic approach is adopted. Indeed, this has taken place as the widely available figures show with respect to other Nordic countries.

In Sweden, the following errors of judgement have been made:

* Even though this number is limited, how many transfers from person to person it requires for Corona virus to attenuate is unknown. It has been assumed that if people were exposed to it ad libitum, this will happen quickly. This is an example of mechanical thinking based on statistics, and it is incorrect.
* It ignores the simple fact when risk of exposure is high; a high viral load can remain in the ambient long enough to infect more people among whom a greater number may be vulnerable.
* It ignores that a number of passages of the virus from person to person sufficient for it to be attenuated, can be easily achieved while the number of infected people remains small. Here, size of the population infected is irrelevant, what is relevant is the number of virus passages from person to person.

We are afraid that we have allowed us to be carried away, a common fault among those who begin to talk about their subject. Our intention is to reassure the readers that combined with the common precautions like good personal hygiene, keeping a fair distance from others, self-quarantine, avoiding crowds, etc., will soon enable us to defeat the threat posed by Corona virus. We think it is reasonable to be optimistic even though one can never know whether the really useful lessons we could have learnt from it will be learned.

Best wishes!

Lal Manavado

## Murungi Jonan, Agroecology advisor, Uganda

The pandemic has negatively impacted most of the value chains in Uganda if not all in way that COVID-19 came at a time when harvesting period of some crops was nearing mainly vegetables and given their perishable nature and low techniques of post harvest handling, farmers significantly made losses because accessing market during lockdown was nearly impossible, given that people were home not working even the present produce on market would completely fetch low prices due low purchasing power by consumers

In summary farmers have greatly suffered the effect of the pandemic mainly because of difficulties in transportation and Marketing.

## Nana Oforiwaa Koranteng, Migals Consulting Services Ltd, Ghana

POST COVID 19- A SILVER LINING FOR MODERNIZING GHANA’S AGRICULTURE SECTOR

**Introduction**

During the COVID lockdown period it became obvious that there is a delink between food production centers (supply points) and food consumption centers (demand). Food insecurity in urban centers became heightened leading to some level of social insecurity. Even after the lockdown, food availability in city centers is still inadequate for a number of reasons including an inherent fear of infection by suppliers to urban centers and the seasonal low supplies of main staples at this time of the farming calendar. These low supplies will continue after COVID-19 for food imports including rice from Asia which contributes to 60% of national needs and meat products from Brazil and Eastern Europe due to protectionists measures likely to be adopted by producing countries whose national food securities would have affected by the pandemic.

In the past 3 years’ data from Ministry of Food and Agriculture MOFA show that Ghana has been self-sufficient in local staples including roots and tubers and vegetables Thus the challenge is not necessarily food production (supply) but food distribution (access). However, to sustain farmers interest in increasing food production, they will have to be assured of a market; a confirmation of my proposition that “increased agriculture production is a function of market availability”

The purpose of this paper is therefore to explore opportunities to sustain current food production levels resulting from PFJ interventions by enhancing real demand through a reduction of the physical and virtual distance between food production and consumption centers. The discussion will focus on three post-production links of the commodity value chains to sustain market opportunities and subsequent increased incomes for farmers to sustain their interest and capability in the application of improved production methods for increased productivity and subsequent sustained national food self- sufficiency in local staples The objective is two-fold

* Higher efficiency in food distribution by the private sector in Ghana.
* Improved urban food security
	+ increased wealth creation
	+ engendered youth employment in the agriculture sector

This paper has been developed based on observations during the COVID 19 emergency strategies outlined by the President of Ghana His Excellency Nana Addo Dankwa Akufo-Addo

Food Aggregation and Storage

Traditionally food distribution has been managed by the private sector mainly by three major operatives’ i.e. aggregators, transporters and retailers. Though Government has the National Buffer Stock Company (NABCO) which manages public sector warehousing for grains and legumes, there is no denying the fact that most food distribution (especially roots tubers and vegetables-cassava, plantain, yams) is done by the private sector comprising mostly women who often aggregate from farmers and send them to market centers for sale to retailers for onward distribution to consumers in city centers.

On the other hand, women aggregators in the private sector do not have access to storage and haulage facilities thus reducing their ability to influence the demand required to encourage farmers increase production. Their modus operandi have been to aggregate from a number of farm families and head cart

them (or use tricycles) to sides of main highways to look for transport often (Kia trucks) to bring them to urban centers to sell to retailers for onward sale to consumers. Often the retailers buy on credit making payment only after sale of produce, a situation which reduces the ability of the aggregators to make expected quick turn-overs by holding investment in abeyance and at the mercy of the retailers. This often has a rebound effect on farmers who also have to sell their food on credit to the aggregator who depending on the location of the farm often is a monopoly and seen as a benefactor by the farmers. A study I once undertook showed that quite often aggregators defaulted in payment making farmers the ultimate losers. The negative rebound effect also implies farmers do not receive timely returns on their investment thus reducing their production capabilities.

Coupled with this dilemma is the high operational costs which lead the aggregators who often operate on shoe-string capitals to offer the least possible prices to farmers, a further disincentive to farmers who based on the low return on investment have no option but to either reduce farm sizes or return to subsistence farming. The combined effects of poor aggregation and haulage capacities coupled with lack of storage facilities and pack houses for vegetables contribute to increasing both the physical and virtual distance between food producers and consumers a situation which does not support the transformation of Ghana agriculture from subsistence to market oriented economically viable businesses.

**Recommendations**

**A. Reduction of distance between production and consuming centers.**

The government through the Planting for Food and Jobs has succeeded in helping farmers increase their production levels these past 3years. I believe the next level of support to modernize agriculture is to transform the excess food to cash by creating markets. But this must be done through the private sector not government agencies-neither the Food Distribution Corporation and CASHPRO were self-sustaining and there is yet no indication that the NABCO is running on its own steam. Meanwhile there exists a cadre of aggregators in every region/district/community whose major constraint seem to include operational capital, haulage and storage. Meanwhile there apparently exist different sources of financing for commerce with the Agriculture Development Bank (ADB), National Youth Employment (NYEP), National Board for Small Scale Industries (NBSSI) etc. that could be re-oriented towards these women traders/aggregators to increase their operational capacities and reduce their reliance on the urban retailers who often deliberately frustrate their efforts to make decent returns on their investment.

Currently women aggregators operate on individual basis and independently arrange transport to bring food into market centers. With the proposed organized collection and haulage, these women will have more reliable means of moving food and assured markets thus creating opportunities for improving the economic viabilities of their small scale businesses

**B. Haulage and Distribution**

Secondly, with an increase in the feeder road networks and increased access to farm gates through the use of tricycles. I believe there is great opportunity to create employment avenues for our youth in the rural communities. The same credit facilities as mentioned above could be extended to groups of young men and women to increase their operation capacities from the farm gate to various nodal points. From

there another level of haulage packages can be facilitated to move food to market centers in the urban centers.

**C. Employment and Revenue Generation**

Metropolitan, Municipal and district Assemblies (MMDAs) who depend on market tolls for the bulk of their revenues are encouraged to explore areas of facilitating the operations of private aggregators and haulers to link with identified urban market centers for the sale of commodities in which their districts have production advantages. For example, it is known that under the Planting for food and Jobs program, (PFJ) there were quantum increases in plantain production which was exported to some Sahelian countries. With the closure of borders, it is recommended that food from the Agogo and other areas in the Afram plains be redirected to Accra, Kumasi, Takoradi and Cape Coast. When effectively managed, such arrangements can boost inter district trade and collaboration, timely redirect food items to where they are most needed and reduce defaults in payment to farmers thus empowering them to increase their production levels.

