

Covid-19: Impact on Agriculture & Allied Sectors in Odisha

Dealing with the Pandemic

This document seeks to examine the impact of Covid-19 pandemic and the subsequent lockdown on the Agriculture and Allied (A&A) sectors in Odisha, which includes horticulture crops, livestock and fishery sub-sectors. It considers the period from 13 March 2020 when select business activities in Odisha were closed down and addresses an evolving situation as the pandemic continues. Based on secondary information, it documents how threats to the Odisha economy were addressed and provides pointers for a priori actions by the Department of Agriculture & Farmers' Empowerment (DA&FE)¹ of the Government of Odisha (GoO). The note uses the Indian numbering system wherein a crore denotes ten million and is equal to 100 lakhs. All dates, unless otherwise stated, refer to the year 2020.

AGRICULTURE IN ODISHA - IN A TRANSFORMATIVE PHASE

The contribution of A&A sector to the state's Gross Value Added (GVA) grew from 18.9 percent in 2018-19 to 19.9 percent in 2019-20 (AE). It achieved a growth rate of 7.61 percent in 2019-20 far exceeding the national rate of 2.80 percent and outgrew the Industries sector (4.88 percent) and Services sector (6.84 percent) in Odisha for the same period. Odisha's growth story, in the recent past has been spurred by the growth of the A&A sector. This bodes well for the state's development trajectory as GDP growth originating in agriculture is at least twice as effective in reducing poverty compared to GDP growth originating outside agriculture².

Odisha's A&A sector is undergoing a transformation on many counts. Dependency on paddy is reducing and through a concerted effort of the government, the share of high value outputs – vegetables, fruits, spices and condiments, aquaculture and livestock is on the rise. The share of cropped area under vegetables, fruits, oil seeds, pulses has increased from 42.37 percent in 2014-15 to 43.79 percent in 2018-19. There has been considerable increase in production of livestock products like milk, egg and meat. Fish production

has increased from 6.85 lakh metric tonnes (MT) in 2017-18 to 7.59 lakh MT in 2018-19. This has often buffered the low or negative output in the crop sector that arises from the frequent extreme weather events that the state faces.

With a dedicated Agriculture Cabinet and a separate Budget³, the sector has seen steadfast growth in budgetary allocation for the sector. In December 2019, the state adopted a futuristic and inclusive Agriculture Policy 2020 (titled *Samrudhi: Odia for prosperity*) to harness the potential of Odisha's agriculture sector in a sustainable manner addressing farmers' income, welfare and nutritional security.

On the aspect of food security, FCI reported stocks of 2.08 lakh MT of rice (par boiled and raw) and 1.52 lakh MT of wheat on 30 April⁴, in depots across the state. Inflation in Odisha is driven by cereals and products followed by prepared meals, snacks and sweets etc and meat & fish. The rate of inflation in Odisha during 2019-20 was 3.2 percent in rural and 5.5 percent in urban against 3.4 percent in rural and 4.7 percent in urban areas across India.

¹ The note draws inputs & includes actions of Fisheries & Animal Resources Development & the Cooperation Departments of the Government of Odisha.

² Agriculture for Development - World Development Report, 2008

³ The Budget includes Water Resources and Cooperation Departments.

⁴ http://fci.gov.in/app/webroot/upload/SP%20E_3.pdf



Livestock plays a significant role in rural economy of Odisha and is the second largest sub-sector, after crops, contributing around 14 percent of total GVA of A&A activities and 3.91 percent of the state's GVA. The milk segment contributes around 43 percent of total value of output from livestock and around 48 percent from the meat segment, respectively.

The fishery and aquaculture sector of Odisha,

with an annual production of 7.59 lakh MT, was ranked third amongst Indian states in 2018-19. It is the fastest growing sub-sector among A&A sector with an average annual growth rate of 13 percent over last 5 years. The sub-sector provides livelihoods for 15 lakh fishers and incomes for three lakh aquaculture farmers. The state has embarked on a plan to double production and exports over the next five years⁵.

COVID-19 MANAGEMENT & AGRICULTURE IN ODISHA

Odisha's actions for the management and control of Covid-19 pre-dated most states and the Central Government. Even before WHO declared it a pandemic, on 11 March Odisha had initiated steps for intersectoral coordination and management of Covid-19 on 4 March with the formation of the State Crisis Management Committee. It included Secretary, Fisheries & Animal Resources Development (F&ARD) Department⁶ as a member. The committee was empowered to 'take policy decisions for containment measures'. The first phase of curbs on business and other activity in Odisha was notified on 11 March 2020 for regulating congregations and closure of education institutes. On 21 March, a lockdown of five districts and eight urban bodies was announced, in view of the concentration of foreign returnees. The territory included the biggest towns in the state and the relatively prosperous districts. This effectively triggered the impact on the A&A sector in Odisha, earlier than most parts of India. It declared Covid-19 as a state 'disaster' on 13 March.

In an effort to decentralise the management of the pandemic, the state took an exceptional step of empowering panchayats to run quarantine centres. Notification of 11 March required holding special meetings of Gram Panchayats and Panchayat Samitis to sensitize people's representatives about Covid-19 and

precautions to be followed. This is likely to have provided a head start for awareness generation in rural areas, providing an edge for farmers to deal with the subsequent disruptions and the crisis.

