

# IMPACT OF COVID - 19 PANDEMIC ON FISHERIES AND POULTRY INDUSTRIES

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**Abstract:** COVID - 19 pandemic is a major global health crisis. The whole world is under a great threat due to this pandemic. In December 2019, the outbreak of COVID – 19 took place in the city of Wuhan, China and then rapidly spread all across the globe. As its impacting various sectors, it is affecting both the food sector as well as the food security. The food security Need to be ensured to everyone irrespective of the age, gender and societal class. It can lead to severe food crisis unless proper measures are not taken. Fisheries industry and poultry industry that are parts of food sector, got adversely affected by COVID - 19 pandemic. This paper tries to understand the impact of this COVID – 19 pandemic on the fisheries and poultry industry of India by the means of a questionnaire circulated in the form of google form. The responses indicated the COVID - 19 impact on these industries. The situation could be managed by applying some mitigating measures mentioned in the paper.

**Keywords:** COVID - 19, Pandemic, Fisheries, Poultry and Food Security.

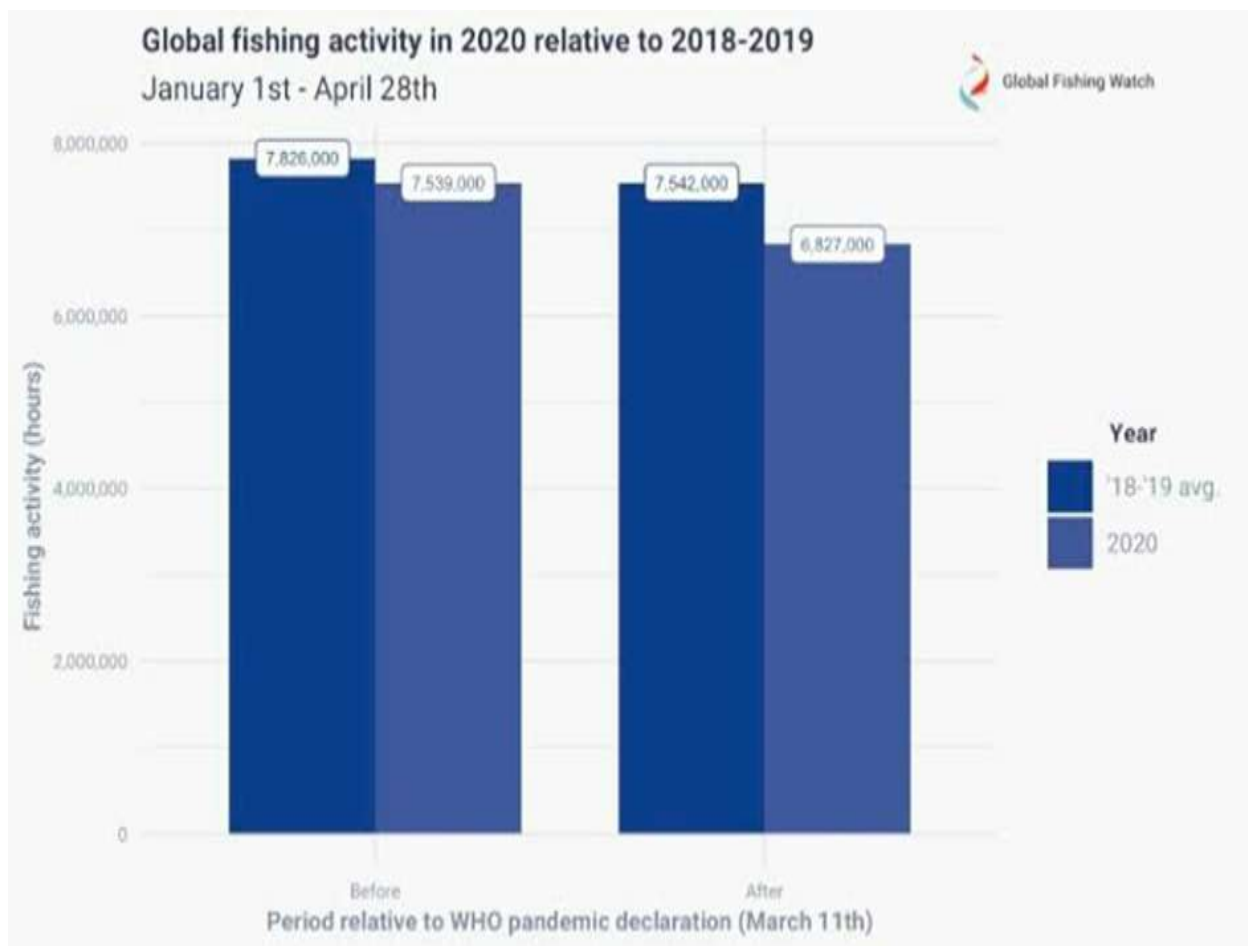
## INTRODUCTION

Even though, Covid-19 pandemic does not infect aquatic species as per the study reports of various researchers or on poultry farm industry as per several FSSAI reports, it has drastically affected the fisheries industry and the livestock market across the globe. The proactive protective measures taken by governments to curtail the spread of the disease has influenced each ladder of the supply food chain, from production, to processing, transport and retail or wholesale marketing at large. The governments across the world along with the policy makers need to recognize an attempt to cope up the current and potential negative impact of Covid-19 pandemic on crucial sectors that contribute to nutrition, livelihoods and food security. The poultry farming and fisheries industry serves as the major contributor to these areas, especially for the world's most vulnerable populations. Fishes serves as an important diet for animal proteins, micronutrients and Omega-3 fatty acids specially in the countries with low-income and food-deficit. Whereas the product of poultry farm industry also serves as fibre and energy rich diet. Therefore, several proactive steps need to be taken by the concerned authorities to protect this sector and related activities, products and services upon which the entire world relies.

## CHALLENGES FACED IN FISHERIES INDUSTRY

### Fishing activity got reduced

As per the Global Fishing Watch, industrial fishing activity had fallen across the world by about 6.5 percent at the end of April 2020, in comparison to the preceding year. This is mainly due to partial or complete lockdown in different parts of the world as stated by Clavelle, 2020. The procurement of cheap labour and inputs needed for production like; fingerling, feed and medicines has also got influenced by several restrictions on the movement of cargo, border shutdown and precautionary measures.



