

## From Farm to Fork: Agrifood Supply Chains | Text Transcript | CIRCLE

This is a text transcript of the webinar “From Farm to Fork: Agrifood supply chains and the fallout of COVID-19 lockdown in India” presented by the Canada India Research Centre for Learning and Engagement (CIRCLE) at the University of Guelph. The webinar was recorded on August 12, 2020 and was moderated by Dr. Bharat Punjabi. The guest speaker was Dr. Sudha Narayanan, Indira Gandhi Institute for Development Research, Mumbai.

Transcript:

### Bharat Punjabi:

All right. A warm welcome to all of you to today's webinar which is on food, food economy in India. Before we begin I just wanted to you know, give you all some background to today's event and also to the center that is hosting it. My name is Bharat Punjabi. I'm an adjunct at the Guelph Institute of Development studies and I'm also a lecturer at the University of Toronto and it's my pleasure to share today's session on the food economy in India.

To give you all some background on the center CIRCLE as it is called, was the Canada India Research Center for Learning and Engagement has been established in February 2020. It aims to be an interdisciplinary nucleus in Canada for cutting-edge research on India and the Indian diaspora to showcase, advocate, catalyze and foster an equitable, respectable and sustainable exchange of knowledge between Canadian and Indian scholars and complex public policy issues which are related to sustainability and social and economic well-being and that's in keeping with the mandate of the University of Guelph's interest in economic development.

Today I wanted to take the opportunity to introduce today's speaker. Professor Sudha Narayanan has joined us from Mumbai, India and she's an associate professor at the Indira Gandhi Institute of development research with research interests in agricultural economics development economics and applied econometrics.

The reason we've had Sudha today is to talk about the food economy in the context of the COVID-19 crisis in India in that combination of Sudha's current research is on agrarian trade and market structures and institutions in developing countries and the title of the talk is “From farm to fork: agri-food supply chains and the fallout of COVID-19 lockdowns”, which looks at the kind of impact of on the movement of food within India in the context of today's crisis before I hand this over to Sudha, I also wanted to mention the kind of broader protocols around asking questions.

Sudha will speak for approximately 30 minutes and if you have a question, I invite you to ask a question on the video or preferably in the chat screen which is in front of you I can allow about three questions per round and I will be doing the summarizing of questions and posing them to Sudha as we speak so let me hand this over to Sudha now and everyone's looking forward to a presentation on this especially as it comes in the context of the COVID-19 lockdown in India and the impact on the Indian economy. Thank you.

## Sudha Narayanan:

Thank you very much Professor Punjabi. I think CIRCLE is an exciting initiative and I look forward to how this unfolds over the coming years and I think one of the benefits of the crisis and the lockdown has been that engagement across countries seems to have increased more than before so I'm one of those who welcomes it as we can't be in many places at the same time except through zoom.

So let's get started. I'm going to share a presentation with all of you and I'm going to presume that you don't have familiarity with India, so some of the issues regarding markets, I'll just explain, and if you already are familiar with those, just allow, indulge me, I'm just going through it anyway. So as professor Punjabi said, my topic is going to be looking at agri-food supply chains and of course the idea of supply chains essentially tracks the movement of products but the lens that I have is actually through products' prices and to some extent people as well.

So the talk today is going to draw on research that we've been doing continuously in tracking food markets, food retailers as well as farmers. So I'll be drawing on multiple pieces of work and using secondary data as well as telephone interviews and face to face Interviews. So this is kind of pulling together a lot of the research that we have done. And I'll distill the insights that we have learned from that.

So I'll start by saying that in India, the pandemic triggered an economic crisis before a health crisis. So the first case was on January 31<sup>st</sup> and very early on, the government of India decided that a national lockdown would be essential. This was March 24<sup>th</sup>, 2020 and at that time actually there were very few cases in India and it was considered that this lockdown timing would kind of prevent an explosion of cases. We now know that that's not happened, because the cases in India have increased only now.

So in some sense the health crisis is imminent but the economic crisis already set in which was triggered by a national lockdown. Now all law lockdowns need not necessarily create an economic crisis but in the Indian case it did because it was a sudden announcement. Only four hours was given before the lockdown was implemented and to give you a sense of how unprepared people were - there were fishermen who went out to sea to catch fish, when they left there was no lockdown. When they returned they found everything was shut and almost one million tons of fish apparently was put back in the sea or was lost.

Similarly, truck movement on highways the lockdown was announced truck drivers could not reach their destinations... India is a large country – not as large as Canada - but it takes several days to get across, and they just abandoned their vehicles and went home because they couldn't even access food. So this was the kind of lockdown that we went in under-prepared, it was also among the most stringent in the world and enforced quite brutally in some cases.

The bigger issue was that there was very limited clarity on what would be permitted. It was deemed that essential services would be okay, but to define essential services, we had to go back to another act, which was from 1955, to see what essential actually meant. And different

people were interpreting it differently so the local interpretation of rules led to a lot of chaos. But more importantly there's also a federal structure, and in India agriculture and markets are state subjects, so each state has jurisdiction over policies, and the central kind of intervenes above all of that.

And here one of the curious things that happened in India was that those cases that the states that saw the earliest cases had actually issued orders for lockdown in various ways, and when the center's locked down orders and regulations came, it was largely independent of the state actions and sometimes orthogonal or conflicting with them. So then you have this poor center-state coordination actually coming up with different rules and states were ahead center was invariably a step behind and many of the states were just floundering to align their own state specific rules to those of the center. So this is the context in which this unravelling of agri-food supply chains was triggered, and I felt this background is essential to understand why there was this issue. I'll go faster now - and broadly there are two views, okay.