Odisha is a net recipient of returnee migrant labour who are mandatorily required to register on a portal before re-entry to the state is allowed. As on 21 June, 5,72,271⁷ people have returned to Odisha, mostly migrant workers. The coastal district of Ganjam, rich in agriculture with strong production base for fishery, dairy and poultry, has alone received over two lakhs of the returning migrants.

DA&FE was reclassified from 'non-critical' to 'critical' Department, on 29 March after which the Directorate of Agriculture and Food Production (DA&FP) issued orders on 13 April to field offices to make detailed arrangements for ensuring the continued functioning of agricultural operations.

In the ensuing response, DA&FE took several steps not only to resolve the problems from the crisis, but also to strengthen the A&A sector. Emergent solutions⁸ also included innovations and enactment of new laws, digital solutions, participation of community organisations and the private sector, which is still an evolving and dynamic story.

⁵ Note on Impact of Covid-19 and Estimation of Losses by Directorate of Fisheries.

⁶ It is likely that the purpose for inclusion of F&ARD may be reports of the virus mutating from animals, rather than to provide representation for management of the impact of the subsequent lockdown. This was however a good "one health" recognition to the health crisis.

⁷ Press release of instant date by Information & Public Relations Department, GoO.

⁸ Referenced later in the note are examples such as Veg on Wheels, website for horticulture products, hiring & reskilling of drivers from mining sector and institutional buyers of produce besides institutional measures and regulatory steps.

CHALLENGES FROM THE PANDEMIC & LOCKDOWN

Preparation for Kharif

The principal season for the state, *Kharif* accounts for more than 85 percent of the paddy produced. The participation of small and marginal farmers in the season is significantly higher than *Rabi* with most cultivators using its harvest for consumption, impacting overall food security of the state.

Months of March, April and May are crucial for the *Kharif* season as field preparation traditionally starts with *Akshaya Tritiya* – the sowing festival which was on 26 April during the lockdown. Constraints in availability of seeds and fertilizers, both of which are credit driven supplies for farmers, was a key challenge. Other constraints were supply of sowing machinery for hire, non-availability and unwillingness of labour, disruptions in transport and the limited

functioning of financial institutions. The risk of already dominant informal financing channels overcharging farmers and an informal market for inputs loomed large.

For the approaching Kharif season DA&FE had taken up a plan to increase area under pulses by 32 percent, oilseeds by 57 percent, cotton by six percent, vegetables by 85 percent and spices by 14 percent. This would have been achieved by reducing the area under cereals by one percent and paddy by three percent. Focusing on the outcome of crop diversification, Odisha has taken up a strategic effort to reduce the land under cereals and paddy with a view to increase farmers' income and shift to sustainable agriculture practices through diversification of crops.



The Covid-19 pandemic and resultant unprecedented step of lockdown, announced and implemented with a few hours' notice, cast a spell of uncertainty across all walks of life and for business, industry and commerce. It has led to not only the most challenging public health crisis but also the worst global economic crisis in recent times and for the A&A sector, it meant multiple challenges, of which the key ones are described below:

Harvest & Procurement of Rabi Crops

The threat of Covid-19 and the consequent lockdown coincided with the commencement of the harvesting of Rabi crops that are higher value cash crops. The principal crops for Rabi season sown in irrigated fields of the state and its coverage area in the following table:⁹

⁹ As per letter dated 22 October 2019 from Chief Secretary, Odisha to all Collectors

Odisha was awaiting a bountiful harvest having exceeded the target for coverage of the main Rabi crops - paddy and vegetables. Factors that threatened to disrupt harvesting were restrictions on movement of people and vehicles including carriage vehicles, limited access to spaces for stocking, non-availability of labour and lack of access to equipment renting facilities. Psychosocial factors such as fear of the pandemic, uncertainty about markets and the lack of information and clarity on what the lockdown entailed, were other factors. Faced with significant losses from a late harvest, the urgency was further accentuated by threats of unseasonal rains from low pressure formations and impending heatwave that would impose restrictions on the hours for field work. Timely harvest was critical since all the crops were not under the coverage of Pradhan Mantri Fasal Bima Yojana.

Crop	Target area in lakh Ha.	Achieved area in lakh Ha.	Target prodn. (in MT)
Paddy	2.85	3.71	10.12
Green gram	6.80	6.59	3.40
Black gram	3.06	2.43	1.57
Groundnut	1.80	1.13	3.83
Mustard	1.30	1.07	6.24
Sunflower	0.25	0.15	3.50
Potato	0.40	0.35	5.90
Onion	0.55	0.48	6.45
Vegetables	4.78	5.87	75.28



Supply Chain Disruption

The lockdown disrupted the entire supply chain involving farmers, agricultural inputs, processing, storage, transporters, wholesalers, retailers and consumers. For producers, movement of perishables to mandis, collection/storage centres and markets was critical. Inputs such as seeds and fertilizers could not be moved just as people could not move to retail shops to purchase. Reaching banks which functioned with limited staff and operations affected the flow of money for purchase of inputs and produce. Complete closure of inter-state, inter-district and urban-rural borders along with restrictions on movement of persons choked the supply of labour, particularly important for high value crops.