The Ministry of interior could also work with transporters and the immigration service to manage food exports in support of AFCTA

**D. Packaging**

Finally, it was realized that the COVID-19 restriction period made demand for food in household packages quite attractive. Most middle income households and young professionals buy their food requirements on weekly basis for convenience in three main areas

* Household storage capacity
* Efficient budgeting Available cash outlay
* Efficient use of time

To respond to this challenge, MMDAs can generate incomes through organized packaging to promote standardization in weights and measures. Young women and men under the National Builders Corps can be engaged in packaging local staples to meet the demand of such urbanites. Unfortunately, the inability to apply approved weights and measures in the sale of local staples has been a major source of revenue loss to the Ghanaian farmer. As well, MMDAs can better organize commodity locations at various market centers to reduce congestion and help meet planning and environmental standards in our food markets.

**Conclusion**

To every dark cloud there is a silver lining. In the past 4 years, Ghana has embarked on a comprehensive program to modernize her agriculture from subsistence to a market oriented economy with a view to transforming her hard-working farmers into agri-entrepreneurs with competitive incomes.

Whilst COVID-19 has brought considerable hardships to urban dwellers it seems our hardworking farmers are not as hard hit in their enterprises. Unfortunately, it will take a calculated effort to reward their hard work by facilitating systems that will enable them get decent returns on their investments. It is hoped the foregoing will be a wake-up call to both our public and private sector decision makers to take another look at support to the agriculture sector as a key contributor to Ghana’s GDP.

*Nana Oforiwaa Koranteng, a Development Economist, is the Principal Consultant at MIGALS Consulting Service Ltd. Her expertise is in Agriculture Policy, Food Security, Commodity Value chain development and analysis, Regional/Rural Development planning, as well as the design and use of Monitoring & Evaluation Systems*

## AMM Zowadul Karim Khan, Former Adviser, Solidarites International; and National Consultant, FAO, Bangladesh

**1. Can you share examples on how the bottlenecks listed in the policy brief have been addressed and with which result?**

Bangladesh was in countrywide lockdown since the third week of March, being extended almost seven times until the first of June. During this period the harvesting of Boro rice was to be done. Boro rice contributes to 54% of rice production in Bangladesh and is harvested mostly in May. As the public transports were not functioning, large number of seasonal labors required for harvesting could not move. The farmers were in panic. Several remedies were taken by the government and civil society, those have been:

1) Organizing special transport for the labor movement; 2) Engage local youth as voluntary labor for harvesting; and 3) Promotion of use of mini combine harvesters.

Government is providing subsidy/grant to farmers for purchase of mini combine harvester. This grant is included in the [Covid-19 agriculture recovery package](http://www.theindependentbd.com/post/244489) (of around 90 billion Taka).

Government has also increased purchase of rice. [This year government doubled its Boro rice procurement target compared with the previous year](http://www.fao.org/giews/countrybrief/country.jsp?code=BGD).

**2. What has been the impact of measures to face the COVID-19 pandemic on the exports of food and cash crops?**

Bangladesh is an exporter of tropical fruits, like mango, lychee etc., and vegetables. Since 2015 FAO representation in Bangladesh is [supporting mango export](http://www.fao.org/bangladesh/news/detail-events/en/c/287226/). Apparently, the export this year has been hampered. However, a clear picture is not yet available.

**6. What challenges related to the food value chain have emerged during the relaxing of COVID-19 containment measures?**

The main challenge is now to recover the pandemic losses. Now one rice sowing season (Aus) is in place, and another one (Aman) is coming, or already in place. The previously mentioned support package is also targeting this season. Government asked the farmers [not to leave any arable land uncultivated](http://www.observerbd.com/news.php?id=258484), as Food Security is the most important issue for Bangladesh in the post pandemic period. Bangladesh is losing in two large export sectors, 1) RMG and 2) Remittance. Hence there is an additional challenge to the Agriculture sector.

## Mylene Rodríguez Leyton, Universidad Metropolitana de Barranquilla, Colombia

The repercussions of the COVID-19 outbreak on food value chains through efficient logistics must be analyzed from a more comprehensive and comprehensive perspective, given that they form part of a complex interrelation of structural and conjunctural determinants whose main purpose is to guarantee at all times the right of all people to adequate and sufficient food to enable them to lead healthy lives.

In the face of the COVID-19 pandemic, governments have responded to the urgency, mobilizing resources towards the attention of the health emergency, the care of sick people, the prevention of mortality and the containment of the spread of the virus; as well as adjusting the capacity of health services to meet the needs of the population and coping with the crisis of health professionals; The installed capacity of this sector was exceeded, showing the already existing difficulties and showing that it needs to be strengthened in terms of infrastructure, administration and labor guarantees for human resources; This issue cannot be relegated when addressing food value chains, because although it is true that the virus does not discriminate against the population, we are all vulnerable, there are territories where the poorest population is not only affected by the lack of food resulting from the poverty but because they are part of the infected population, as is the case of the indigenous population living on the Colombian-Brazilian border in the department of Amazonas (Colombia).

Many of the decisions made to contain the spread of the virus to protect the life and health of the population; they affect the economy not only from the factors related to supply, but also from demand. with the pandemic There was a loss of employment, mainly and immediately after the start of the pandemic in informal workers, with the drastic decrease in their income and purchasing power generating ruptures related to economic access to food that exacerbated the suffering of hunger due to the deficiency in the supply of energy and nutrients of the people who make up a home in these most vulnerable populations and that will surely increase the malnutrition figures.

The containment measures also generated interruption of food supply chains that affect physical access, and the increase in prices; border closures both local, regional and national in the countries, as well as bordering areas between them, has also prevented the entry and exit of food, affecting its availability; among other effects on food and nutritional security, showing shortages and price increases.

The greatest challenges for strengthening food value chains are found both in strengthening the rural sector and in developing consumer skills to return to healthy food purchasing and consumption practices for the individual, in harmony with the social and human development.It is the moment to potentiate the productive capacities of the rural sector to guarantee the food supply, family, peasant and community agriculture should be stimulated, through the diversified production of food, above the logic of the market, to protect the rural population and the implementation of sustainable processes with the environment, protection of forests, water, seas and ecosystems, change in fishing practices that allow food sovereignty for local self-sufficiency.

In this sense, it is necessary to work in the protection of rural populations, fishermen, peasant populations and ethnic peoples so that they can autonomously manage their food production process, with forms of agroecological production that are carried out in harmony with the environment, ecosystems, the responsible use of water, in solidarity relationships, understand food as a social process mediated by practices, own knowledge and differential relations with the territory.

It is necessary to include in the agricultural sector, public policies that promote local production models, where family, peasant and community agriculture is promoted to ensure that they are the suppliers of food for each country, giving priority to local markets with short marketing circuits. bringing the supply closer to the consumer, favoring food prices and interrupting the chains of intermediaries generating fair trade practices.

Reform in rural education is required, as an opportunity for the protection of rural peasant populations and other rural inhabitants who have traditionally been excluded and who during this pandemic have suffered from restrictions on access to education due to lack of of public services and connectivity. This implies the participative construction of pertinent contents that allow recovering the traditional practices of food production and preparation, the food culture of its inhabitants and the guarantee of educational infrastructures, public services, access to connectivity.

Likewise, the culture of self-care and self-determination in health emerge as more effective prevention measures, as well as the return to models in collective health, which allow for articulated work between health entities and communities in search of joint solutions, being essential food and nutrition education to rescue healthy eating practices, consumption of food from family and local production, favoring the consumption of naturally produced and prepared foods and less industrially processed foods.