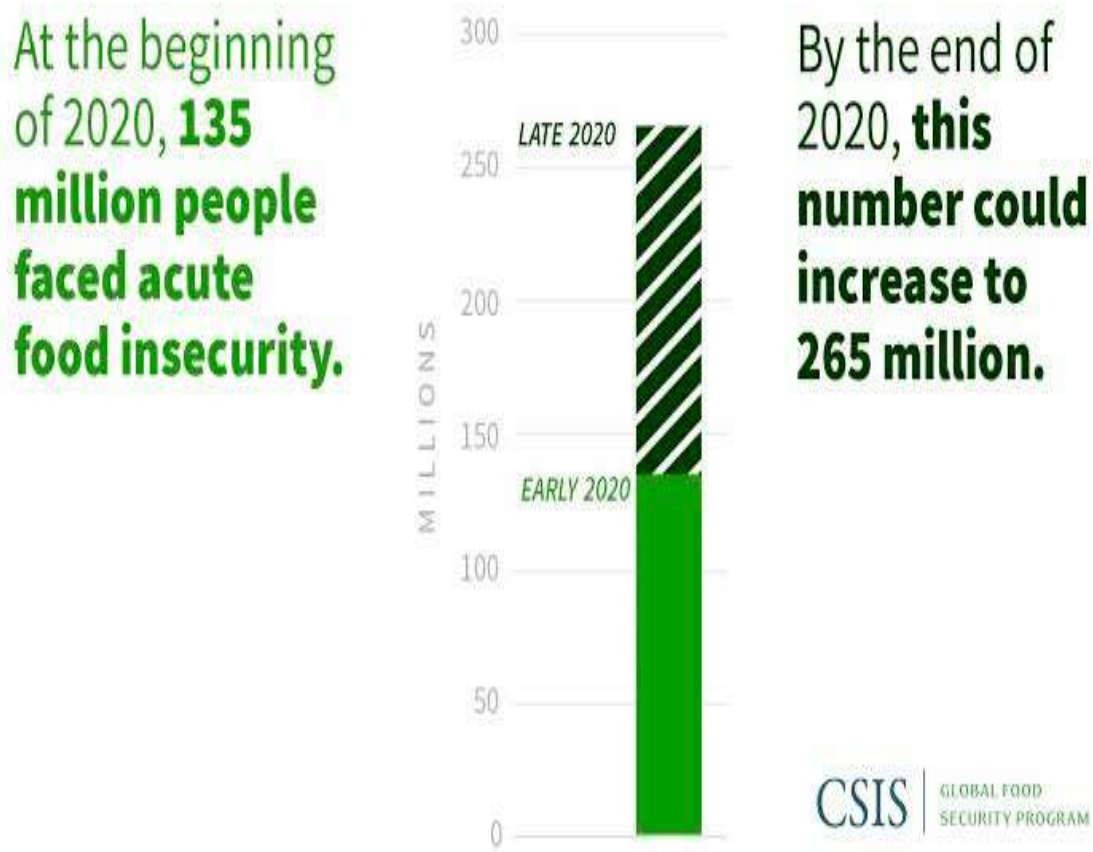
Source: Global fishing Watch

### **PROCESSORS, MARKETS AND TRADERS STRUGGLING TO COPE UP WITH THE DEMAND**

Producers supplying to the food services sector, e.g. hotels, restaurants and catering got severely affected. A large number of fishermen has already started home delivery service in order to compensate for the losses done by a complete breakdown in the supply and demand chain of hotels and restaurants. There is also a trade deficit in the concerned sector due to a partial or complete blockade in the transport services. Due to Covid-19 illness and quarantining of staff as a protective measure has also affected workers health and lead to labour shortages which ultimately had an adverse effect on the processing unit.

### **SAFEGUARDING THE SUPPLY CHAIN AT EACH STAGE OF THE FISHERIES INDUSTRY**

Not just being a significant source of livelihood for a large number of fish-dependent communities, fish and fish products also serves as the most highly traded food products in the world, with 38 percent of total fish production entering overseas trade. The proactive protective measures important to curtail the spread of Covid-19 pandemic has leads to the instability in both domestic as well as foreign supply chains. Safeguarding each stage of the supply chain is of prime importance in order to overcome local food crisis as well as food crisis across the globe, thereby providing a cover to the fish dependent economies.



Source: CSIS

## CHALLENGES FACED IN POULTRY INDUSTRY

### Poultry production

#### Reduced access to poultry feeds:

In the rising need for personal protective equipment and due to physical distancing, the efficiency of industrial feed enterprises got reduced. The restrictions in the movement and increasing illness led to the shortages in labour work force with a drop in the supply of raw materials.

#### REDUCED ACCESS TO MARKETS

Due to the Covid-19 pandemic, there is a break in the logistic channel and tremendous downfall in the demand are reducing sales thereby lowering in prices too. Instability in the income from poultry industry has badly affected women the most by reducing their Purchase Parity Index [PPI] for fundamental household needs.

### PROCESSING

#### Reduced processing capacity:

Due to a sharp decrease in the labour work force due to lockdown measures are constraining poultry processing industries. The fall in the workforce is also due to childcare, quarantine and sick leave.

### COMPROMISED STORAGE AND CONSERVATION

Due to the problem faced by small scale producers in the storage and conservation of the products from poultry farm industry has led to the removal of their outlet thereby lacking the capacity to sell it to the formal market.