The lockdown starting towards the end of financial year (FY) 2019-20 meant that most traders, stockists and retailers had low stocks of inputs and food items to rollover to the next FY. These include cattle, fish and poultry feed, fertilizers, pesticides and consumables for equipment and machinery.

Falling Demand & Non-Operating Markets

A skew in demand resulted immediately after the lockdown that as the hardest, lasted for about a month. Shutting down the food, hospitality, catering, processing units, institutional consumers such as schools, office canteens and the prohibition of any kind of congregation resulted in a demand side shock. An example is the Jaganath temple of Puri in which food for almost 50,000 people was prepared daily, with exceeding dependence on local vegetables, but has remained shut for devotees till date.

At the beginning of the lockdown, most *mandis* and markets closed because of stoppage of transport and lack of clarity in the regulations for the lockdown. While, cereals and pulses could be held back, it was

the higher value dairy, poultry, fishery and perishable horticultural produce that were most vulnerable.

Stay at home orders prohibited the movement of consumers to markets and most urban centres in Odisha lacked local options for online ordering of fresh foods. Even after markets opened, the fear of contracting Covid-19 has till date kept away many from visiting the markets to purchase vegetables and fruits. Coupled with reduced income due to inactivity in business, falling interest rates etc., many households are managing with basic necessities.

Marine sector exports valued at ₹2,825 crores (5.93 percent) and exports from rest of A&A sector valued at ₹210 crores (0.44 percent) of the total exports from Odisha in 2018-19¹⁰. Marine exports, already on the decline owing to the slump in demand caused by the closure of international markets because of Covid-19, further contracted as processing plants had to withhold harvesting due to labour shortage and operated at about 30-40 percent of the capacity.

Fake News and Fear of Animal Contact

The fishery and livestock sectors saw reduced demand as consumers desisted from the consumption of meat, fish, chicken and egg in early March extending to the initial phase of the lockdown. This was on account of misinformation and fears of contracting Covid-19 from 'animal' products, as the virus causing the pandemic had its origins in animals. The impact was most steep for chicken, and affected eggs and fish to a certain degree across India. As per All Odisha Poultry Forum and All Odisha Layer Farmers Association the price of chicken had gone down from ₹70 to ₹35-40 per live bird and from ₹3.40 to ₹2.80 per egg during the week preceding 3 March¹¹. However, by March end, the demand recovered with disruptions in the supply chain leading to higher than normal rates for meat and egg.

10 Odisha Economic Survey 2019-20, Government of Odisha



Estimated Losses in Fishery Sector

The fishery sector in Odisha is driven by local as well as export market - Per-capita consumption of fish in Odisha was 14.4 kg in 2017-18 and it jumped to 15.4 kg in 2018-19, which is almost double of the national average. Sea food exports of the state have steadily increased from ₹1,964 crores during 2014-15 to ₹2,969 crores in 2018-19 with annual growth rate of 10 percent over last 5 years.

As per the Directorate of Fisheries, the loss to the sub-sector is:

Segment	Engagement	Coverage (hectares)	Impact	Estimated Loss (₹ per unit)	Total Loss (₹ crores)
Women Self Help Groups	Lease for 3-5 years	3,500	4,319 WSHGs	40,000/ha	14
Fresh water	Pisciculture, hatchery & wage loss	70,000	97,800 workers 80 hatcheries	40,000/ha 7,500/ person 100,000/ hatchery	334
Brackish water	Stakeholders across the sector ¹²	7,800	18,880 farmers 20 hatcheries 33 processing plants	80,000 /ha 2 lakhs/ hatchery 7,500 per worker	77
Inland capture	Riverine, reservoir & Chilka	-	639 Primary Fisher Cooperatives	7,500 /person for approx. 120,000 members	90
Marine	-	-	Stakeholders 126,813	7,500/person	100
Total					615

11 <https://timesofindia.indiatimes.com/city/bhubaneswar/bhubaneswar-poultry-farms-say-coronavirus-has-no-link-with-eating-chicken-or-eggs/articleshow/74479898.cms>

12 Includes farmers, tanks, shrimp hatcheries, workers, processing plants, vendors, feed retailers, transporters

RESPONSE AND ACTIONS TAKEN

Faced with the challenge of simultaneously protecting lives and livelihoods, the immediate requirement was to maintain supply of essential items and food supplies. To this end, the Central and State Governments took steps to unlock markets for meeting the demand and supply of various commodities. Discontinuation of supplies, distress sale of produce and steeply rising prices for the consumer could jeopardise the very objective of the lockdown.

Keeping this in mind, the DA&FE took a series of steps to open the A&A sector during the lockdown. These were notified on 13 April by Revenue & Disaster Management (R&DM) Department and included an extensive list of activities that were exempted from the ensuing phase of lockdown¹³.