In the early days it was very clear that there was an unraveling of agri-food supply chains and from farm to fork whether it was access to their own farms, availability of labor machinery, this was a problem. Many small farmers sell in the village itself to traders who visit. They stopped coming because they couldn't move, they were also unsure of whether they could sell. Then the Indian government actually runs these regulated markets and I refer to it as *mandi* henceforth, and these mandis were closed because they are crowded spaces and were deemed to be high risk areas.

In fact of quite a few cases have been among traders and these produce fresh produce markets. So they were shut down which meant that the chief artery of the way the produce moves was actually disrupted. As I said transporters were having a difficult time - costs increased. Warehouses, coal storages, all of them face labor constraints. Many of you might have seen pictures of migrants leaving the big cities and going back to their villages because for want of jobs and because of the fear as well, so labor constraints meant they were in storage was not possible.

Agro processors were operating way below capacity and one of the things that happened was the demand collapse because hotels and what we call *HORECA* – hotels, restaurants and catering services – had collapsed, and plantation crops and the animal sector were particularly badly hit. The animal sector in particular because early on, this COVID-19 was associated with poultry and so they took a very bad hit. Now even though many people were writing this and urging the government to act to prevent further destruction of supply chains, there soon came another view which was that agriculture was a ray of hope.

And one of the things - this is the narrative that has dominated the last three months which is to say that, you know, among all the sectors, agriculture has been the least affected. In fact, that's going to lead India out of the current economic crisis. So growth rate of agriculture – it historically lagged behind other sectors but now it was actually doing better than the non-farm sector.

So they quoted numbers like there's record production of horticulture, food grain production has been very good, and area soon had expanded and in May, people were celebrating that the acreage zone was actually higher by around 38% but we know by August 2020 - and these are numbers from two days ago - that that gap has narrowed, and we find that acreage zone is about 10 percent higher. And there is some truth to this - agriculture has been resilient in India.

One fortunate event was the timing of the crisis which, what happened in winter season which is called *rabi* and that's in rainfed agriculture, during the winter or rabi season, land is left fallow in many places, so those who left plant value were anyway not exposed to these shocks. The other important distinction especially from North America is the institutional diversity in agriculture. We have very few factory farms or large farms and 85 percent of farmers own less than two hectares of land.

The agro-based industry is also a large number of really small enterprises - very often household enterprises with very large scale enterprises as well, so there's a whole mix there. And we also have different institutional forms, like Pharma producers organizations, agri-tech firms and many co-operators and we have quite a few different kinds of institutions there. And there's some sense where if one failed, the other stepped in to solve a farmer's marketing problem.

So these are the two views and there is some truth - the truth as they say always lies in between, and I kind of view that rather than a ray of hope, we have reasons to continue worrying about agriculture.

### On-screen content:

Dr. Narayanan shows a slide with the following information:

- Growth rate of agriculture projected at 3.1% in Q4 (2019-20)
  - Record production of horticulture – 320 million tonnes
  - Foodgrain production – 295 million tonnes
  - Area sown has expanded (49.9 lakh ha. to 67.25 lakh ha. as of May 2020), in August 2020, about 10% higher acreage under sowing.
- Resilience of agriculture during the pandemic
  - Rabi season (rainfed agriculture – estimated at 51%)
  - Institutional diversity
    - Smallholder agriculture – 85% are small and marginal farmers, absence of factory farms
    - Agro-based industry – mix of large scale and MSMEs
  - Role of FPOs and agri-tech firms – small scale, but effective

## Sudha Narayanan:

And if this is the only slide that you want to see, that's fine, because this is the central message that I have. All of the rest of my presentation is just trying to persuade you that this is what we found.

So I would say that the central lesson that we have learnt is that India has a resilient food system but with vulnerable people. And I built this around five facts: So one is consumers prices rose on average, so the prices consumers were paying in cities rose while the producer prices crashed, so essentially it's acid that the demand collapse was transferred to the producers of farmers in the form of low prices and all the costs, additional costs, with transport, uncertainty, were all shifted to the consumers in the form of higher prices.

India is a large country, therefore the impacts are very heterogeneous. We are finding some improvements over time but - not - I mean, I don't think we've fully recovered. And the role of traditional retailers has been instrumental. Early on, everyone predicted that the traditional retailers would be hit hard, which is true, they have faced huge challenges. At the same time, actually, we find that the modern organized retail and supermarkets and internet-based online grocery have been hit worse and they've not been able to function effectively.

And in fact, I'll talk a little more about the *Kirana* and street vendors. Kirana stores are like the mom and pop stores or the corners, brick and mortar stores that are usually characterized as hyper-local, so they would service a very small geographic area and it's usually not self-service. So you would go to a shop and ask for what you want and there wouldn't be much space typically and the stock keeping units are actually not very high.

The fourth fact is that, we see that wherever government procurement, so India has a large scale procurement to fund the food distribution system which is subsidized grains that for the poor, and the variable government procurement, and whichever crops that government procurement was there, it actually held up producer prices. Private innovation has also been quite impressive. And I'll talk a bit about that later.

But the big concern, and when we say resilient food system with vulnerable people, the vulnerability is really across both consumers and producers, but food insecurity has remained high. And my own concern is, and this would be the way I conclude is that the government has so far focused more on reform, and less on relief. And as I mentioned, the health crisis has not passed and the economic crisis will not end until the health crisis has also passed. So there is a huge need for relief as much as reform. I won't talk too much about this for paucity of time but this is something I'm happy to address in terms of questions.