The great challenges generated not only by the pandemic itself but also by containment measures, imply for decision makers to establish new ways of articulating for the implementation of public policies on food and nutrition security, considering the complexity of its determinants, which allow coordinate actions to guarantee adequate food for the entire population. With this panorama, the actions to address the consequences of COVID-19 on food security should consider not only conjunctural interventions to mitigate the short-term hunger generated by the containment measures, but structural proposals that contribute to recovering what Amartya Sen calls the assets and ownership of the most affected: their income, their employment.

Likewise, price control must be exercised, and social protection networks must be strengthened for the poorest and most vulnerable population. Another major challenge is the review and adjustment of the priorities and goals of the sustainable development goals to the year 2030, in which all those involved must participate, especially those related to the reduction of inequalities and inequities that have been deepened by the Covid -19, represented in deficiencies in public services, deficiencies in education, decent employment and and actions aimed at recognizing the human right to food as a priority.

## Justin Langtar, Centre Régional de Santé Animale pour l'Afrique Centrale, Chad

Bonjour à tous,

le COVID -19 est certe une pandemie du siècle qui a frappé tout le continent où certaines familles de loin ou de près sont endeuillées. Cette pandemie menace à la fois la vie et les moyens de subsistance des populations rurales et urbaines. avec les restrictions des mouvements, les fermetures des frontières inter-pays et aux seins des pays, les mesures de confinement ont limité l'accès à une alimentation et une nourriture adéquate. le secteur agricole est une chaine bien structurée (producteurs, trasnformateurs, transporteurs, commercant etc) où un maillon de cette strucuture est amputée, il ya repercussion sur les autres.

Dans un pays où l'élevage est à 80% pastoral et basé sur les parcours à la recherche des paturages, Les troupeaux d'animaux n'ont pas accès à l'eau, aux pâturages et aux traitement à travers des campgnes de vaccination à cause des restrictions des mouvements. Nous risquerons encore une épizootie animale à cause de manque de vaccination et de traitement des animaux

De ce précède,

les pays doivent mettre en place des mesures d'accompagnement en vue d'aider les populations vulnérables. Les pays doivent appuyer les producteurs (paysans, agro pasteurs) locaux car la pandemie a entrainé une penurie des mains d'oeuvres et lune manque d'accès à l'eau et au pâturage. de nos jour beaucoup des pays dependent en grande partie des importations des produits alimentaires de base et si des dispisitions ne sont prise dès maintenant à travers une logistique efficace , nous risquons d'entrer dans crise alimentaire très sévère.

Good morning , COVID -19 is certainly a pandemic of the century that has hit the entire continent where some families from far and near are bereaved. This pandemic threatens both the lives and the livelihoods of rural and urban populations. with movement restrictions, inter-country border closures and country closures, containment measures with limited access to adequate food and food. the agricultural sector is a well-structured chain (producers, processors, transporters, trader, etc.) where one link in this structure is cut, there is an impact on the others. In a country where livestock farming is 80% pastoral and based on rangelands in search of pasture, Herds of animals have no access to water, pasture and treatment to cross the fields of vaccination due to movement restrictions. We will still risk an animal epizootic because of the lack of vaccination and treatment of animals From this precedes, countries must put in place accompanying measures for vulnerable populations. Countries must support local producers (farmers, agro-pastoralists) because the pandemic has resulted in a shortage of the main works and a lack of access to water and pasture. nowadays many countries are largely dependent on imports of basic foodstuffs and if distributions are not priced right now through efficient logistics, we risk entering the very severe food crisis.

Dr Langtar Nadji Justin : Unité Partenariat et Recherche de la Cellule Technique du Centre Régional de Santé Animale pour l'Afrique Central (CRSA-AC)

## Siobhan Kelly, FAO, Italy

Under the aegis of the UN Secretary-General’s Shared Responsibility, Global Solidarity report, FAO has been an active collaborator in the UNs’ socio-economic support to countries during the COVID-19 crisis. An important aspect of this support has been [socio-economic assessments](https://www.undp.org/content/undp/en/home/covid-19-pandemic-response/socio-economic-impact-of-covid-19.html) carried out to provide a solid evidence base upon which governments can design informed responses to the crisis. The assessment from Kenya mirrors the impact of COVID-19 on a number of countries in the sub-region and beyond.  In Kenya, where agricultural contributes 53% of (GDP) directly and indirectly through other sectors, employing 70% of the rural population, the country was already struggling with the fall-out from a seasonal drought in 2019, before the onset of COVID-19 which also coincided with start of the maize planting season, and the ongoing locust crisis.  The culmination of these calamities means that food stocks in Kenya are destined to decline, and prices to increase, effecting the poorest and the most vulnerable segments of the population. Logistics restrictions and curfews in Kenya have continued into June including two-week quarantines for the crews of cargo vessels at Mombasa Port and stricter checks at the country’s borders.  The Tanzania report has assessed in more depth the impact of reduced traffic in cargo vessels on storage. As domestic production has been sustained  due to minimal restrictions, the existing storage capacity is struggling to serve the backlog of destined exports commodities stocks due to delayed take-offs from ports and airports, however mostly impacting non-perishables such as sisal, tea, cotton and coffee. Results also shown that some import purposed warehouses are also empty. These insights indicate that if the fall-out from the COVID-19 crisis is to continue impacting domestic and international logistics, deeper analysis on import/export food storage capacities will be required to match the effects and inform possible repurposing of storage across sectors to fit the evolving situation.

All reports continue to emphasize the severe impacts on small informal actors, particular in the food services segment of the food industry, such as petty traders, micro food processors, and food canteens.  Kenya quickly put into place a series of measures to support these types of actors from reducing the turnover tax rate to 1% from 3% and suspending the listing of non-payment of loans by SMEs. Kenya’s advanced cashless economy has also contributed to an acceleration on food e-commerce, with Safaricom implemented a fee-waiver on M-Pesa to reduce the physical exchange of currency, and Standard Bank providing a 90-day Coronavirus Business Interruption Payment Scheme to small business owners.

The assessment from Turkey also highlights the importance of keeping business, particularly those in the food industry, informed about the implications of decrees on changes in logistics, with 36% for exporting companies, and 22% of all enterprises, reporting the need for improvements in advice on foreign trade, logistic restrictions and requirements, with already engaging in foreign trade.

The Tanzanian assessments outlines a useful scenario analysis (best, moderate and worst case scenarios), on the implications of logistics on many of the country’s important import and export commodities. Under the best-case scenario, large losses have still been incurred by exporters of horticultural crops (flowers, cloves and fruits), tea, coffee, fish/crustaceans, sisal and live animals, cumulatively accounting for 70% of export revenue. Failure to export cotton lint, tobacco, and cashew nuts, has also jeopardized the incomes of countless small farming families as well as jobs in the agro-processing industry. The moderate case indicates that the export of cereals, maize and paddy, milled maize and wheat flour and wheat malt will continue to suffer since the situation on transport logistics is likely to get worse. And the worst case, implicating continued logistical export restrictions with reduced foreign exchange will translate into fewer imports of basic commodities like edible vegetable oil, sugar and wheat; as well as fertilizer for the next farming season. Shortage of edible oil, industrial sugar and wheat is likely to affect operations of beer and other beverages factories as well as hotels and restaurants. Worse still, the sudden fall in incomes by producers and businesses in the agricultural value chain will most likely affect their ability to service bank loans or take new ones; as well failure to implement plans for the next farming season. The worst case scenario will also possibly mean that agro-industry establishments are likely to resort to mass retrenchments due to cash flow problems.