On 29 May 2020, GoO announced a package of ₹17,000 crore (170 billion) to boost the state's economy and help overcome the economic situation from Covid-19. The package focused on A&A sector and included:

- ₹6,640 crores in Mahatma Gandhi National Rural Employment Guarantee Scheme to generate 20 crore man-days of work for 46 lakh people.
- ₹1,000 crores to create 105,000 ponds under Mo Pokhari (My Pond) scheme.
- ₹200 crores will be dedicated to A&A sector, to benefit approximately 25 lakh farmers. This includes subsidizing seeds, providing hybrid seeds and vegetable seed mini kits to cover 1 lakh hectares, and distributing seedlings for backyard plants.
- ₹111 crores for ponds for 40,000 fish farmers and provide livelihood support and input assistance to marine fishermen and Women Self Help Groups.

This assistance is in addition to the flagship program Krushak Assistance for Livelihood & Income Augmentation (**KALIA**), run by DA&FE from 2018-19. The key component of the program provides financial support through DBT to Small and Marginal Farmers (S&MF) and Landless Agricultural Households (LAH) for cultivation, purchase of inputs, hiring of equipment and labour etc. Under the program 31,96,556 S&MF and 15,82,825 LAH received the assistance in Financial Year (FY) 2019-20.

During the lockdown, in April, a further 59,095 S&MF and 3,57,214 LAH received the assistance after the program was rationalised in February to supplement the Pradhan Mantri Kisan Samman Nidhi Yojana. DA&FE is currently in the process finalizing beneficiaries and planning for the disbursement in July-August to support beneficiaries for the Kharif season.

Institutional Actions

- Reclassification of DA&FE from 'non-critical' to '**critical**' Department on 11 April authorising the functioning of offices in Bhubaneswar and Cuttack with up to 50 percent staff and delegating powers to the department to decide the scale of operations in field offices. From 2 May, offices of critical departments were allowed to work with 50 percent staff.
- An extensive information and **communication program** targeting farmers' issues and was taken up to build the confidence promotion and EC activities taken up through social media, television and media briefings. Wide ranging topics constituted the messaging in the awareness campaign including promotion of available services and entitlements, processing of specific crops (such as drying of chilli) and social distancing in farms and market

13 <https://www.osdma.org/wp-content/uploads/2020/04/2149.pdf>

RESPONSE & ACTIONS TAKEN

1 Institutional Actions

- ❑ Critical department
- ❑ Extensive IEC
- ❑ District Nodal Officers
- ❑ Contract farming & services
- ❑ 3-tier on-ground system



2 Making markets work better



- ❑ Local markets operations
- ❑ Movement of inputs
- ❑ Inclusion in e-NAM
- ❑ Dispelling misinformation
- ❑ Farmer loans
- ❑ Horticulture marketing support
- ❑ 'Veg-on-Wheels'
- ❑ APMC Reforms
- ❑ Contacting traders outside state
- ❑ Agri Production Clusters focus

3 Harvest & procurement of crops

- ❑ Mechanization – combined harvesters
- ❑ Emphasis on procurement



4 Farm & production continuity

- ❑ Ama Krushi call centre
- ❑ Functioning of veterinary hospitals
- ❑ Inputs for *Kharif*
- ❑ Generating rural employment
- ❑ Free labour movement
- ❑ Building farm ponds



- On 15 April, DA&FE designated **Nodal Officers for 30 districts** to oversee day-to-day operations and be in constant touch with the area level officers so that issues arising in the agriculture sector can be addressed on time. The nodal officers would also monitor the implementation and progress of initiatives taken during the lockdown and hold meetings with other agencies for convergence. Weekly meetings on video conferencing are held with the nodal officers.
- In response to the lockdown, DA&FE set in place a legal framework with the Odisha **Agricultural Produce and Livestock Contract Farming and Services** (Promotion and Facilitation) Ordinance, 2020. It aims at registration of farmers with contract farming companies for improving production and productivity by way of land, soil management, seeds, saplings, fingerlings, inputs, feed and fodder, technology and other such services and covers sale and purchase of 50 varieties of crops and five of animal produce. Currently, the Cooperation Department is in the process of formulating the corresponding rules for implementation of these Ordinances, that are likely to be enacted as laws in the future.
- **A three-tier system of field functionaries** – in the district, block and panchayat levels – cutting across the entire cross section activities related to the A&A sector played a critical role during the period. The system, already in place, was put into action and strengthened to provide a framework for information dissemination and resolution of farmers' problems.
- These meetings also served to bring 'convergence' between various Departments and agencies in the A&A sector going beyond Departments and collaborating with development projects such as Odisha Livelihoods Mission (OLM).

- At the panchayat level, WhatsApp groups of farmers, set up by field officials of DA&FE, were used for quick dissemination and sharing of information related to the lockdown and Covid-19 and to dispel misinformation.