So for each of these five facts I'm going to share with you some of our research results. So I said prices of farmers' fees have crashed and this is actually the red line that you see here is the lockdown and you see that over the next two months the prices are actually about 40% to 50% of what it was and that's what we are seeing. This is across 33 commodities and across all

regulated - what I said was – *mandis* across India, and these crops together account for about 85% of acreage zone. So it's fairly representative of Indian agriculture.

### On-screen content:

Dr. Narayanan presents a line graph that shows that prices faced by Indian farmers since the cross-country lockdown have sharply declined across 33 commodities. The lockdown began March 24, 2020 and the price decline continues up to May 1, 2020.

### Sudha Narayanan:

So you see the prices farmers have faced have crashed and look at what has happened in consumers. In urban centers, consumers have faced higher prices and this is from 114 urban centers in India - across India - and we've plotted the retail and wholesale prices and this is up to 31<sup>st</sup> of July, actually a little after, I think 3<sup>rd</sup> of August, and you see that the prices were trending downwards and after the lockdown actually it's increased a lot. And I'm not going to discuss that but if you look at it, the gap between the retail and the wholesale prices actually increased a lot, which kind of indicates that low prices are being pushed on to farmers at the producer end and the high costs are being shifted to the retail, to consumers.

So now what we are seeing is that has improved and the margins are going back, the markups are going down. But this is what we are seeing – the government is aware that the prices are increasing but they don't feel that it has reached a stage where they have to worry yet. I worry about it though.

### On-screen content:

Dr. Narayanan presents line graphs of the Retail Price Index and Wholesale Price Index over the period of February 1, 2020 to August 3, 2020. In both graphs, prices sharply increased immediately following the lockdown on March 24, 2020. Prices trended downward over May and June, and then increased again beginning in July.

### Sudha Narayanan:

Okay, so now what exactly happened? So we've been doing food retailer surveys in about 14 cities. So by student volunteers we have a forum called "Hard Work No Pay" where they work hard for no pay, and we've had a very good support from these students who went out and interviewed one street vendor and one grocery retailer each. And I'm presenting two rounds. We've done a third round in June, and we haven't entered in July, sorry, and we haven't integrated it yet. So as you can see, most of them were not able to - In the early days, which is the light gray bar - most of them were not able to get supplies, and transport was hard to get.

Those difficulties have reduced a bit but if you see what's increased, it's the labor shortage and transportation costs have increased among other things. And many of them have found that demand has gone down at least for some commodities. Many grocery retailers said, 'actually we have faced higher demand because the supermarkets have shut and online retailing is not effective, so we've actually attracted more customers', but one of the things that came out

quite prominently is the harassment from police and vigilance. And we found a lot of reports of communal discrimination on the base of ethnicity, and religion actually came up, where vendors from some community - people were boycotting them and so on. So this is then a disturbing trend that came up in our surveys.

So, while many of the retailers, especially the street vendors, said they were facing high harassment and their profits had gone down, some of the brick-and-mortar stores were actually saying that they are doing much better. And you know I think when we talked about resilience of the food system, two things were really interesting to us: one of it is the fluidity of who a retailer is, and we found that in many cities, many retailers were reporting that those who had lost their jobs - a car mechanic, a construction worker, they found that they'd lost jobs, and they started retailing fresh produce.

And this sort of indicates that the barriers to entry, anyway, are low, but people were actually adapting to survive in big cities if they couldn't go home. So some of them in fact indicated that the number of street retailers or pushcart vendors had actually doubled and in smaller cities they said that, whereas there used to be 50 now we have about 300 actually in the markets picking up produce to sell and they were all innovating as well. So because of the lockdown residents from these large-scale apartment complexes, they couldn't venture out, so many of them relocated in these complexes to be able to sell.

So that's the kind of adaptation that we found. The other interesting innovation, and this is just an example, is because restaurants were closed, many restaurants actually pivoted to delivering fresh produce to consumers. So they were able to change the way they were doing business and many of these online micro-delivery platforms actually responded. And many online retailers also started hiring in Uber or Taxi aggregators, because the drivers were not allowed to apply but they were kind of used and incorporated or they were contracted in to do food delivery, so these are the ways in which the urban centers are adopted.

### On-screen content:

Dr. Narayanan presents findings from a two-round survey of street vendors and grocery retailers in 14 Indian cities. A bar chart shows the following data:

<b>Problem faced by retailers</b>	<b>Percentage of retailers experiencing problem – April</b>	<b>Percentage of retailers experiencing problem – May</b>
<b>Am unable to get supplies regularly</b>	58%	35%
<b>Transport is hard to get</b>	46%	42%
<b>Labour shortage (loading and unloading)</b>	34%	42%

<b>Problem faced by retailers</b>	<b>Percentage of retailers experiencing problem – April</b>	<b>Percentage of retailers experiencing problem – May</b>
<b>The price that I have to pay traders to get supplies in very high</b>	34%	29%
<b>Transport costs have increased</b>	34%	55%
<b>Demand has gone down</b>	32%	26%
<b>Harassment from police, others, etc.</b>	28%	35%
<b>Prices I charge consumers has reduced</b>	8%	6%
<b>Discrimination</b>	0%	16%

**Sudha Narayanan:**

But we do see a lot of heterogeneity. There's no clear pattern. Smaller cities have seen larger increases. I talked about the markups already and commodity-wise, differences are huge. So cereals, after an initial increase, they steadied. Pulses and edible oils, the prices have gone up and they don't show signs of coming down, and with horticulture, meats, eggs and milk, they've been very volatile so we found prices go up and down and there doesn't seem to be any particular - That day, if in that city, the police are enforcing a lockdown more severely, prices would go up. In a city, if a trading wholesale market has a COVID case then you would see it shut down, and the prices would go up.