Ultimately these assessments highlight that, while compared to the severe impact of COVID-19 on other non-essential sectors, the food and agriculture sector is nonetheless the most sensitive to logistics and restrictions in the movement of people and goods, and therefore requires more analytical assessments and scenario building to inform public sector programming to mitigate the impact of COVID-19 on food security and those actors reliant on the food industry for their livelihoods. More assessment from 44 countries across Africa, Europe, Asia and Latin America can be accessed at [www.undp.org/content/undp/en/home/covid-19-pandemic-response/socio-economic-impact-of-covid-19.html](https://www.undp.org/content/undp/en/home/covid-19-pandemic-response/socio-economic-impact-of-covid-19.html)

## Siripen Iamurai, SiPa Research Organization, Thailand

In the period of Covid-19 Pandemic & lockdown in Thailand, the growth of food delivery services increased more than 80% in the capital and metropolitan areas.  Including the increase in the number of businesses provider of food delivery services has increased too.  Including to the employment and the number of employees in this businesses.  The food packaging has been modified and adjusted to the variety of food dinning styles by retaining the food qualities and the value nutritional.  Plastic has returned to be the important in term of disease protections for individuals and food too.

The increase in plastic waste contaminated in the environment and ecological may become the major problem after the epidemic crisis has passed.

## Mebit Kebede, Save The Children International, Ethiopia

The latest CSA Consumer Price Index indicate that the cost of living reached the highest rate in a six-year period (since 2014) increasing to 22.6 per cent following the confirmation of Ethiopia’s first case of Coronavirus (COVID-19) infection. The inflation of food prices reached 26.9 %

COVID-19 has significantly affected the prices of food items in Ethiopia due to distractions along the food value chain e.g., processing, transportation between rural and urban areas which leads to higher prices in urban areas which can affect food access for poorer households.

A team of agricultural experts of the Jimma University, Ethiopia, in its study entitled “Covid-19 probable impacts on Ethiopian agriculture and potential mitigation and adaptation measures: no food – no health – no life” published in April 2020 has indicated that the current pandemic of Covid-19 has a potential to increase the food insecurity of the country due to resource mobilization towards prevention of the disease, movement restriction subsequently affecting food production, transport, processing and consumption patterns.

According to IFPRI Blog: research post, April 19, 2020 urban consumption of fruits and vegetables is declining that trade is affected by travel bans and reduced competition, and that farmers face lower prices and reduced access to inputs. With the same blog, the dairy value chain particularly raw milk vendors and small dairy shop in Addis Ababa have been hit hard due to the pandemic

In response to the COVID-19 pandemic, Ethiopian Ministry of Agriculture call up-on its development partners and develop Agriculture sector response plan to COVID-19 with the major content of COVID 19 pandemic risk diagnostics in the agriculture sector, major interventions to mitigate the risk of Covid19 pandemic in Agriculture sector with estimated budget.

So as to ensuring minimal disruption in flow of agricultural products and inputs with appropriate actions in transport/logistics and procurement the government of Ethiopia give priority and take action on the following:

Remove unnecessary and/or illegal check points/taxes/other payments through the coordinated effort of federal, regional, and local authorities and institute expedited COVID-19 related checks to further reduce delays on the road.

Keep markets open with clear and enforced sanitization procedures and appropriately scheduled closed days to implement those procedures.

Minimize the operational burden on retailers in the form of regulations which, though appropriate in normal times, discourage operators under the current difficult circumstances – up-to-date licenses, tax arrears, …

Alongside private markets, set up food distribution centres (such as the kebele/lower administration level) outlets particularly in urban areas to provide food for households with considerable decline in incomes

Encouraging and supporting local civil societies and neighborhood organizations to engage in the mobilization and distribution of food assistance as appropriate. ( for instance; Addis Ababa City Administration has launched a network of what it calls ‘food banks’ at sub-kebele level to mobilize and distribute food and other resources to the needy)

## Pathawit Chongsermsirisakul, Panyapiwat Institute of Management, Thailand

I am interested to the initiative for the Sustainable Infrastructure Community of Learners. Because I have the project which are studied and more significant continental effort after the spreading of COVID-19, which it’s might be applied in the part of the strategic planning of SDG 2030 platforms as the infrastructure assets and development sites of cultivation soil or farming land may be rehabilitated and retrofitted for eco-efficiency for communities inclusive infrastructure to developed land. For example, the new normal packaging designed from natural resources during the Covid-19 outbreak as for Grab and Go concept.

## Nihal Destan Aytekin, HarvestPlus/IFPRI, United States of America

Dear FSN Forum Team,

So many thanks for the opportunity to be a part of this fascinating discussion.

Thought leaders and the research community have been highlighting the critical need to keep the food supply flowing globally, scaling up efforts to ensure that the most vulnerable populations have access to nutritious and affordable foods and investing in sustainable and reliable food systems for long-term recovery. There is scientific evidence that good nutrition and adequate micronutrient intake boost the immune system. Ensuring this is even more vital during this pandemic[1].

An IFPRI blog[2] talks about the nutrition crisis, what to expect, and how to protect vulnerable populations during the COVID-19 outbreak and beyond. IFPRI highlights that COVID-19 may cause significant reductions in dietary quality, with direct and indirect impacts on maternal and child health. They suggest ten key actions to protect vulnerable groups. The blog post emphasizes the use of biofortified crops as part of the solution, in the context of leveraging social safety net programs to improve dietary quality. A blog by the World Bank[3] highlights that "social safety nets for the poorest and most vulnerable are needed as part of the immediate and next phase of COVID-19 emergency assistance."

Biofortification is the process of naturally increasing the micronutrient content of staple crops through conventional crop breeding in order to improve the micronutrient intake, and hence the micronutrient deficiency status of populations. It specifically targets smallholder farming families who cannot afford diverse, nourishing diets, relying primarily on inexpensive but nutrient-poor staples like rice, wheat, and maize. It is a robust nutrition response to the COVID-19 outbreak, at no extra cost to governments or consumers, since integrating biofortified crops into food systems is a sustainable way to build resiliency and ensure access, specifically for the most vulnerable populations, to enhanced nutrition through staple crops. Biofortified crops are produced locally, rely on short supply chains, and are therefore more resilient to global supply shocks. Since these staple foods can be stored for an extended period of time, they are also better able to withstand the disruptions caused by the global pandemic.

HarvestPlus is continuing to reach smallholder farmers and vulnerable communities during the COVID crisis as follows[4]:

* In Colombia, HarvestPlus and partners are delivering seeds by mail. They have reached 1550 smallholder farming households through these traditional mail operators. In addition, the partners provided virtual training for the farmers.
* In Uganda, agro-dealers sell seeds at the pop-up agro-shops at churches and schools where farmers can purchase these seeds at a safe social distance, and with all the necessary precautions in place.
* In Zimbabwe, HarvestPlus is recording farmers' feedback on the performance and taste of new biofortified varieties via phone surveys and providing necessary information about the benefits of these nutritious crops.
* In Nigeria, HarvestPlus organized successful virtual events to engage with the key public and private sector stakeholders to come up with COVID responses/action plans and to implement and monitor these plans. These actions included innovative ways to increase the availability of quality seeds, facilitate farmers' access to seeds, assist enterprises in laying the grounds for recovery, and provide palliatives to highly vulnerable populations, in collaboration with government and partners.

HarvestPlus has also elevated the use of digital technologies for several delivery programs, during these pandemic days when digital solutions are today more important. For example, HarvestPlus has been linking farmers to markets, empowering the supply chain by providing agronomic updates, and enhancing the seed systems by making use of technologies such as the vitamin A sweet potato app, led in coordination with the government, in Uganda[5].