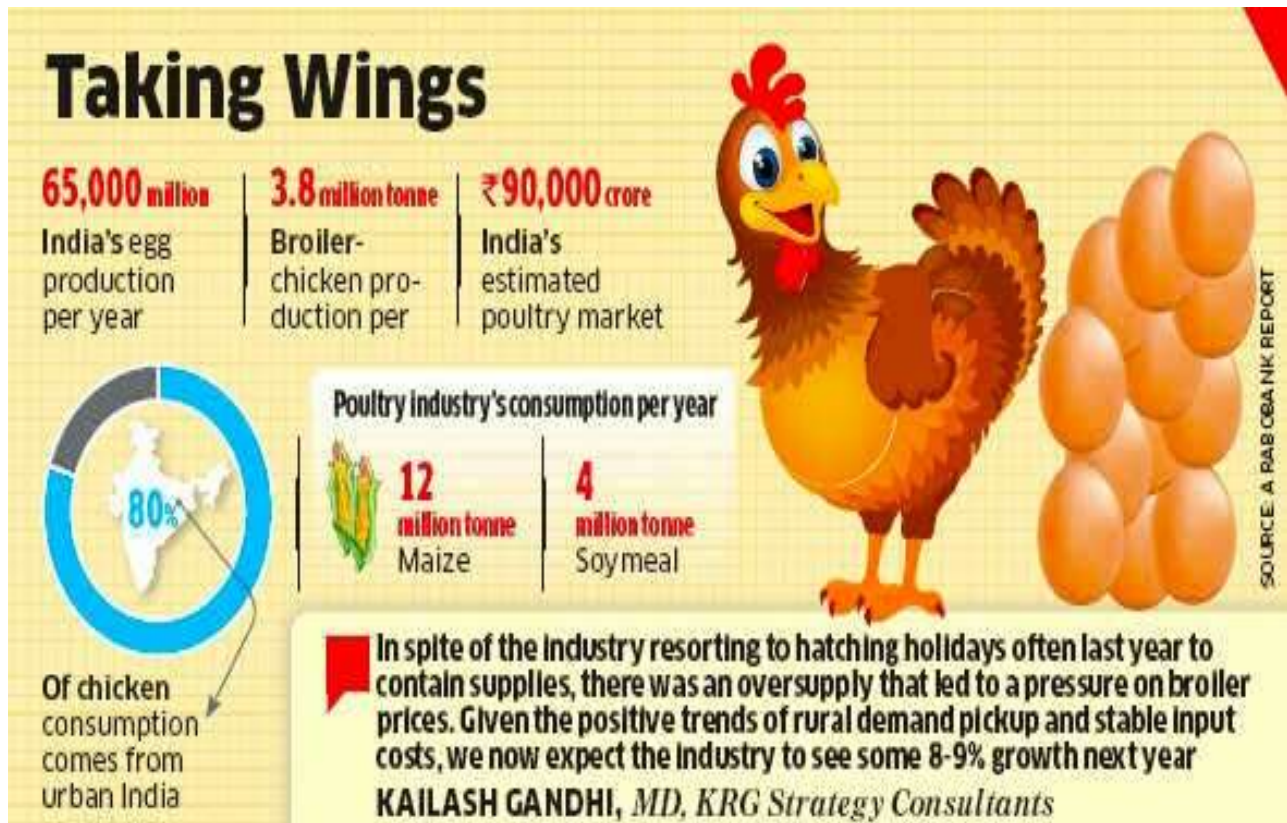
## SALES AND CONSUMPTION

### Reduced Purchasing Parity Index [PPI] of consumers;

Several lockdown measures and guidelines to cope up Covid-19 illness has reduced the purchasing power of the labour from informal economy. The economic recession and rise in the unemployment have already led to hike in the joblessness.

### REDUCED DEMAND AND PUBLIC PROCUREMENT

In several countries across the globe, due to lock on the restaurants and fall in the tourism sector has led to a tremendous decrease in the demand for food by these sectors. School feeding programs like Mid-day meal and Poshan Abhiyaan also remain suspended, due to which millions of children of access to food thereby got affected. However, with the passage of time when several measures were lifted, the overall consumption rose back to the level as it was earlier. Rumours and fake news also affected the demand-supply chain. In India, the sale of chicken and eggs were reduced drastically after bogus posts on various social media platforms, which led to the creation of an impression that humans are also vulnerable to the Covid-19 infection by the consumption of chicken.