So it's really responding to local situations. But one of the big caveats in our research is that we know very little about rural food prices and availability and we know that from hearsay that different things are happening in different regions. In the production zones where prices presumably crashed and food is cheaper there. Now, peri-urban centers we are not sure what's happening but in consumption zones which are not especially in rainfed areas, it's likely that prices have gone up, but this is something of a black box and we don't understand it well.

But one way of getting to know about it is actually through phone surveys and field accounts and of course, I'm not going through each of these in detail, but there's been a bunch of institutions conducting these surveys and all of them say that farmers had problems harvesting and selling, and if they sold, they got a very low price. And to the point that today the most recent survey is the one that's called *Gaan Connection CSDS* report. It was released yesterday and they are noting that there's a lot of financial distress and food insecurity.

## On-screen content:

Dr. Narayanan presents a slide with the heading “evidence from phone surveys and field accounts” and the following information:

- Overwhelming majority unable to harvest, could not sell or sold at reduced prices (85%) (Azim Premji University)
- PARI – farmers holding on to cotton stocks unable to sell
- SSER – village accounts suggest a range of problems across geographies
- Harvard TH Chan School of Public Health-PHFI-CSA survey in May 2020
  - 10% could not harvest; 63% harvested, but 22% could not sell
- Gaon Connection-CSDS report released yesterday suggests similar patterns
  - Financial distress and food insecurity
- IGIDR farmer dipstick survey (~370 in 9 states – April/May)
  - Prices of tomato (Rs.18 to Rs.5; paddy Rs.1000-1500 vs. MSP of Rs.1815; Gourds Rs.20 to Rs.10, watermelon Rs.12 to Rs.4)
  - Loss of work and experience food insecurity

## Sudha Narayanan:

We ourselves did a survey in nine states and our experience was similar and I’m just going to show you a couple of slides from our survey. So it's from nine states, only 370 farmers, so it's by no means representative, it's a dipstick survey where we have longer conversations with farmers on what they were facing. So, contrary to the kind of “agriculture as a ray of hope” story, we find that quite a few have been affected, almost 39% were saying they were quite badly affected. And most of them don't seem to have a problem continuing farm operations which is the rightmost bar, but paying back loans, finding work, earning income, were all stated as key problem areas.

## On-screen content:

Dr. Narayanan presents a pie chart that represents a finding from the dipstick survey of 370 farmers in nine Indian states. 56.58 percent of respondents were ‘somewhat affected’ by the COVID-19 lockdown. 39.22 percent were ‘very badly affected’ and for 4.2 percent, the lockdown ‘has not made any difference.’

A bar chart details the specific problems faced by farmers, and their severity, during the lockdown. The problems included in the survey are:

1. Paying back loans
2. Finding work
3. Earning income
4. Food availability
5. Taking care of household needs
6. Continuing farm operations

The most severe problems were paying back loans, finding work, and earning income. Continuing farm operations was a notably less severe problem for survey respondents.

### Sudha Narayanan:

So one of the things in India is that because of the very small size of holdings, most farmers have pluri-activities and many of them dependent on depend on wage labor, so in a 2013 survey almost 32% of farm household incomes were coming from through wages, not just agriculture or livestock. And we found that almost a quarter had a member who had lost his or her job and many of them were stuck in a distant place and were unable to come, and disturbingly over 23% actually said that 'we had to borrow food, rely on others for food, or skip a meal at least once in the past week'. And this is being consistently repeated across surveys, only the magnitude differs, but you wouldn't expect farm households who grow for self-consumption to actually say this. And this is despite all the social safety nets that are in place in terms of cash transfers and food distribution.

I've already talked about the other kinds of problems, and one of the concerns in agricultural economists, is that we care about coping strategies because many of them don't have substantial savings and borrowing is often at usurious interest rates, they don't have formal sources of finance and we found that most of them in the immediate short term were cutting back on expenses. At that time only a few were selling assets but now recent surveys are reporting that many people are selling their mobile phones, small items, and one hopes that they don't start selling livestock, which typically they do, and other larger value assets.

So as of now we have indications that people are borrowing and selling a few assets. And we don't have plans to yet to go back and do another round of survey but it's some it's an option that we are keeping open to see how things pan out. One of the interesting social safety nets that India has is a workfare program in rural areas - it's called the *Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)*. That's a mouthful, so I'm just going to call it workfare, and it entitles each rural household to 100 days of work, unskilled manual work, without many use of machines, with limited use of machines and it's usually creating farm ponds and drought proofing and earthworks mainly.

The program was started in 2006 and in 2008, all the districts in the country had access to the program, and I'm showing you the scale of operation post-COVID, so in the last 10 years. Actually, never has the NREGA - It's a demand driven program, so if I want work I go and ask for it and it's a legal entitlement so if I don't get it I can claim compensation in principle. None of these actually work well in practice but this is a very good indication of the distress while a majority of them are actually landless workers and therefore not really producers, I think many farmers, too, are small holders, actually rely on NREGA to tide over the summer when cultivation is not widespread. So you see that in one month actually 600 million person days was generated, so this is again, another barometer of the kind of distress we are seeing.

## On-screen content:

Dr. Narayanan presents a line graph showing the number of households that participated in the NREGA workfare program from 2011 to the present. The number of participating households spikes around June of each year from 2011 – 2019, in the range of 15 – 25 million households. In March 2020, there is a massive increase of participating households, up to around 34 million households.

## Sudha Narayanan:

Now I'll just wrap up with a couple more slides. The government initiatives have been many. There have been loan deferrals, farmers, daily producers, have been issued for credit cards where they can borrow money quite easily. Then as I mentioned, the government procures food training and in many states they go for decentralized procurement, which is to say that the procurement happens at the village level so that the farmer doesn't have to travel or take their produce, and this has been quite effective.