The focus of COVID responses aiming to enhance food systems should be on promoting nutrition, and supporting farmers and food system workers, by capacity strengthening, and helping them access seeds, fertilizers, and technology, including digital technology.

Links to resources:

<https://www.harvestplus.org/knowledge-market/in-the-news/coronavirus-pandemic-highlights-need-ensure-good-nutrition>

<https://www.ifpri.org/blog/covid-19-nutrition-crisis-what-expect-and-how-protect>

<https://blogs.worldbank.org/voices/hunger-amid-plenty-how-reduce-impact-covid-19-worlds-most-vulnerable-people>

<https://www.harvestplus.org/knowledge-market/in-the-news/reaching-farmers-and-vulnerable-communities-amid-covid-19>

<https://www.harvestplus.org/knowledge-market/in-the-news/harvestplus-supports-sweet-potato-mobile-app-project>

on behalf of HarvestPlus,

Destan Aytekin
Knowledge Management Specialist

<https://www.harvestplus.or>

## Ernest Molua, Centre for Independent Development Research [CIDR], Cameroon

While most discussions attempt to explain the negative consequences, few seem to have captured the strengths and opportunities that have emanated during this episode and period of COVID 19. The advent of COVID-19 has also demonstrated the positive side of African agriculture and food systems, with respect to its resilience, adaptive capacity and innovativeness.

With the exception of countries or regions experiencing a civil war, environmental shocks, climatic stress, and strain, countries in the continent have largely demonstrated the capacity to sustain a flow of food during these difficult times associated with stringent lockdown and restriction of movements.

The following factors could explain the resilience of the African agriculture and food systems during this period constrained by anti-COVID 19 protective measures: (1) The proliferation of home gardens and family farms; (2) the pervasiveness of informal production, marketing, and trading systems; (3) the omniscience of informal financing and input supply systems; and the (4) reliance of social capital, cooperatives, and self-help initiatives.

These are important pointers for policy-makers and those in governance to threat seriously, rather than with disdain and looked upon with scorn. These parallel informal structures, which go beyond classic

## Cristina Grandi, IFOAM Organics International, Italy

Dear FSN Forum Team and members,

We would like to share with you the views of organic farmers from India, Sri Lanka, Brazil, Philippines, Zambia, Indonesia, South Africa, Uganda, Ghana, and Puerto Rico on how they are dealing with COVID-19 in their countries.

Shamika Mone, a young organic farmer from India and president of INOFO[1], collected their voices and wrote the article “[Farmers have their own struggles and their own solutions](https://www.organicwithoutboundaries.bio/2020/04/22/farmers-have-their-own-struggles-and-their-own-solutions/)” published on the IFOAM blog “Organic Without Boundaries”. The article contains answers to some of the questions of the FSN Forum online consultation on “Responding to the impact of the COViD-19 outbreak on food value chains through efficient logistics”.

Although we suggest you to read the whole article, we have included below a summary of the main issues highlighted by the farmers in the different countries.

**India**

Food producers, especially those with small and marginal lands who live primarily on their daily-earned source of income are feeling the impact of the pandemic. Urban workers sometimes get packets of free food from the government or other institutions, but rural workers are completely deprived of this assistance.

Where harvesting is at its peak time, farm workers tend to migrate from one place to another to earn higher wages. Due to the lockdown, there are now hardly any workers to harvest the crops. Machines are also not easily available. Due to the delay in harvesting, mature grains have started to shatter and grazing (wild and stray) animals are also harming the crop. Crops long ready for harvest are exposed to a number of other risks like the rains, fires, etc.

Farmers often plant 2-3 types of major crops at different times. The farmer arranges the money to pay for the harvesting of subsequent crops upon immediately selling the first crop. But as the markets and retail shops are closed, it has become difficult for farmers to sell their harvest. As it is necessary to arrange money for harvesting, small farmers are being forced to borrow money from local traders, by making deals to sell their crop at a lower price. However, many farmers might not be able to repay their crop loans within the time line, given the inability to harvest.

**Sri Lanka**

As many farmers’ markets for organic produce are closed down along with other markets, the Sri Lankan organic farmers find the only possible marketing channel available is “door to door” delivery. Many in the organic sector in Sri Lanka are working in two shifts – day and night – to implement a local home delivery system especially for fresh veggies, fruits, and other perishables.

**Brazil**

As street markets and restaurants are closed, many young organic farmers are working non-stop on an online delivery system to sell their veggies, fruits, and mushrooms. They are stimulating online payment via app and online bank transactions. This new in-between system is difficult to manage but we are forced to innovate for the sake of the family’s income and also to feed the community. At the same time, lots of other farmers, mostly the elderly ones, are not able to participate in this system. They are losing their produce and the corresponding income, hence, bringing hardships to them and their families. There are some projects from institutes and people who buy organic food and supply it to poor communities in large cities.

**Philippines**

Not only for organic but especially for conventional farmers, it is now difficult to sell their products because of restrictions on movement. Some vegetables are being thrown away or fed to animals because they cannot be transported to the markets in the city. Some local governments are buying the farmers products and distributing them to the local community but there are very few initiatives like this and the majority of farmers are experiencing difficulties. In other scenarios, farmers are giving away their products for free so they don’t go to waste.

**Zambia**

There is no complete lockdown, yet. Farmers in Zambia are dealing with lower prices for their commodities as the local economy slows down. In addition, they are witnessing an increase in transport costs as less public transport options are available. They foresee a situation where farmers will lose their produce (especially fresh produce) because of challenges imposed by some of the measures adopted. A window of opportunity has arisen where farmers are being encouraged to partner with retail chain stores and supply some products that are normally imported especially some fruits and vegetables. Though this is a long term program, it exposes some weaknesses in the value chain when one depends on imports and would no longer be available as neighbouring countries are **under complete lockdown.**

**Indonesia**

There is an increase in demand for organic products. The Indonesia Organic Association (IOA) has collected information from their organic farmer members and found that there has been around 300 % increase in demand from the supermarkets compared to regular demand. Also, some of their members are getting about 7 – 10 new customers a day. Among the many products, there is an increased demand for the ginger and curcumin family, vegetables, and fruits.

**South Africa**

Most fresh food producers have shifted to online sales and are setting up pop up stalls in existing local shop venues who have offered to help producers shift their goods. Interest in local, traceable food has escalated 100 fold. However, fresh organic produce is scarce with an increase in demand and the inability to move products easily. Special permission to transport essential goods is required which is a lengthy process. Lots of homes are planting food in their gardens, but high density shack dwellers are at high risk especially children and the elderly who are reliant on feeding schemes. Farmers are also affected by drought but they hope to have some decent rains soon to bring much needed relief.

**Uganda**

The ban on public transport has hit everyone really hard. The situation has affected food trade and production. Although trucks delivering goods are not yet banned, from the source (farms) to the destinations (consumer homes, restaurants, open market places, etc), the food supply chain is broken. It escalated when armed law enforcers stormed the main city in Kampala, and several of its suburbs intimidating citizens: all in the name of enforcing social distancing. Fear gripped the public. Now, with no access to transportation, most businesses have come to a standstill. At the fresh veggies association in Uganda, members are studying the situation, and have plans to stock seeds for their families since they produce about 60% of the food they eat. They also plan to use this time to raise vegetable seedlings and sell them.

**Ghana**

There is a partial Lockdown in Greater Accra and Ashanti region, the two economic hubs of the country. These are the places where population numbers are the biggest and demand for organic food is the highest. The lockdown only allows the transport of goods between these regions. But reports from farmers in Accra suggest there is now higher demand for organic produce. All orders are placed online or through calls and money is received by app.