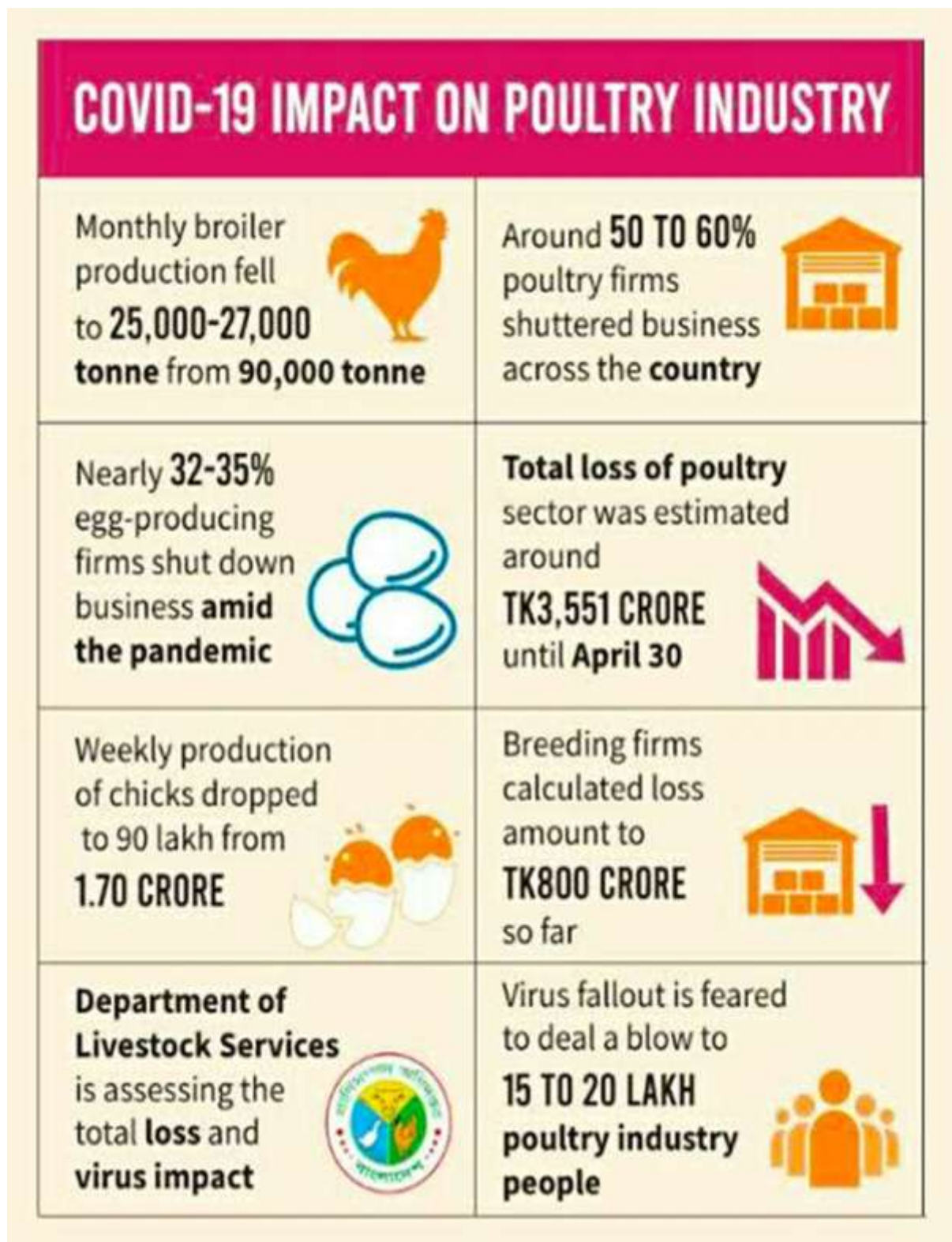


Source: A RAB CBA NK REPORT

## TRANSPORT

- **CONSTRAINED NATIONAL TRANSPORT** – Restriction in the movement across state borders and districts borders within the country has led to the reduced supply of poultry farm products.
- **CONSTRAINED INTERNATIONAL TRANSPORT** – Restriction on the overseas trade has impacted several countries worldwide who were exporting a large percentage of the products from poultry farm industry as well as to the farmers who depend on it primarily. The producers and traders from poultry farm industry along with the butchers lost their earning due to complete blockade on the export.





Source: Google Image

#### DATA AND METHODS

This is an outline survey based on random sampling done by generating a google form consisting of 8 questions related to people of different regions across the nation getting affected by COVID – 19 pandemic outbreak. The sample size of the people on which the online survey has been done is 524.