The social safety nets in India - many people have criticized it for saying that it's costly, ineffective and prone to corruption, but we've seen these social safety nets actually serve their role in the pandemic. So whether it's the public distribution system of subsidized food grains or the workfare program that I just showed you, have really been a lifeline in this crisis.

Now, I earlier mentioned that the government has focused on reform rather than relief, and there the government has actually sort of taken the view that agriculture is the ray of hope and we are going to support it the best we can, and a couple of politically difficult decisions have been made. One is an infrastructure fund for post-harvest facilities. I haven't converted this to Canadian dollars but I think it's about 17 million Canadian dollars over 10 years so I'm not going to - I could be wrong but I need to check this.

So it's for post-harvest facilities that's often seen as the weak link, so it directly addresses supply chain issues. There are other interventions that the government has actually tried to allow space for. The private sector one is the essential commodities act. Earlier in the talk I said the word 'essential' comes from this 1955 act, so the government ratings the right to put curbs on storage and transport, on anything they deem essential. And those curves were actually viewed negatively by the private sector players who couldn't hedge or store commodities freely because they wouldn't know when these curbs would come.

So the uncertainty associated with implementation - those have been removed to some extent and I've been mentioning *mandis* which are government regulated markets. Now the central government has said 'we can't have this happen and trade should be permitted outside regulated markets'. Many states already allow that but you still have to pay a fee to the local market and that fee is being removed so that private players can trade freely. The contract farming is also - There's now an exclusive legislation to promote contract farming.

Now I don't think this is the forum where I can go into all of these in detail, but these are all to just suggest examples where these are all reform initiatives, not directly addressing the COVID

crisis. So what is the prognosis that I have? One of the things that we need to watch out is for the cropping pattern changes. I think horticulture producers have seen a huge slump in prices and they are probably going to move away from horticulture this season, and early evidence suggests that area under food grains has expanded.

There's also going to be a labor market effect and this is where we have to understand the distributional consequences of these changes. So in some places many big farmers who used to hire in labor are now relying on family labor. Some have mechanized, in other places there's a labor shortage. So the wage rates have risen so you're going to see a lot of heterogeneity in how landless workers are affected by on-farm impacts. The marketing decisions, concerns of food security, are looming large in the minds of farmers, so how much they choose to market and how much they keep for consumption is not known. There are again indications from journalists that people are holding back and not selling their grain.

And the key point that I already made is that the health crisis is not over and the economic recovery is linked to this. Many agricultural businesses and private players have bounced back a bit but we don't know about the millions of small, medium and micro enterprises in the food sector. We continue to have transportation bottlenecks and labor availability, and of course India is not an island, we have international trade which contributes quite a lot for agricultural GDP and we do not know what this context is going to be like. So I'll stop there and happy to address questions.

### Bharat Punjabi:

Many thanks Dr. Narayanan, and this is such a wide-ranging presentation on what is going on in India, both in the cities incidentally as to how the food is flowing, and also to the level of agrarian distress in rural areas. I had some questions but what we'll do is, we'll open the floor to questions directly from the attendees and I hope that's okay with you. Yeah, that's perfect, yeah.

Yeah, so let me open the floor to questions. Please be very concise in your questions and we have about 35 minutes for a discussion. So I'll take that opportunity again to thank Dr. Narayanan and I'll be around to moderate this session. So let me take the chance to open up the floor to questions now. All right.

So before we and kind of work on you know, opening up the floor there were some questions which were coming through the chat function and one was from Mr. Montero who was asking whether food prices are not controlled by the government given that you know India has mechanisms like the PDS, public distribution system and an administered price mechanism so why his question was "why is there such volatility given that India has some of these levers, these policy levers, to stop such volatility?" So Dr. Narayanan, could you respond to that?

### Sudha Narayanan:

Yeah, thanks for that question. The volatility that you saw was actually like a weighted average of 35 commodities. You're absolutely right that even though the whole price guarantee system

is criticized for being inefficient, giving farmers the wrong incentive, what we have seen is that there is a minimum support price which is the price guaranteed to farmers, across 28 commodities, but the government usually does not procure in any of them.

So in some sense the price is announced, but if the procurement doesn't happen then there is no enforcement or guarantee that the price will come. So in some sense it's a blunt instrument. The commodities for which this actually works well is wheat, paddy, which is rice and occasional purchase of oil seeds, cotton, and coarse grains, and this year they went all out to procure many of these commodities, and wheat procurement was actually at an all-time high this this year.

Those commodities for which there's effective procurement in those areas this procurement is also not evenly spread across the country. It tends to be geographically focused and we are seeing that where this procurement happened, the prices to producers have held up. Similarly the public distribution system that gives out grain, I think that has also helped keep the main cereal prices down, but that distribution is also controlled only for rice and wheat so these other prices have not really increased drastically. So I hope that answers your question.

### Bharat Punjabi:

Thank you. Yeah and so on that note. I hope before we get other questions from the attendees, I had a question on the kind of role agriculture has played in the newly liberalized economy and from your presentation, one could make out that the government's trying to, if not spin it, by saying that agriculture is going to revive the economy, but trying to make a case that agriculture is becoming more important. So do you think that once this crisis is over, we are going to see an attempt by the Modi government to take on rural poverty more directly and the broader agrarian crisis more directly?

### Sudha Narayanan:

My sense is that recent governments in India have been of the view that people need to exit agriculture and perhaps because of that view, they have not made sufficient investments in agriculture, and other than a brief period post 2008 when food prices increased, and after 2004-5 government actually invested in rural areas in terms of access to water, I don't think agriculture is viewed as a dynamic sector capable of growth. I think now there is a way in which people have been discussing in policy circles, on maybe we should have job creation in the non-farm sector in rural areas, where location.