Crop Weather Watch Group

State Level Coordination
Meets weekly during June-Sept & fortnightly in Nov - March 3
Agricultural Production Commissioner as Chairman
Various Departments, Agriculture University (OUAT) and Central agencies like IMD, Railways



District Level

Monthly meetings
Frequency stepped up for Covid-19
Chief District Agriculture Officer convenes
District heads of various Departments & Directorates
Collectors' participation when required
Address unsolved issues at Block level



Block Technical Team

Convened by Block Agriculture Officer
Held at Farmer's Information & Advisory Centre
Block level officials of various departments & projects like OLM
Takes up unresolved issues from Panchayat meetings
Calls to <i>Ama Krushi</i> are analyzed



Panchayat Level

Held weekly
Conducted by Agriculture Overseer/ Village Agricultural Worker
Farmer Counselling Centre with improvement of extension services at grassroot level
Includes field workers of allied Departments

Making Markets Work Better

- In the Operational Guidelines for social distancing issued by the R&DM Department on 17 March directed local authorities to engage with trader associations and local markets to spread awareness and maintain social distancing. The **operation of local markets** was allowed with an advisory for limiting the congregation and ensuring that it functioned in an orderly manner. This was an early step to ensure the flow of local agriculture produce. Further, local authorities and police, wherever required, relocated these haats to open spaces such as fields or empty roads to allow social distancing.
- On 28 March F&ARD Department notified authorising local urban bodies and district veterinary authorities to issue passes for the **movement of feed for cattle, poultry, fish** and other livestock and allowed retail shops selling these to remain open.
- **Inclusion of mandis in eNAM** to promote social distancing and ensure better price realisation for farmers by directly selling to buyers from through the online platform to cover 41 APMCs and 30 Mandis for online trading for which 55,380 farmers had registered.
- F&ARD Department launched an effective **information campaign** to dispel misinformation on the consumption of poultry products. The campaign included appeals from the Minister, TV spots, newspaper adverts and social media citing medical information and advisories from national and international agencies, including the World Health Organisation. The campaign significantly contributed to bringing back demand and restoring normalcy in prices as the price of poultry products shot to higher than normal levels by 28 March.
- The target for loans to **farmers** for the Kharif season administered by the Cooperation Department was raised to ₹9,000 crore from ₹7,500 crores in last year. Migrant returnees were included along with small and marginal farmers, joint liability groups and women self-help groups as priorities and cover short-term credit for fisheries, animal husbandry, dairy and poultry sectors. This infusion of capital would provide a fillip to the agriculture inputs, services, implements and logistics markets, including hiring of labour.
- On 21 April, DA&FE launched a website to facilitate **marketing of horticultural products** of the farmers, prevent the distress sale and get better price for their produce through a web-based platform. The website <https://odihortmarketing.nic.in> connects farmers to traders and aggregators of fruits and vegetables. The available quantity in 30 districts of the state is uploaded by district level Horticulture Officers who facilitate the assessment and transaction. So far, 1,500 traders and 882 farmers have registered, making available 61,000 quintals of which 7,500 quintals have been sold. This initiative connected traders from outside Odisha to local markets enabling better price for farmers and reduced off-take time of perishables.
- A **'Veg on Wheels'** initiative was launched during the lockdown by DA&FE in collaboration with District Administration, ORMAS, Mission Shakti, Odisha Livelihoods Mission & NGO partners. These provided vegetables at the doorstep of consumers in select urban centres of the state and district headquarters.
- On 19 May, an ordinance was passed to replace the Odisha Agricultural Produce Markets Act, 1956 was passed to provide better marketing facilities to farmers. Titled Odisha Agricultural Produce and Livestock Marketing (Promotion and Facilitation), 2020 the new law will provide **alternate marketing channels** other than Agricultural Produce Market Committee (APMC) to farmers in marketing their

produce at competitive and remunerative prices. Other features of the new law include the abolition of the fragmentation of markets within the state by removing the concept of notified market area so far as enforcement of regulation by APLMC is concerned. The other objectives are promotion of direct interface between farmers and processors/exporters/bulk-buyers/end-users to reduce the price spread for advantage to both - producers and consumers. This significantly eases the marketing for farmers' produce enabling online platforms and direct P2C (Producer to Consumer) transactions.

- Contacting **traders outside of Odisha**, DA&FE could organise the shipment of 20 lakh betel vine leaves, 8,400 quintal watermelon, 1,700 quintal soil palm foroil, 440 quintals chilli and 120 quintals jackfruit as on 5 May.
- In 12 tribal dominated and highland districts 12,669 quintals of vegetables from **Agriculture Production Clusters** could be sold with the efforts of DA&FE, during the lockdown period. The program aims to double the income of one lakh small and marginal farmers and creation of livelihood assets like irrigation in 16,000 acres, orchards in 8,000 acres, farm mechanization access to 70,000 farmers and sheds for goat and backyard poultry for 30,000 farmers.



