



Cover Page



DOI: <http://ijmer.in.doi./2022/11.05.130>

IMPACT OF COVID-19 PANDEMIC SITUATION ON FISHERIES SECTOR IN INDIA-A RESEARCH STUDY

¹Dr. D. Swarupa Rani and ²Cheggam Susmitha

¹Associate Professor (Rtd.) and ²Assistant Professor

^{1&2}Department of Economics

¹Kakatiya University, Warangal and ²Government Degree College, Parkal, Hanamkonda
Telangana, India

ABSTRACT

Fisheries sector has been recognized as an important sector in the economic growth of India. The whole aquaculture production system was disturbed due to COVID-19 pandemic. As the disease is highly transmissible the vaccine has not been developed, so the ways to 'flatten the curve' include the imposition of self- quarantine, social distancing, travel restrictions, and closedown of the entire country. This working paper aims to describe the multidirectional economic impacts of the fisheries sector from this pandemic. Some policy recommendations were given to hit the pinch of economic crises. For the present paper both primary and secondary data were used. For the collection of primary data 52 fish merchants were randomly selected in erstwhile Warangal district, and they were interviewed through mobile phones. Simple percentage method has been used to analyse the data. The study results revealed that COVID-19 pandemic affected different areas of the aquaculture sector including reduction in consumption, decreased demand, lack of supply, sport crisis, debt among farmers and they are not able to carry out day to day activities. So, there is a greater need of Government support to the fish farmers. End of lockdown is not a solution but the government should assist the stakeholders to repay their loans, rents and start the day-to-day activities as usual before lockdown.

Keywords: COVID-19, Fisheries Sector, Lockdown, Economic Crisis, Annual Income, Poverty Elevation, Domestic Consumption, Digital Motivation.

Introduction

Statement of the Problem

"We don't have to sacrifice a strong economy for a healthy environment"

Dennis Weaver

India is the second largest fish producing country in the world, with 6.56 percent of global production (GOI.2019). Around 14.5 million people are engaged in fisheries and its allied activities in India, and it has been estimated that around 60 percent of the total population consume fish (shyam.2016). Fisheries sector of the country contributes about 1.1 percent to the overall GDP and 5.23 percent to the agriculture GVA(NFDB). Hence in these precarious situations, an attempt was made to examine the potential impact of COVID-19 pandemic on the fisheries sector in India and various mitigation measures to ameliorate the Coronavirus shock.

Indian Fisheries in the pre-COVID-19 period: The COVID-19 shock is playing out in almost a similar manner in all around the world by squeezing out demand and supply and the consequent economic slowdown. In India, the problem might be long-lasting because before the pre-COVID-19 period Indian economy had deteriorated significantly after years of infirm performance (Dev & Sengupta, 2020). In 2018-19 India's fish production was 13.34 million metric tonnes which was about 6 percent greater than the previous year (Seafood Source, 2020). As per seafood export is concern, it is the fourth biggest exporter in the world (Seafood Source). In 2018 India exported 13,77,244 tonnes of seafood which fetched \$ 7.08 billion (The Economic Times, 2018). In 2017-18 Andhra Pradesh was the leading fish producing state in the country, followed by West Bengal and Gujarat by producing 34.5, 17.42 and 8.35 lakh tonnes fish respectively (GOI, 2019). In inland production, Andhra Pradesh stood first followed by West Bengal and Uttar Pradesh. Gujarat was the first state in marine production in the country (GOI, 2019).

In 2022-23 the government aims to increase the fish production to 20 million tonnes, through 'Pradhan Mantri Matsya Sampada Yojana (PMSSY). To reach the government's target by 2022-23, the current annual average growth rate needs to double. But the corona virus outbreak has impacts on the global economy with unpredictable consequences and the fishing industry is not an exception.

On March 25th, India initiated a strict 21-day lockdown, later extended until May 3rd and May 17th and again up to May 31st [3]. During the 21-day lockdown, fishing was halted due to the closure of storage facilities, markets, and processing plants. On April 9th, India's Ministry of Home Affairs allowed fishing and aquaculture businesses to pursue their activities under conditions of adequate social distancing. International exports were also badly affected. Frozen shrimp which make up 70 percent of India's seafood export earnings have been severely affected.