#### DATA COLLECTION AND PROCEDURE

An outline survey was conducted from 17<sup>th</sup> August to 30<sup>th</sup> August 2020. A structural questionnaire link using google form was sent to people through WhatsApp, Messenger, Instagram and email id. Participants were provided full consent before participating in the online survey. A total of 524 people provided complete information regarding the survey.

## DATA ANALYSIS

Descriptive statistics were carried out to understand the distribution of study participants. The answer of the questions Were asked in multiple choice question format. The question comprised were related to the type of food habit, the primary source of food intake to meet out energy needs, accessibility of fishes and poultry products during lockdown, prices hike observed in chicken and fish in their respective areas and also the part of India where they reside in.

### The type of food habit;

524 responses

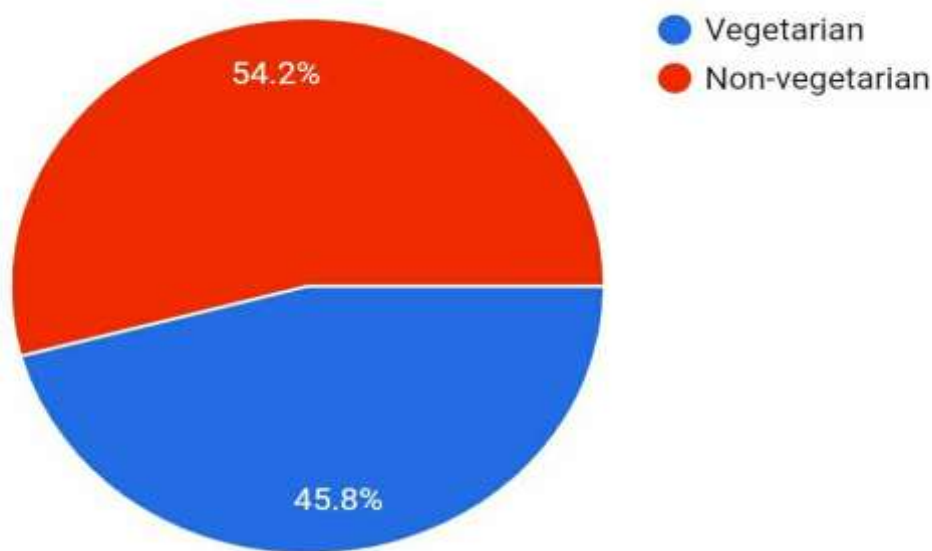


Figure :1

### The primary source of food intake you do prefer to meet energy rich diet;

524 responses

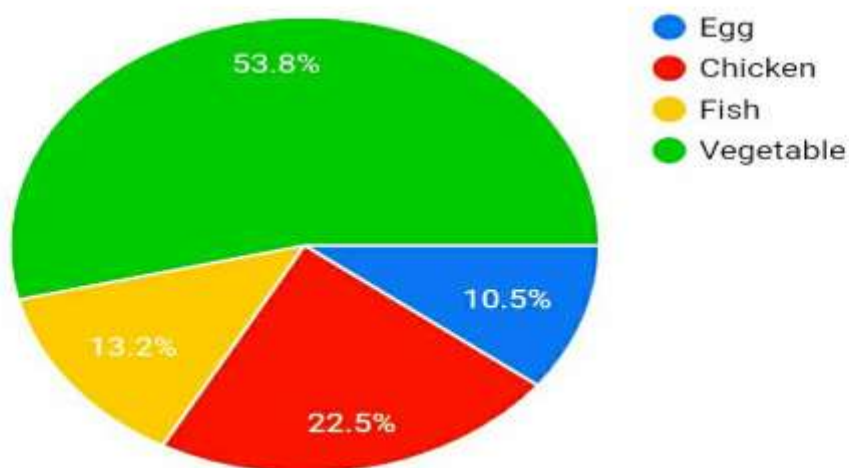


Figure :2

Was the product from fisheries and poultry farm industry easily accessible to you in your locality during lockdown period?