**Puerto Rico**

People are denouncing the confusing position of the government on street food vendors. People are allowed to buy food at the supermarkets, yet informal produce vendors are not allowed to sell food. Most markets were shut down. Farmers have been making food basket deliveries. The main challenge for farmers, is how to earn enough to feed themselves and their families in the coming weeks.

On behalf of IFOAM Organics International

Cristina Grandi

IFOAM Chief Food Security Campaigner

## Schola Campesina, Italy

The following contribution will explore two points: 1) the particular resilience of localized food systems -based on family farming- highlighted by the global crisis and; 2) the urgent need to support family farming as a strategic response to the crisis We highlight the importance of localized food value chains -and its main actor family farmers- in alleviating the adverse effects that have been encountered thus far and building sustainable food systems, able to face future crisis.

**1. Localized food value chains have demonstrated heightened resilience**

The Covid-19 outbreak has attested to the fact that local food value chains provide particularly efficient logistics in comparison to long and globalized food chains. Indeed, global food production has not been significantly affected and -where local markets have remained in operation- no major issues have been reported. Conversely, international trade has been strongly affected due to its inherent globalized and complex logistics.

If we look at the main elements that affect food value chains in times of such crisis, such as: a) the closing of markets, b) the restriction of access for seasonal workers, c) bans on exports (and thus imports),  and d) the restriction of trade in agricultural inputs/equipment; it is evident that long food chains are highly vulnerable, affected by all the aforementioned elements, whereas local food chains are only affected by the closing of markets. Based on international trade, globalized food chains have clearly shown their fragility and susceptibility to market volatility (e.g. the meat sector crisis in the US). However, local food chains (such as Community Supported Agriculture) have, in many countries, provided an efficient substitute to long food chains  ([Urgenci, 2020](http://urgenci.net/community-supported-agriculture-is-a-safe-and-resilient-alternative-to-industrial-agriculture-in-the-time-of-covid-19/)). We can also herein re-emphasize that globalized value chains are based on heavily industrialized food systems that are also polluters, and that represent the bulk of greenhouse gases emissions in the food and agriculture sector.

This extraordinary crisis has shown with clear and paramount empiric evidence that family farming - constituting the vast majority of local markets- is providing the bulk of the food consumed by humanity (UNDFF, 2019). Specifically, when taken within an agroecology framework, family farming has demonstrated an incredible resilience and capacity to absorb the unforeseen shock (see Indian case study below). If this were not the case, the current pandemic would have already precipitated an unprecedented food crisis that would have affected a large part of humanity. Today, thanks to the localized structure of food systems provided by family farming, food is available for the population. Furthermore, if [the UN warns of a coming food crisis](https://www.theguardian.com/society/2020/jun/09/world-faces-worst-food-crisis-50-years-un-coronavirus)[[1]](http://www.fao.org/fsnforum/activities/discussions/covid19_logistics#_ftn1), it will be directly expedited by the lack of income and the increased poverty prompted by the global lockdowns. The World Food Programme also states that “[COVID-19 will double the number of people facing food crisis unless swift action is taken](https://www.wfp.org/news/covid-19-will-double-number-people-facing-food-crises-unless-swift-action-taken)”.

It is imperative that we acknowledge that family farming is feeding the vast majority of the world and that, on the contrary, the conventional agro-industrial sector, with its globalized structure, is in crisis. In this emergency, family farming and its localized food systems are the crucial components that are preventing us from food shortages.

**Box1**

Indian agroecology school Amrita Bhoomi welcomes ex-workers of conventional farms

Conventional farms in India have been heavily affected by the COVID crisis, which has rendered many people redundant, in particular women. These women have been welcomed at the Amrita Bhoomi Agroecology School in Chamarajanagar District where they have the opportunity to learn how to grow their own food without using synthetic fertilizers or pesticides. The Agroecology School provides free training and equips participants with all the necessary tools needed to become an autonomous farmer: land, seeds, training and support, equipment, etc.

The impairment of conventional farming systems by the COVID crisis has directly resulted in the loss of livelihoods of many families. Amongst them, 14 women found a new opportunity to make a living in agroecology within localized food chains. Instead of being irreparably sabotaged by the global health and economic crisis, Amrita Bhoomi Agroecology School has safeguarded households from hunger and destitution.

(Interview with Amrita Bhoomi volunteer / June 2020)

**Box2**

Bio-distretto della Via Amerina e delle Forre,  an Agroecological territory in central  Italy,  boost the sales of local organic farmers to respond to the increase in demand of quality and safe food coming from families in lockdown in Urban and peri-urban areas

During the lockdown period in Italy, the food consumption patterns have dramatically changed. The Hotel Restaurant and Catering (HORECA) sector, that usually accounts for more the 50 % of the overall consumption, has been drastically reduced. On the other hand, family consumption has been bolstered, as the three traditional meals per day have to be consumed by all the components of the family at home.  At the same time, greater attention to health care and food quality have been necessitated by the family demand. In this context, all the short chain sales models, and especially those demonstrating a clear agroecological approach ([Nyeleni 2015](http://www.foodsovereignty.org/forum-agroecology-nyeleni-2015-2/)), like the bio-districts, have garnered special attention by families, especially in urban areas. Italy’s bio-districts have clearly defined territories and encompass organic agriculture and food production, a promotion of local community initiatives, cultural heritage, and traditional crafts. Bio-districts foster collaboration between farmers, local residents, tourism operators, local authorities, and other cultural and historical institutes and organisations. Italy has 30 bio-districts.

Biodistretto della Via Amerina e delle Forre is a nonprofit organization that includes the territories of 13 municipalities in the province of Viterbo (50 km north of Roma), with a population of approximately 70,000 inhabitants , and represent an area where more than 300 organic farms  are active .

Biodistretto della Via Amerina e delle Forre is an   association based on membership. The main aim of the association is to promote sustainable development at the territorial level with an agroecological approach: Other thematic areas included in this mandate are sustainable tourism, renewable energy, environmental protection, and circular economy principles. The Bio-distretto aims to support the local community to transition to a zero-emission model of production. The Bio-distretto promotes the use of renewable energy and is the key actor at local level in creating better conditions to facilitate the realization  of the project’s goals, as it involves collaboration between the local public authorities, food producers and  civil society organizations.

In the Bio-distretto della Via Amerina e delle Forre the farmers and producers grow and sell diverse products: wine, olive oil, cheeses such as mozzarella and sheep’s cheese, pork products and saffron, and furthermore operate an agri-tourism business and an international agroecology school .

Many of the products from this area are sold in the main markets of Rome or in smaller local markets, and are also distributed to local families through the use of direct selling schemes . This kind of model is a strength of the biodistrict’s small-scale farmers – they are not constrained to one particular market and so they can easily adapt to different situations. In the COVID crises period an increase in sales of approximately 25% has been reported.

The small farmers and producers who live in Biodistrict della Via Amerina e delle Forre are innovators. This is most encapsulated by the fact that they have adapted their traditional farming methods to the demands of the modern world, and yet remain focused on sustainability. The farmers have strong social and cultural principles, and work together with the local community. Part of the ethos behind the biodistrict movement is to go beyond the ‘single farm’, and to create a holistic and integrated sustainable community.

**2. Response to the crisis: supporting family farming**

Based on the above analysis, it is evident that the immediate response to the crisis should be to support family farming and its associated organizations, which have the unique capacity to guarantee a food supply to all and to reduce poverty. Grants and credit programs should be immediately directed towards family farming and related organizations to increase their autonomy on seed production, post-harvest management, and access to markets. In the context of the UN Decade for Family Farming (UNDFF), all initiatives at national and international level that support family farming should receive funding immediately. We call especially upon IFAD to drastically revise its priorities.