Harvest & Procurement of Crops

After the initial shock, and with the efforts of DA&FE, harvesting of Rabi crops gathered momentum and was reported on 5 May as per the following table:

Crop	Harvest till 5 May 2020 ¹⁴	Target production (in lakh MT) ¹⁵
Paddy	40%	10.12
Green gram	85%	3.40
Black gram	95%	1.57
Groundnut	70%	3.83
Mustard	100%	6.24
Sunflower	30%	3.50
Potato	100%	5.90
Onion	60%	6.45
Vegetables	Ongoing	62.15

- Non-availability of labour for harvesting in the immediate period after lockdown was triggered by restrictions on movement and fear of the pandemic. To overcome the immediate fallout of shortage of labour and ensure that harvest of the standing Rabi crops was not delayed, DA&FE encouraged farmers to **use combine harvesters** and allowed inter-district movement. It also facilitated some reskilling and hiring drivers of mining equipment from the mineral rich districts to operate the harvesters in the absence of skilled drivers being immediately available.
- **Procurement of Rabi crops** started from 7 May for non-paddy crops – green gram (*mung*), black gram (*biri*), groundnut and sunflower and for paddy from 8 May across 17 districts. This compares well with the corresponding dates in the two previous years – 1 May for paddy in 18 districts in 2018 and 11 May for Sambalpur district in 2019¹⁴. As on 21 May, 205,727 MT of paddy had been procured registering a 68 percent increase over the quantity of

122,655 MT procured on the same date in 2019. 41,000 new farmers registered for paddy procurement of Rabi season of 2019-20 to account for a cumulative 258,000 farmers. By mid-June, the procurement of paddy had exceeded last years' quantity by 32 percent establishing that the procurement system was insulated from the impact of disruptions. Procurement was undertaken adhering to guidelines issued on 29 April, by Food Supplies & Consumer Welfare Department taking into account requirements of social distancing, use of sanitizer and phased time slots to ensure that not more than 30-35 farmers were present at the same time at any paddy procurement centre.

Farm & Production Continuity

- **Ama Krushi call centre** provides assistance and advisory services to farmers. In 2019-20 it received 6.24 lakh calls and is active between 12 noon to 8 PM. During other times, farmers can leave a voice message with their query for *Ama Krushi* call centre to reach to them within 24 to 48 hours. Availability of the service was proactively and widely publicised during the lockdown through social media, TV advertisements, press announcement etc. that led to an average of 275 calls per day from farmers seeking services and clarifications on the lockdown.
- On 22 March, F&ARD Department notified the that **veterinary hospitals and dispensaries** would continue to function for providing essential veterinary services in the lockdown areas.
- **Inputs for Kharif** were made available to farmers through a concerted effort. By 5 May, about three lakh MT of fertilisers of the total of 8.6 lakh MT requirement, were prepositioned and tagging of 1.48 lakh quintals of seed, accounting for almost a third of the total requirement had been completed.

¹⁴ From DA&FE presentation to Chief Minister, 5 May 2020

¹⁵ As per letter dated 22 October 2019 from Chief Secretary, Odisha to all Collectors

Generating Rural Employment

- On 21 April, free and unfettered **movement of labour**, including agricultural labour, was allowed in passenger vehicles with utilisation up to 40 percent of the capacity
- The influx of returning migrant workers to Odisha since the resumption of inter-state transport by bus and train has grown manifold times. In addition, several thousands of workers, within the state, engaged in the wage and informal sector in urban areas, are likely to have moved to rural areas. Creation of assets under

MGNREGS has been expanded to include A&A sector in Odisha. A program for **construction of over 100,000 farm ponds** to generate labour intensive work under MGNREGS has been taken up by DA&FE. This is a part of the overall program of GoO to take up two million MGNREGS works per day, which is double of the last FY levels. Expected to create work for displaced agriculture labourers and returnee migrant labour, this was decided on 28 April. Construction of 700 farm ponds and 100 water harvesting structures are currently under progress.



SHORT TO MEDIUM TERM CONSIDERATIONS

A wide range of measures have been taken in response to Covid-19 pandemic, many of which will have longer term impact on the A&A sector in Odisha. The phase of lockdown has seen innovative solutions that have emerged. Although it may be early to assess the impact and efficiency of all the responses, there are several that fairly indicate success and can be institutionalized for long term gains. Change in consumer behaviour and the 'new normal' will entail some opportunities that may be considered for implementation in three months to one-year period.

Technology Interventions

- The urban markets of Odisha lack local or national players in delivery of farm produce. Local platforms launched in the past have been revived (www.veggiekart.com) and few new ones have emerged during the lockdown. Like in Kerala, linkages with e-commerce platforms Zomato and Swiggy may be explored for this purpose. Local entrepreneurs and organised retail chains such as GROFERS, Big Basket, MORE can be contacted to establish business in urban centres of Odisha.
- The disruption of the supply chain and distribution networks established a pronounced need for storage facilities and extending the shelf life of perishables¹⁶. Irradiation is a food processing and preservation technique wherein agricultural products are exposed to a controlled amount of radiation. The Ministry of Food Processing Industries¹⁷ (MoFPI) is implementing a scheme for Integrated Cold Chain and Value Addition Infrastructure with the objective of preventing post-harvest losses of horticultural as well as non-horticultural produce. Mostly set up by private sector, several states already have irradiation plants, drawing on the subsidy provided by the Ministry.