Now you're not taking the centers of growth away from urban areas, but here again it's sort of linked to agriculture but not in agriculture. I'm not seeing that recognition of agriculture is being the source of job creation in the future and there is also another way in which there is a general sense that the government should allow private sector to take over many things and some of it is in agri-tech, promoting agritech, promoting insurance, allowing private players to come in and build these market linkages. So in some sense I see a slight withdrawal of the government from providing infrastructure that supports farming.

### Bharat Punjabi:

Right. There are more - Thank you Sudha, this is very insightful. There are more questions coming through the chat function. One is from William Barrett who's asking it's pointing under this paradox, where if - he's basically asking if producers are getting low prices and consumers are paying high prices, who's actually making the money in the food chain?

### Sudha Narayanan:

Yeah, this is an interesting question. In India we have lots of middlemen in the supply chain. So typically from farm to fork your produce can pass hands around five or six times, so it's a very long supply chain and the traders, or the middlemen have always been an object to villainize. I mean, they're always villainized saying these are the people who exploit the farmers and the consumers and make a lot of money. And I do believe that is there, I mean traders have information from both ends. They take the risks and the costs and they are able to arbitrage.

So there is that story where there are players and carters and collusion and monopolistic pricing and so on. But I think in this current context that's a smaller part of the story. My own sense is that the costs have increased, so much so transporters are now charging a lot more. So in some sense if I don't want to take the losses and I want to pass it on, then maybe the traders are not making huge money but they are certainly protecting themselves from losses that they would have had otherwise.

So I don't see it as traders making the money. There may be many who are doing that but there are also traders who are just saying 'I don't want to be the one who's losing money and passing on the cost to the two ends of the chain'. But, this is just my insight, so I don't have numbers that I can share.

### Bharat Punjabi:

Yeah this has always been a very difficult problem with Indian agricultural policy of absolutely making money but the intermediary is actually skimming off a lot of profits. The next question comes from Dr. Sharada Srinivasan and she was wondering if you could outline, in your view, what other relief measures the government should take? I know that you outlined some of them, but if you would give us some more detail on what you would do as if you were giving advice to the government on the problems within agriculture today.

### Sudha Narayanan:

Yeah, thank you for that question. I think whenever we complain about a problem we should come with the solutions as well, or at least propose them, and I have to say that I sound like a broken record because I've been saying this in every government meeting I've been invited to. Now I've kind of given up because I haven't seen anything happen, so one of the things that has happened, but should continue to happen, and that we are not seeing that is an effective employment guarantee because it kind of puts money in people's pockets and these are people who are likely to use it productively in farming or related activities. Many small farmers are also NREGA workers so it's not only the landless.

The other, in my experience what I found most effective - today, the government is focusing on financial, on credit and my feeling is that at this time, it's best to actually have direct interventions in kind. Because the supply chains are broken and transportation is expensive, delivery of input kits, seed kits, kitchen garden kits, and procurement locally and this is a very nice way in which you could locally procure, but feed back into local food safety programs like child development services, school meals. So you just do local procurement and give it back to the community and these are systems that I feel should have, would have worked well on a larger, at a different level.

I think even land leasing arrangements. I think we find that many migrant workers who went also have ties to the land and they've not been willing to give that up, so you'll have rather one of them farming. So is there a way in which you can support people who want to farm at least for the next year, access land through land leasing arrangements so that's again, or even vertical farms, or small scale interventions, like that. So I guess these would cover many aspects of the challenge.

### Bharat Punjabi:

Right, yeah and there's a lot, that can be done then you pointed out to the diversity of the kind of problem the complexity of the problem when you spoke about heterogeneity. There are two more very interesting questions: One related to technology and the other related to trade.

The one related to technology comes from Mr. Montero who's asking whether this lockdown will increase incentives for farmers to adopt new technologies, labor saving or not, and if I could follow that up with another question if you don't mind, Sudha, it's from Leonard Buckles, who is basically asking as to know what the effect of this crisis would be on trade. He's basically saying that he knows that Myanmar used to provide India with a lot of the beans and pulses and after, Canada, which also exports a lot of pulses to India, so how does this health crisis, actually, how has it affected India's agricultural trade, with other countries? So those two questions for you.

### Sudha Narayanan:

Yeah I'll answer the first one first. Again, because of India's heterogeneity we are seeing very different patterns. The Punjab, for example, which is the home of India's grain revolution depended heavily on migrant farm labor from Eastern India so several thousand kilometers away, no, not several thousand but at least a thousand kilometers away, they left. And now there's a huge labor crisis in places like Punjab.

So there we are seeing the tractor sales have, in general, increased, suggesting mechanization of some sort. There are also new planting approaches like direct seeding of paddy, rather than transplanting, which is labor intensive. Direct seeding of rice has failed. Many people have complained that it doesn't work and there's some contest between, that scientists are saying they didn't do it properly, the farmers are saying 'no we did, it just doesn't work' so in some sense, if there are not effective technologies that they can adopt, then they are probably going to seek to revert back to the old ways of doing things when things get normal.

In other places we've actually had people farmers, willing to fund flight tickets for migrant workers to get them back. But in many medium and small farmers we are essentially relying heavily on family and paid labor to tide over this crisis, so I think we're going to see different responses in different contexts. And whether there is an overall trend, it's not clear yet, but I know that the tractor companies are doing quite well. Pesticides and herbicides are also doing well which suggests that hand weeding and those are probably not very important now.