**284 responses**

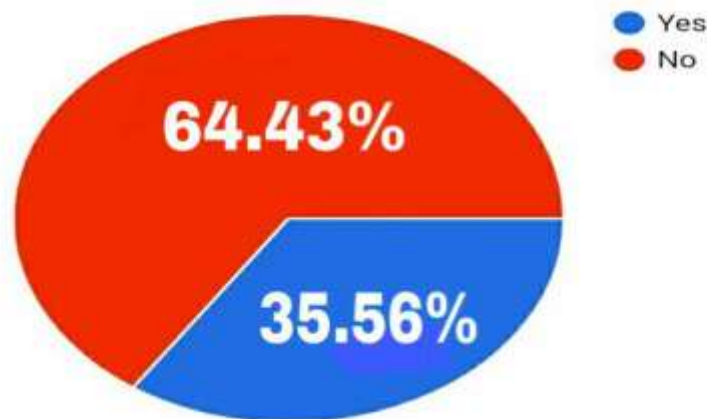


Figure :3

Have you ever observed a price hike in it while purchasing in the lockdown period?

**284 responses**

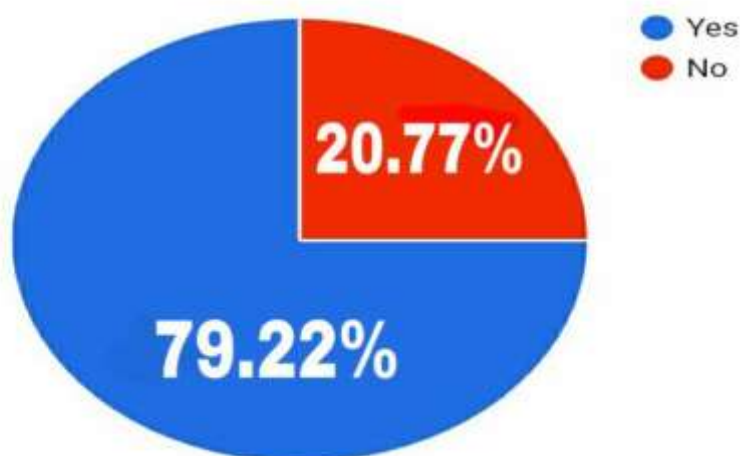


Figure :4

How much price hike did you observe while purchasing chicken(In Rupees)?

**284 responses**



Figure :5

How much price hike did you observe while purchasing fish (In Rupees)?