Cover Page



DOI: <http://ijmer.in/doi/2022/11.05.130>

OBJECTIVES: Following are the Objectives for the study:

- To examine the impact of COVID-19 on Indian fisheries.
- To analyse the issues and challenges faced by fish merchants during lockdown time.
- To suggest suitable policy measures to ameliorate the Coronavirus shock.

HYPOTHESIS: There is a positive relationship between spread of COVID-19 virus and increase in the issues and challenges faced by fish merchants.

REVIEW OF LITERATURE:

S. M. Rafiquzzaman: In Bangladesh, lockdown has been started officially from 26th March, 2020 which is actually most important time for harvesting and summer stocking in pond. The survey results revealed that pandemic COVID-19 has been affected in different areas of the aquaculture sector including reduction of consumption, export order cancellation, reduction in price, delayed in summer stocking, lack of technical support and transport crisis.

Kapila Manoj and others: This survey results revealed that COVID-19 pandemic affected different areas of the aquaculture sector. Consumption, exports, prices, transportation. Survey traced out that most of the farmers are not in condition to repay their loans. All of the respondents demanded for government assistance to sustain post lockdown for managing the farm activities and start the day to day activities soon.

Julie Soren Sen (2020): This commentary provided an over view of the impact of COVID-19 on the commercial fishing industry. The study dealt with the immediate and expansive impacts of COVID-19 on fishermen's health and wellbeing, economic impact, market disruptions, as well as the very real, logistical challenges of protecting workers on fishing vessels.

N. J. Bennet: This study focused specifically on the implications of the pandemic for the small- scale fishers, including marketing and processing aspects of the sector, and coastal fishing communities, drawing from news and reports from around the world. The negative consequences included shut-downs of some fisheries, market disruptions, increased health risks for fisheries, increased illegal, unreported and unregulated fishing. Though much of the news is dire, there have been some positive outcomes such as food sharing, the revival of local food networks, collaborations between communities and governments.

Research Gap

Many researchers studied the economic and social impact but there are limited studies on the sensitive issues which were covered in this paper. The researcher has gone through many journals, articles, surveys, FAO OECD research works already published relating to the study undertaken. The researcher gained significant insights into several aspects, dimensions, prospects of COVID-19 impact.

Methodology:

The present paper is based on both primary and secondary data. For the collection of primary data well-structured questionnaire is prepared and collected the information through mobile phones and in some cases the researcher approached some fish merchants with very caution in personal hygiene and social and personal distance. The responses received were processed component wise to evaluate the impact of pandemic COVID-19 on fisheries sector. For the secondary data the researcher scanned several websites, journals, magazines and annual reports related to the subject.

Research Design: For the purpose of the paper 52 fish merchants were randomly selected from erstwhile Warangal district.

Data Analysis: Simple percentage method has been used to analyse the data with tables to explain the impact of COVID-19 pandemic on fisheries sector.

Impact: Fishes are one of the major nutritious parts of the global food chain and key source of employability generation among rural coastal people. Fish and fish products are one of the most traded food products throughout the world involving 38 percent international trade (FAO, 2020). Decreased consumer demand, lower supplies, and interference in supply chains will directly affect the people engaged with the industry such as fisherman, fish processor, fish vendors, suppliers and transport workers. Postponement of various research and development program science and management meetings will detain the growth of this sector. Lockdown in the landing centres and harbours has severely affected the fisher folks in all nine coastal states and four coastal union territories of the country. Suppliers and producers will be greatly affected by reduced demand, transport constraint and closure of different restaurants and retail outlets. Lack of proper functioning of supply chains, lots of farmers are not able to sell their crop properly, leading to massive losses.