On the trade question, I think because consumer food prices in urban centers is politically a very, very sensitive issue, in the context of import of pulses, I think the government is not going to be protectionist. Although they are procuring pulses locally, there is also talk that they will be importing a lot of pulses. And I think in that sense for critical food commodities that can actually swing elections.

I don't know if many of you are aware, the price of onions is a very sensitive issue in India and is known to have brought down governments, so for things like this I think the government will not shy away from looking to international trade and Myanmar, in fact in my home state Tamil Nadu, Myanmar actually supplies some of the pulses for the food distribution system. So I think this is going to be a critical piece. But I think the government is currently focused most on export promotion as a way of getting the farming sector out of crisis and making it profitable so they're going to be pushing export more I think import protection is not going to be an issue for food commodities.

### Bharat Punjabi:

Thank you Sudha those are very, very interesting answers and as you said there's no way we could know as to what is going to happen policy-wise given that this is an ongoing crisis.

### Leonard Buckles:

This is Leonard Buckles again from Montreal. Question around contract farming - How do you see that evolving? I mean obviously it's all linked to agro-business. If we're looking at increasing India's export of agricultural produce, it probably will be done through contract farming. Do you see an uptake in that and how do you see the negative impacts of that on small land holders?

### Sudha Narayanan:

Yeah, thank you very much for the question. I did my PhD on contract farming, after which I work less on contract funding these days. Because as one agribusiness who was doing contract farming told me that in India, contract farming is a complete flop. I think the biggest problem in India is that contract enforcement is virtually impossible. So there are people who talk about the moral economy of the contract where it's purely trust-based relationship, many people call it relationship farming or contact farming, because this idea of a contract itself is not sacred.

I think where they have a contract it's more to express seriousness of intent rather than an intention to enforce the terms of the contract, and in fact, recently Pepsi, which has very organized contract farming schemes, many farmers say that they have an open contract, essentially which means that I take the potato seeds but I can choose whether or not to sell to

Pepsi. So I think the kind of contract farming that happens in India is small scale and very fragile and sensitive to competitors' prices because enforced site selling is very common and breach is very common.

The big firms like Pepsi and a couple of, there is a company called ITC – they have managed to run successful schemes, but they end up investing a lot of corporate social responsibility initiatives to gain the trust and loyalty of the farmers. In general in India because of the very small size of land holdings, people, firms, try not to get into contract farming because to get even a small volume you have to contract with 5,000 farmers, and beyond that it just becomes a nightmare.

So even those who do contract farming tend to do 25% contract farming, 50% from the regulated markets, and 25% from their own farms. So that's the way it's working so I don't think that this contract farming is going to see explosive growth. There are going to be large companies who wait and watch and expand, but by and large, I don't think contract farming is the way we'll go. Thank you. More questions if anyone wants to ask –

### Sharada Srinivasan:

Hi Sudha, Sharada here. I have a question, so one of the webinars that we did was on India's migrant crisis, especially during this COVID pandemic, so this was a couple of weeks ago. So one of the questions and I think it came from someone working with IFAD and her point was that actually the fact that a lot of these migrants going back to rural areas has actually led, and will lead to the rejuvenation of the rural areas and to agriculture. So I wanted to just hear your thoughts on this. Thanks.

### Sudha Narayanan:

I feel this was a possibility had the government sort of intervened at that particular point of time. I think that window is closing really fast because as I said when migrants go back, what are the resources that they have at their disposal in rural areas? I mean they left the rural areas, not only because of their aspirations, but also because of a constraint, and it may be the brother who didn't have a large enough holding, it may be somebody who didn't see a way out and there were no jobs. So I feel like had the government come with a good plan to engage or support or provide resources for this migrant labor, I think there was a real chance that we would have seen some kind of resurgence. There was a lot of talk but we are already seeing many of those migrants saying 'well there's nothing here. We are ready to come back' and the only thing that's now keeping them back is the fear of COVID 19 in the big cities.

So yeah I believe this is an optimistic view of reverse migration and what they can give but it was an opportunity, but I think that window's closing really fast.

### Bharat Punjabi:

Thank you. More questions if there are.

### Leonard Buckles:

I'm sorry. This is Leo I was just going to type one in but anyways I'll do it this way. There are a lot of, not a lot, but some Indian entrepreneurs, agribusiness entrepreneurs, that have bought very large land plots in various African countries - Ethiopia is one of them, there are others, and basically they are looking at providing food produced back to Indian consumers. Do you see this as a trend?

### Sudha Narayanan:

Absolutely, in fact, India has land stealing legislation which prevents people from owning above a certain acreage. It also has pro-tenancy laws. It also - many states prevent non-farmers from buying land, which is to say that if I can't prove that my parents were farmers, wherever I am from then, I can't buy farmland. So there is a lot of legislation and many firms feel it's easier for them to go abroad. Ethiopia is the favorite destination.

The other one that's come up recently is Vietnam. So many people are actually working out of Vietnam in doing this, so that's absolutely right. And in that context, one state, Karnataka, has also now changed the law to allow non-farmers to buy land, so the land ceiling holds but the non-farmers can buy land and their hope is that hybrid businesses will now acquire land for production.

Now that has obvious, I mean, there are obvious concerns about how it will be used because we've seen that in land issues in India often agriculture is just a front and it's often real estate and speculation and all of that and politicians actually buying up lands, so we don't know how this is going to pan out or how they're going to ensure that farmland is going to be used as farmland. But the trend that you notice is absolutely right. Okay, thank you.

### Bharat Punjabi:

I'll just follow that up with one question just coming through the chat function Dr. Narayanan. It's from Martha Mugalpur who's asking whether - if you have, if you know of any encouraging examples that show collaborative efforts between gram panchayats, which is the local self-governments in rural areas or self-help groups to diversify sources of income during this crisis especially as seen seasonal migrants have returned. And our unrelated question or maybe related to that, is how could the role of rural youth be paid more attention to? How could rural youth be galvanized during this crisis?