**284 responses**

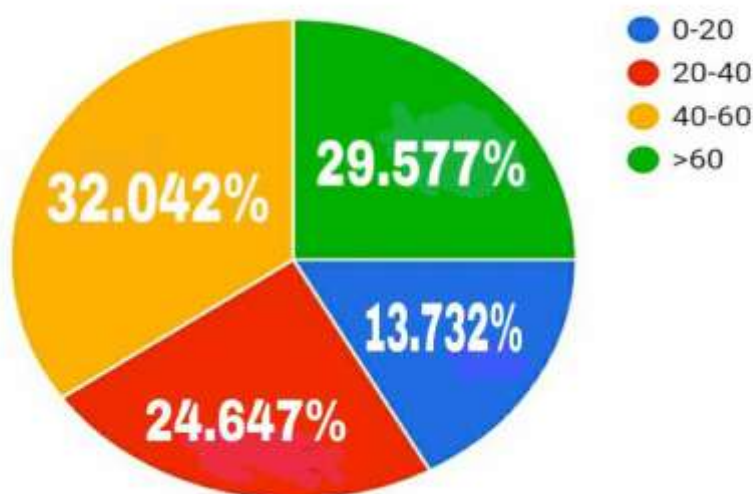


Figure :6



## In which part of India do you reside?

524 responses

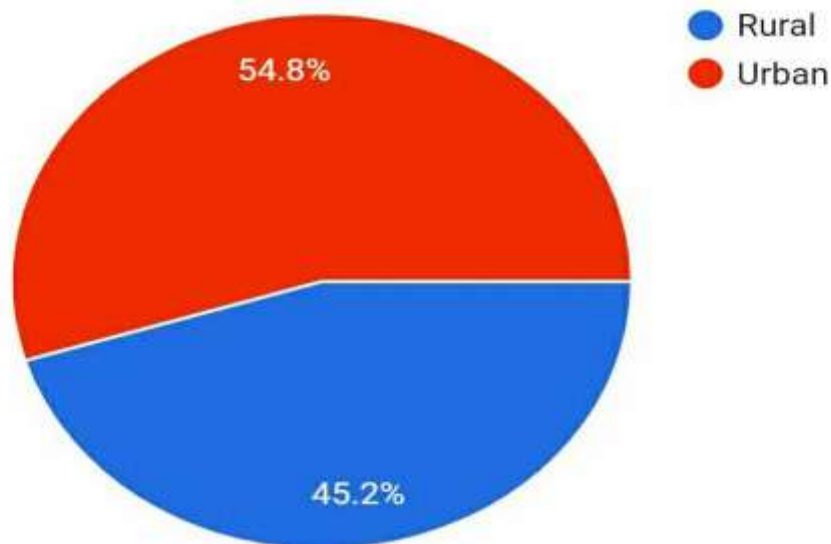


Figure :7

### OBSERVATION

TABLE: 1

S.NO.	QUESTION	NON-VEGETARIAN	VEGETARIAN
1.	The types of food habit?	54.2%	45.8%
		Urban	Rural
2.	In which part of India do you reside?	54.8%	45.2%

In this random sampling survey of sample size 524, it was found that 54.2% were non- vegetarian; 45.8% were vegetarian, and the part of India they reside in which 54.8% belongs to urban area; 45.2% belongs to rural area.

TABLE: 2

S.NO.	QUESTION	YES	NO
1.	Was the product of fisheries and poultry accessible in your locality?	35.56%	64.43%
2.	Have you observed price hike in it?	79.22%	20.77%

In this random sampling survey of sample size 524, it was found that from 284 non – vegetarian people: 35.56% people were accessible to products of fisheries and poultry whereas, 64.43% were not; also 79.22% of the people observed price hike and 20.77% do not during the lockdown in their locality.

TABLE: 3

S.NO.	QUESTION	0-20 Rs	20-40 Rs	40-60 Rs	>60 Rs
1.	Variation in price hike in chicken?	11.619%	26.760%	32.746%	28.873%
2.	Variation in price hike in fishes?	13.732%	24.647%	32.042%	29.577%

In the random sampling survey of sample size 524, it was found that from 284 of non – vegetarian people some observed variation in the price hike while purchasing chicken in their locality (In Rs) 11.619% observed 0-20 Rs hike; 26.760% observed 20-40 Rs hike; 32.746% observed 40-60 Rs hike; 28.873% observed more than 60 Rs hike in price. In the same manner the people found variation while purchasing fishes in their locality (In Rs) 13.732% observed 0-20 Rs hike; 24.647% observed 20-40 Rs hike; 32.042% observed 40-60 Rs hike; and 29.577% observed more than 60 Rs hike in price.

## CONCLUSION

Covid-19 pandemic had an adverse impact on the management of fisheries processing unit. Due to the lack of proper monitoring and control of fishing operations, there is a higher risk that levels of illegal, unreported and unregulated (IUU) fishing would surge. Also, in the poultry farm industry due to the spreading rumours amidst the lockdown, it had been hit immensely. The ongoing crisis has triggered unprecedented responses by governments across the globe. A large number of mitigating measures are being taken such as; to safeguard public health, to protect workers deployed in the concerned sector and also to strengthen by providing a social protection cover to the most vulnerable group of people avoiding a socio-economic crisis. Cash transfers in D.B.T(Direct Benefit Transfer) mode, health insurance and unemployment benefits are few steps that would ensure the flow in food supply chain.

## MITIGATION MEASURES

1. Industries and its members along with civil society representatives and various other stakeholders should monitor the situation in close adherence and provide effective management, policy implementation and assistance of technical aid and advice, to survive along the supply chain,
2. Coordination of information and responses with overseas and regional partners, such as intergovernmental economic organizations, research centre and civil society organizations.
3. Financial institution and donors need to develop coordinated and comprehensive intervention packages in order to address the most urgent priorities to reactivate supply chains.

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## DECLARATION OF COMPETING INTEREST

The author declare that they have no known competing financial interest or personal relationships that could have appeared to influence the work reported in this paper.

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