We need to further delineate the situation of the crisis pre-COVID 19 and the one post-COVID 19. The locust crisis in Eastern Africa, and the prolonged drought in Zimbabwe, are emergency situations that have to be handled with context-specific tools and responses that are different to those already outlined above and, more importantly, definitive social protection measures should be implemented. It is imperative not to conflate the two crises, as they need to be addressed separately and with different tools.

We advocate for a new communication by UNDFF after the COVID crisis; to call upon all Governments to put the health of local and regional populations at the centre of their actions and responses, and to put people before economic profit and international trade that benefits a handful of powerful corporations. The UNDFF Global Action Plan must be revised due to the COVID crisis, which is having an impact on food systems worldwide. A precedence for this has already been set by the food crisis of 2007/2008. Not to acknowledge this impact on food systems will undermine the outcome of the UNDFF.

At the same time, we highlight that all Governments have (not always very effectively) tried to guarantee food access to the entire population (food provided by, in the vast majority, family farming, through localized food systems). This means that they are acknowledging the heightened importance of the right to health and the right to food over any trade rules or transnational agreements.

The observations on the effectiveness and efficiency of local food systems also necessitate a larger and improved support for family farming, including a more rigorous implementation of the UN Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP), and a structural reform of the global governance of food and agriculture. A governance system out of the purview of the WTO and any bilateral trade agreements. In this sense, a more decisive role should be given to the Committee of World Food Security (CFS), where family farmers have a voice.

The UN institutions and governments should address the above-mentioned points and take the required action needed to ensure that they are successfully and effectively resolved.

[[1]](http://www.fao.org/fsnforum/activities/discussions/covid19_logistics#_ftnref1) <https://www.theguardian.com/society/2020/jun/09/world-faces-worst-food-crisis-50-years-un-coronavirus>

## Mansur Abdul Mohammed, Bayero University Kano, Nigeria

In Nigeria specifically during the lockdown, the authority provides the chance for the transportation and supply of agricultural products and inputs such as fertilizer, seed, and other agro-allied products such as organic manure, ash, and other materials. The major impact of Covid-19 lockdown on food supply and value chain are more on the processing of local and small agricultural product, for instance, the processing and supply of some wild agricultural product (leafy materials) such as yadiya, Moringa, and Tafasa from nearby villages into the city become very difficult for them to supply due to inadequate transport facility, inadequate customers due to lockdown and the supplier effort to adhere to government policy on lockdown. This consequently affects their economic well being. The villagers normally sell the products and buy some farm facilities back to their home and also buy some feeds to some of their domesticated animals which they rely upon as a source of organic manure. Conclusively Covid-19 lockdown significantly affect the transportation and supply of some farm product which directly affect their economy.

Dr. Mansur Abdul Mohammed

Geography Dept, BUK

## Rahmi Khalida, Indonesia

Pandamic Covid 19 have caused greatly impacts the value chain of agricultural commodities and food security especially for the urban area in many provinces In Indonesia . Many commodities must be wasted and not distributed. On the other hand, this situation raises the human spirit conditions and business opportunities, such as in the FinTech value chain technology and online delivery services so that the distribution of commodities from farmers to consumers or from the consumer market to work better. The government also helps in the delivery of agricultural goods to consumers and make sure the food availability is sufficient. The government also helps small enterprises by ease them to pay the business loan. Although the regulations regarding transportation have begun to be easy, this method is still used.

## Dhananjaya Poudyal, Civil Society Alliance for Nutrition (CSANN), Nepal

Responding to the impact of the COVID-19 outbreak on food value chains through efficient logistics

Nepal is an agricultural country where 66 percent of the population is engaged in agriculture facing with several challenges like droughts, famines, torrential rain, landslide, and some manmade disasters too. In the meantime the country has to fight with the COVID 19 likely the other countries. However, the country has taken some measures towards minimising the effects of the disease through efficient logistics on food value chains. Transportation and movement of the people has not been normalised resulting to irregular and insufficient catering of food. Therefore, realising existing situation and future predicament of the country government has taken policy of supplying the food regularly without possibilities of shortages across the country. Thus some of the measures that the government has taken for food value chain with the supports of efficient logistics have been mentioned briefly as follows:

1. Buffer stock of foods: It has been highly prioritized in food security of the country with establishment of additional food procurement stores in some main parts of the country followed by introducing the concept of food bank targeting to the COVID 19. It has been targeted to make availability of the foods round the year with provision of buffer stock through the terminal market (Food Corporation) of the country. The food corporation purchases the food from the farmers immediately after harvesting and sells out to the whole sellers / retailers of the food. In the meantime the government has targeted to increase the production of all the crops of the country like rice, maize, and wheat followed by other cereals, pulses, vegetables and livestock products.
2. Supply of inputs: To meet the target of production of the food arrangement of inputs like fertilizers, irrigation, credit facilities, labour, and insurance of the crops and livestock has been emphasized in the country.
3. Marketing of the agricultural products: It has been arranged the distribution system of the agricultural products through a channel of marketing like from producer to wholesaler and retailer to consumer. Accordingly, pricing policy of the products exists in the country where minimum support price of the main products is fixed before plantation of the crops.
4. Rationing of food: The government at different levels from federal to local level have been involved in rationing of the food to the ultra poor and to the others who are unable to purchase the food from the market.
5. Involvement of private sector: Some of the corporate houses, business men and individuals too are donating raw food as well as cooked food in edible form in many places of the country.
6. Home delivery of food: Accordingly, home delivery system of the food like rice, pulses, cooking oil, spices, livestock products, green or dry vegetables and fruits has been expanded from the trading partners.
7. Maintaining quality of food: Normally, quality of the food is not considered at the time of crisis rather than quantity since everyone’s target is to meet hunger. However, it has been asked to the concerning departments / sectors to maintain the quality of the food even supplying through different channels.

Thank you.

## Laxmi Prakash Semwsl, ANNAMRIT Farmers as Owners Foundation, India

The current challanges of keeping food supply chain operational at one hand to keep the food security promises with securing the lives from spread of covid-19 infection from one area to another is the real litmus test for entire agri value chain from pre production supply inputs to production, collection, grading, transportation, storage, processing and distribution as well as delivery networks. At [www.farmersasowners.org](http://www.farmersasowners.org/) being a social investor of Apple value chain business in partnerships of 15 primary apple growers cooperatives in different areas of Uttrakhand himalayas and agri value chain business managers of [www.himalayanapples.com](http://www.himalayanapples.com/) implemented the idea to practie approach of social business for fair econimies and just societies by applying trekking software to trace the fresh apples from farm to fork [https://www.slideshare.net/utpalchandraa/ict-with-apple-service-project](https://www.slideshare.net/utpalchandraa/ict-with-apple-service-project%C2%A0) was a positive outcome of prepartions through coopetition.

The full cold chain solution with active participation of stakeholders bing values to all with new learnings despite the restrictions imposed sometimes but adopted most of time with feelings to overcome from the difficulties jointly with the help of others. [https://www.pureecoindia.in/shri-jagdamba-samiti-helps-marginal-apple-gr...](https://www.pureecoindia.in/shri-jagdamba-samiti-helps-marginal-apple-growers-in-garhwal-find-market-linkage/) In our opinion the partnerships could help more in these types of difficulties than during normal time.

In India all spaces of agriculture nd agri businesses from input supply to production, processing, transportation and storage disrupted which causes in the quality food availability to citizen and even after three months of lock down the supply chains are not oprational fully.

Fortunatly apple in Himalayas team concluded the off season sales succefully with winning over zero infection of covid-19 despite supplying fresh apples throughout the nation and now preparing for the upcoming harvest from second week of July.