### Sudha Narayanan:

To the first question, India already has something called the National Rural Livelihoods Mission, which kind of organizes women into self-help groups, gives them bank linkage, it's federated, and then the ideas that they undertake, some kind of economic activity and enterprises, and multilateral donors as well as the Indian government have really focused on that, and so we already saw a trend towards women's enterprises locally based in the villages. And many of them have lost work, right, because some of them were doing outsourced work for garment industry.

The government industry collapsed so they stopped getting orders, but there are many of them have actually done some really interesting things like some of them are cooking meals for local government-run kitchens for the COVID food distribution systems but many have also started stitching masks and things like this. I've not seen great examples of long-term investments or ideas that will build on this but I think there's certainly a lot of energy and thought given by many local governments into how they can tap on or use this resource and give it back.

Now the reverse migrant question - how many of them are reverse migrants, that's harder to answer. One of the things we are seeing is the reverse migrants have, they've maintained ties with their families, but not being located in the rural areas has made them ineligible for a lot of place-based schemes. So some of the schemes that you can access requires you to be an inheritor of the village. If you don't have that proof and you've gone away and the NREGA is a good example. You're supposed to be part of a rural household. If you were working in urban areas and your family didn't put your name in the card, you went back but you were not eligible for work.

So the reverse migrants are actually facing a big hurdle here in accessing many of the place based eligibility criteria. On the youth, again, now there has been talk of saying, let's kill the youth. One example actually, on the labor, it links back to the labor saving mechanization question as well. Many of the people who migrated very young to work in the cities, especially not for marriage, for men in particular who actually went there to not work in the non-farm sector didn't really learn farming skills so they've come back.

But they never they were in school and they never learned skills in farming and I think Sharada will also be able to relate to that in the in the context of young farmers. And so many of them actually don't know how to do things in the farm so now the National Skill Development Program is actually trying to impart scaling on ag-technologies. That's happening but what I don't see happening is any platform through which young migrants have come back, they've come with knowledge, they have exposure, for example using the internet, or financial inclusion, I'm not seeing that awareness or knowledge being used creatively. I've not seen that happen but I could be wrong. I may be missing some of them.

### Bharat Punjabi:

Thank you Dr. Narayanan. If there are more questions you could ask these questions directly to Dr. Narayanan. The floor's still open. If not, I had a question Dr. Narayanan, about the centrality of water to agriculture. And this is something I research on and water is important to both agriculture and urbanization but agriculture also tends to be a huge consumer of water. Now this might be slightly unrelated to COVID-19, to the COVID-19 crisis, and also given that we are in the middle of a monsoon.

But how do you think India is - I know that the policy level India is paying a lot of attention to the water crisis with setting up of important committees under Mihir Shah and others, so do you think agriculture's fate is also tied to the water crisis in many senses? And what is the government going to do in the next few years, in your opinion about water?

## Sudha Narayanan:

I think water seems like everything to me right now. I think it's the binding constraint and I think it's going to turn the way in which the economy moves and as you rightly say, when you look at, leaving aside agriculture, the kind of water problems that are there every summer in across rural India just for consumption, it's just, it's mind-boggling, and you have this whole tanker culture. So I think it's going to be a very big problem.

I think the government - I'm not a water expert so - One thing the government is trying to do is to switch to crops that consume less water. Micro irrigation is actually the government's favorite, where you sort of have drip irrigation that conserves water so, how do you deliver water without wastage? The other thing is crop diversification, so it's linked to the price guarantee so the minimum support price for rice and wheat creates perverse incentives and so there's this idea called perverse subsidies that if you kind of rationalize the subsidies then you can actually effect a cropping pattern change.

I think all of these are politically extremely hard to do but I am seeing a lot of fantastic examples by civil society organizations at the micro level changing cropping patterns, undertaking watershed development and things like that. So maybe the scale is just not enough. Related to that, the NREGA, for example, has been used very creatively in many areas to rejuvenate water storage structures and recharge structures, but there is also criticism that these are all used rather as surface storage and actually has a perverse incentive of getting people to switch to water intensive crops because water is now available.

So I think it's a very complex problem but I think it's good that today, I think, across the board this is one issue where there's very little disagreement. I think that's the first step towards change so I suppose we should be optimistic about that.

## Bharat Punjabi:

Thank you, Dr. Narayanan, that was a very interesting reply and very helpful too given that I work on water. If there are other questions you could actually ask them directly and any further questions on Dr. Narayanan's great, very comprehensive and detailed fact-based presentation today. You know, we got a very good glimpse of what is happening in India in the rural sector. We've had other presentations on migration and the movement of Indian students to Canada and with that, if I could say a few words, first of all thank you Dr. Narayanan for the presentation and you know, bringing this to us, in the late evening in India thanks once again.

And for those of you who joined late, Professor Narayanan is an economist with a very prestigious university in Mumbai called the Indira Gandhi Institute of Development Research which is actually funded by the reserve bank of India. It works both as a university and a think tank and produces a lot of research which helps, you know, throw light on Indian development problems as it has been around for 30-35 years.

It's located in the city of Mumbai. So on that note I also wanted to tell you all that we will have announcements on webinars soon in September we'll have a few webinars and we are planning

to send out an announcement soon on that. So my name is Bharat Punjabi. I wanted to thank all of you again for joining us from throughout Canada, maybe other parts of the world, and Dr. Narayanan from Mumbai. And on that note, let me thank all of you. Thank you. Thank you very much.