Market Interventions and Role of Private Sector

- As the state is diversifying towards horticulture-based commodities it will be worthwhile exploring a Perishable Goods Promotion Policy that would include issues around value chain promotion of perishable products such as storage, processing and marketing in the lines of MSME and Industrial Promotion policies.
- Odisha's principal export of the A&A sector is marine products, which faces a challenge in complying Sanitary and Phytosanitary (SPS) standards for food safety in global markets. F&ARD Department may consider extending support to build back better the SPS standards in the state through partnerships that address the four key areas of sustainability—environmental, social, food safety, and One Health.
- On the Animal Husbandry front, the wet markets throughout the state are highly disintegrated and marked by the absence of slaughter houses (SH). This was a trigger for concerns on food safety and zoonotic based transmission issues during the pandemic period. Licensing and regulation of abattoirs/SH is a step that is critical to control the adverse impact of future shocks in the market, particularly for those that may arise from the mutation of diseases from animals. In October 2012, Housing & Urban Development Department set up a State Committee for SHs, following directives from the Central Government. The concept of One Health explained later in this note may be considered to address this issue.
- Farmers need to organise into Producers Collectives and reconfigure their supply chains away from bulk wholesale to (currently closed) restaurants, hotels, and schools, and towards grocery stores and

¹⁶ Cold chain facilities are weak in Odisha with most storage facilities being PDS based

¹⁷ Technical report from: <https://mofpi.nic.in/sites/default/files/RPP-TECDOC.pdf>

home delivery. This will enable local markets with short supply chains to develop. Odisha already has a progressive FPO Policy, the implementation of which needs to be stepped up to achieve this sustainable goal.

- Entering into partnerships with selected private/CSO/CSR Foundation partners that can work on agro-climatic based production clusters producing perishable commodities towards creating end to end linkages.
- Sustained and reliable credit to farmers and their collectives will be another critical aspect that needs to be assessed further and appropriate financial instruments such as non-negotiable warehouse receipts, pledge financing, credit guarantee funds needs to be explored further.
- Promoting agribusiness enterprises that develop the value chain of local produce – such as pumpkin, brinjal, banana, chilli, watermelon, cowpea, millets etc. These may be taken up under existing schemes of DA&FE such as Organic Mission, Millet Mission, *Mukhyamantri Krushi Udyog Yojana* and others. This may require some scaling up of the current programs and undertaking outreach and assessment for identifying suitable enterprises, should be pursued in collaboration with MoFPI and MSME.
- DA&FE may consider positioning agribusiness professionals in larger cities like Bengaluru, Mumbai, Hyderabad, Delhi etc. These professionals will be tasked to market horticulture produce, spices and condiments. Such a practice is being followed by other Indian states already.

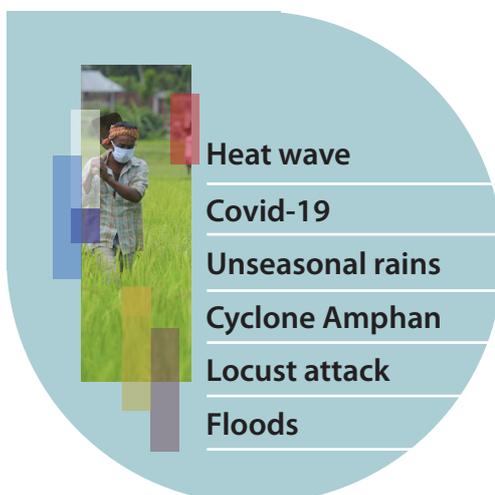
Complementing Federal Initiatives

To address issues that the A&A sector faces from Covid-19, Government of India has announced and initiated a slew of measures under Atmanirbhar Bharat that is a movement for India's self-reliance.

It includes 11 measures for the A&A sector that encompass 'One India, One Agriculture Market' and amendment of the Essential Commodities Act – reforms that have been effected through Ordinances from 5 June 2020. Other steps from the package that benefit Odisha include expansion of farm credit and hike in Minimum Support Price, farmgate infrastructure etc.

DA&FE's ADAPT has made a preliminary assessment of benefits that Odisha can draw from the package. It is recommended that a deeper study is taken up for this purpose to secure funds for the State.

Similarly, DA&FE may take up a review of the ordinances by the Central Government to determine how the state might benefit, compares with those of Odisha and seek clarity wherever needed.



Developing Resilience

- The agriculture sector and farmers of Odisha, during the phase of Covid-19 lockdown faced multiple disasters. Unseasonal rains owing to an inland low pressure lashed the western districts between 21 - 27 April. The rains caused significant damage to the standing crops, resulting in losses for farmers. On 12 April, Odisha State Disaster Management Authority issued instructions to all district collectors for preparations and precautionary steps for the ensuing heat wave. Odisha is prone to extreme weather events, most frequent being cyclones.