We hope for the best on the strong base of our partnership.

On this International CoopsDay we all partners pledged our committments for climateactions with ensuring food security to all and better livelihood to our member farmers.

Goodluck from Himalayas.

## Dele Raheem, Arctic Centre / University of Lapland, Finland

The impacts of this pandemic on the food system has resulted in a diverse range of measures by national governments globally. The food system is interdependent as various food commodities come from different parts of the world. It is likely that some exotic fruits and vegetables that are taken for granted may soon become more expensive or almost non-existent in the Global North. Many countries will have to ensure that their countries rely less on exported foods. The COVID-19 measures taken by countries that produce food and food ingredients in the Global South will likely have impacts on food processing of such imported food crops in the Global North.

In the northern part of Finland, where I am currently based, there are concerns on recruiting seasonal migrant workers that often come to Finland to help with harvesting, picking of berries and mushrooms from the forest. Due to restrictions, many may not be able to come this summer which may eventally lead to many berries unharvested in the forest.

The impact of measures to face the COVID-19 pandemic on the exports of processed food crops will depend greatly on the ready availability of the raw food crops. So far, in Finland the policy of food distribution has been quite good, as there is no shortage of foods in grocery shops to date.

Somehow, we may likely see an increase in the price of foods due to less supply and food adulteration may likely increase, therefore, governments will need to ensure that the origin of food are well monitored to avoid frauds.

## Yusuf Abdi Lare, Livelihood Relief & Development Organization, Somalia

Dear Sir./Madam

The cases of COVID -19 crisis in Somalia have been died down after it rained three weeks slightly so many thanks to Allah who created us, gives us heath, food, water & happiness.

But the standing constraints are as follows:

1. Relapsing AWD cases or cholera
2. Seen or existing some cases of Measles
3. Lack of agriculture investment policy for the small scale farmers
4. lack of livestock restocking investment for Agro- pastoral & pastoral communities in Somalia
5. lack of youth & women skills - empowerment & employment
6. lack of disability rights consideration
7. Continuing of Minority clans' discrimination, marginalization & stigmatization of their color, kind , culture & customs

Thanks

Best Regards

Agric-Engineer

Yusuf Abdi Lare

## Olusola Benson, Nigerian Stored Products Research Institute, Nigeria

All over the world, Coronavirus Disease (COVID-19) has changed the way mankind lives. The impact brought about cancellation, readjustment, realignment, and reintegration of lofty goals and ideas. As a result of the outbreak, agricultural production has witnessed a downturn which was attributed to lockdown and stay at home order by the government to curb further spread of the disease. In response to this, governments of nations and individuals have evolved measures to cushion the effects in form of palliatives.

Addressing the losses and wastages in Fresh Fruits and Vegetables (FFVs) through efficient logistics in Nigeria, the Federal Government is making efforts to generalize the use of ventilated Re-Usable Plastic Creates (RPCs) in transportation of FFVs from the Northern part of the country, where agricultural production activities are higher, down South. In the same way, awareness creation, popularization, workshops and trainings on the use of RPCs by relevant stakeholders (Farmers, Transporters, Traders and Marketers) at various FFVs market places are progressing.

Nigerian Stored Products Research Institute (NSPRI); one of the Research Institutes under the supervision of Agricultural Research Council of Nigeria (ARCN) in the Federal Ministry of Agriculture and Natural Resources developed RPC technology to prevent or minimize in-transit losses in FFVs. Studies have established the importance of Re-Usable Plastic Creates (RPCs) in transportation, postharvest loss reduction, as well as a viable alternative for handling of FFVs in Nigeria (Benson et al., 2020; Okonkwo et. al., 2018; and Babarinsa, et al., 2018). The shallow RPCs were used for tomatoes due to the softness of the fruits, while the deep RPCs were used for sturdy fruits such as oranges, mangoes, plantain and pineapples (Okonkwo et. al., (2018).

The impact of these government efforts is yielding the desired results going by the feedbacks from the on-going workshops and training programmes aimed at popularizing the use of this technology (RPC) amongst all relevant stakeholders. To further deepen the use of RPCs across the nation; the concept of Receipt System could be introduced in government policy post-pandemic. This implies that stakeholders don’t need to own or invest in RPCs acquisitions but instead; they rent and pay token to government registered “Value-chain and Logistic Entrepreneur” who had invested on RPCs for haulage. This would create more jobs, allows efficient management of the receipt system concept, and more importantly, an effective awareness creation for relevant stakeholders because it’s now a business.

Olusola B. Benson

Senior Research Officer,

Department of Research Outreach,

Nigerian Stored Products Research Institute, Yaba, Lagos, Nigeria.

## Sérgio Mattos, Tropical Marine Ichthyology Group – IMAT, Brazil

The construction and implementation of fishing policies requires dialogue and a close relationship with representative fishers associations, to induce intervention processes that should allow to meet the challenges of a bottom-up policies implementation that take notice of empirical and traditional knowledge. In this context, Academia plays important roles where small-scale fishers find support, although still few researchers developing studies and researches on social and economic issues related to small-scale fisheries.

Such commitment allowed knowing more the way which fishers struggled to have rights to resource management, once engagement was ultimately the extent to which management rights coincide with fishers’ power and involvement in decision-making, although only some directly engage. Many fishing arrangements aims at providing fishers with proper rights to resource management, the way in which the majority of fishers do engage in management, because specific mechanisms were develop to facilitating their participation, as formally created or long-established informal traditions tacitly recognized by the Government, although fishers themselves do not participate personally, and they do so through fisher representatives or formal fishing organizations.

Such arrangements, in some way or another, worked as standing committees supporting small-scale fishing villages and communities to deal with recent disasters and outbreaks, with active participation of small-scale fisheries representatives, and last March they published an open letter calling for action, signed by more than 400 institutions, movements and researchers. The result was the establishment of an observatory which functions as a political platform for claims and training, an important active network to support SSF, known as Grupo Observatório dos Impactos do Coronavirus nas Comunidades Pesqueiras (Observatory Group of Coronavirus Impact on Fishing Communities) created during the COVID-19 Pandemic by the Federal University of Bahia and the Pastoral Council of Fishers, aiming at bringing leaders together to centralize data and disseminate information and serve as an emotional assistance to these communities, being composed by civil societies organizations representatives and research institutions. The Observatory collects and disseminates information about Covid-19 on SSF in a blog (https://observatoriocovid19pescadores.blogspot.com/), using Google Forms and Apps, and the reports are grouped together and released at the end of the day, in the Daily Bulletin. And they also serve as a basis for the wider epidemiological bulletin of fishing communities, released at a weekly-basis.

## Marco Vinicio Sanchez Cantillo, Food and Agriculture Organization of the United Nations, Italy

Dear all,

With the discussion now closed, I would like to share a word of appreciation for the time you have taken to provide all these interesting comments.

It is fascinating to read your first-hand accounts on how COVID-19 has impacted the logistics of the food systems in your countries and how governments, civil society, the private sector and individuals reacted to this challenge.

Unfortunately, in many parts of the world the pandemic is far from over and challenges to the food systems will continue. Hence, do not hesitate should you like to share any additional insight related to this important topic and which could provide valuable information and lessons learned.

Over the next weeks we will analyze your inputs and publish a summary. Needless to say, we will let you know once it is available.

Moreover, we will get insights from this fruitful discussion to feed into FAO's COVID-19 resources.

Thank you very much again!

Marco V. Sánchez

1. The State of Food Security and Nutrition in the World 2019 [↑](#footnote-ref-1)
2. <https://doi.org/10.4060/ca8466en> [↑](#footnote-ref-2)