- The intensity and resultant damage from summer cyclones is much more. A very severe cyclonic storm was predicted between 19 - 21 May to impact Odisha from the Bay of Bengal. Heavy rains from the cyclonic formation lead to excessive rains, flooding the riverine network of the state and causing damage to crop and livestock.
- DA&FE has in place a Disaster Management Plan for Odisha (Agriculture Sector) that takes into account extreme weather events¹⁹, fire, disease, insect/pest and chemical poisoning. The plan is focused on protection of crops and compensating crop losses. The term 'disease' in the plan essentially refers to the fallout from diseases that affect aquaculture (particularly vannamei) and livestock. A broader approach to disasters and diseases that includes their economic impact, and pandemics such as Covid-19 that affect humans alongwith the A&A sector, may be considered for inclusion in the Disaster Management Plan.
- Crop Contingency Plans for the state and districts are prepared by DA&FE to mitigate natural disaster situations through making alternate crop or cultivar choices in tune with meteorological forecasts and adoption of farm practices that take into account emergent situations. Moving forward, pandemics and localised epidemics may be included in these plans.
- A concerted effort to adopt Climate-smart agriculture which is an integrated approach to managing landscapes—cropland, livestock, forests and fisheries—that address the interlinked challenges of food security and climate change will enable farmers of the state to meet the challenge from disasters - natural or otherwise. The Agriculture Policy, 2020 already underpins the need for CSA and

has 'adapting to climate change through improved techniques, technology and management' as a focus area. DA&FE needs to formulate targets and timebound plans for implementation.

- Pandemics like Covid-19 establish the need for animal and human health services to work more closely to increase food safety, reduce antimicrobial resistance and control major zoonoses. F&ARD Department should work on developing a State One Health Policy and take-up targeted projects to increase state-level capacity for prevention, detection, control and response to infectious diseases.

Review, Reinforce Innovations & Actions that Worked

- Extraordinary situations such as Covid-19 have generated extraordinary responses. Many of these have been impromptu in nature and innovative in approach. There is a strong case to review these actions and assess the impact of the steps taken to encourage continuation. Reinforcing the three-tier system of field functionaries for convergence, e-Commerce platforms, active role played by Women SHGs and FPOs, the initiatives of private sector players and agri-entrepreneurs are some suggestions to this end.
- Such assessments are required to be taken up immediately to overcome the limitation of lack of granular data for analyses by DA&FE. Datasets may include volumetric arrivals of different products at fruit and vegetable markets, consumer price movement in the organized and unorganized sectors, price realisation for farmers, incomes of farmers and intermediaries, sale of inputs etc. Currently, most information available pertains to grains covered under the minimum support price network.

¹⁹ Includes flood, cyclone, drought, earthquake, heatwave, hailstorm and tsunami

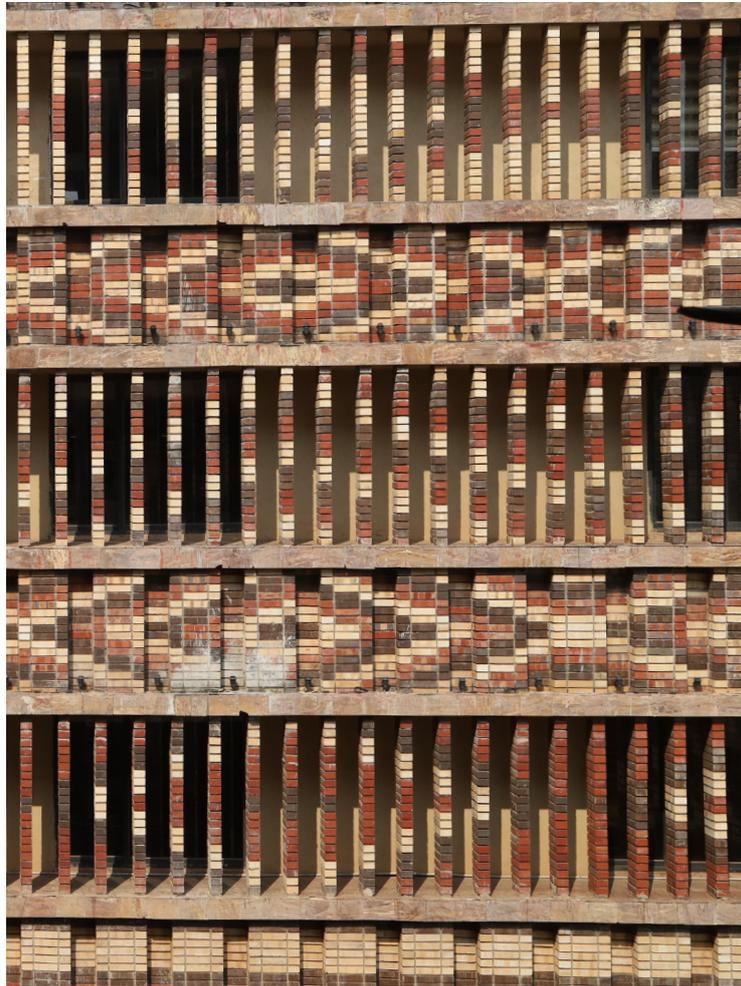
POST LOCKDOWN PHASE

Odisha has extended the lockdown till 30 June with stringent measures that include closure of restaurants and malls, shutdown on Saturday and Sunday in 11 districts and restrictions after 7 PM on weekdays etc. This has been felt necessary owing to the 'peak' in the number of cases of Covid-19 in the state from the beginning of

June. Agriculture and related activities have been allowed during the extended lockdown, though markets remain closed on weekends in most parts of the state. Consequently, this note is dynamic in nature as the ground situation is changing every day.



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