Cover Page



DOI: http://ijmer.in.doi./2022/11.05.130

Despite being essential service, fish and food supply chains are facing a lot of difficulties in marketing. Some people are not buying the fish in fear of getting affected. Indian seafood export may get retarded as it was likely to achieve \$7-billion target this year (Business Line, 2020). Most of the export markets like Japan, US are buying selectively, and European market is totally closed off. Thus, this sluggish farming sector and stagnant exports are going to put the fishery industry of the country in a severe crisis

TABULAR REPRESENTATION:

The tabulation part is divided into two sections. One is Socio-Economic status of the Selected Respondents and the second one is Socio-Economic conditions of the respondents after the Lockdown period.

1. AGE WISE DISTRIBUTION

S. No	Age	% of Respondents
1	Below 25	06%
2	25-45	32%
3	Above 45	62%

Source: Compiled by the author

It is observed from Table-1 that more than 60 percent of the selected respondents are above 45 years and the remaining are below 45 years. The education details of the respondents have shown in Table-2.

2. EDUCATIONAL QUALIFICATION

S. No	Details of Education	% of Respondents
1	Illiterates	32%
2	Up to school level	58%
3	Intermediate	10%

Source: Compiled by the author

It is to be noticed from Table-2 that 32 percent of the respondents are the illiterates and 58 percent of the respondents reached the primary stage. It is good to see the 10 percent of the selected respondents could reach intermediate level. The reasons of the respondents to enter in this business have been presented in Table-3.

3. REASON TO CHOOSE THIS BUSINESS

Reason	% of respondents
Family business/Tradition	75%
Poverty	10%
Interest in business	15%

Source: Compiled by the author

Table-3 explains that 75 percent of the respondents have entered in this business by the cause of tradition and 10 percent of the respondents entered due to their poverty. The remaining 15 percent are entered with their own interest. The particulars of the respondents where they are living have been shown in Table-4.

4. TYPE OF HOLDING HOUSES

Type of holding house	% of respondents
Own house	70%
rented	30%

Source: Compiled by the author

It is happy to say 70 percent of the selected respondents have their own houses according to Table-4 but the rest of the 30 percent are living in rented houses. The various shop holding details have been presented in Table-5.



Cover Page



DOI: http://ijmer.in.doi./2022/11.05.130

5. TYPE OF HOLDING SHOPS

Type of holding shop	% of respondents
Own	38%
Rented	62%

Source: Compiled by the author

It is to be seen from the above Table-5 that more than 60 percent of the selected respondents are running their shops on rented basis and 38 percent of the respondents are running shops in their own houses. The number of working days in a year have been shown in Table-6.

6. ACTIVE WORKING DAYS IN A YEAR

No of Working days	% of respondents
Less than 100 days	2%
101-150 days	8%
151-200 days	10%
More than 200 days	80%

Source: Compiled by the author

Table-6 illustrates that 80 percent of the respondents are getting employment more than 200 days per annum before lockdown. The income details of the selected respondents are presented in Table-7.

7. DAILY INCOME

Daily Income	% of respondents
Below Rs. 500	37.5%
500-1500	60%
1500 and above	2.5%

Source: Compiled by the author

Only 2.5 percent of the respondents are getting more than rupees 1500 per day and most of the respondents earn Rs.500-1500 per a day before lockdown. The various sources of the investment have been shown in Table-8.

8. SOURCE OF INVESTMENT

Source	% of respondents
Co-operative societies	20%
Nationalized Banks	10%
Private persons	70%

Source: Compiled by the author

It is very sad to say that 70 percent of the respondents are depending on the private persons for their investment in their business and 10 percent of the respondents are depending on Nationalised banks. The particulars of the active working days during lockdown have been presented in Table-9.

9. ACTIVE WORKING DAYS DURING LOCK DOWN

Working days	% of respondents
No working days	90%
One month	2%
10-15 days	5%
Less than 10 days	3%

Source: Compiled by the author



Cover Page



DOI: http://ijmer.in.doi./2022/11.05.130

From the above Table-9 that 90 percent of the selected respondents lost their employment during the lockdown period. They faced so many problems during lockdown without employment. The daily income details of the respondents during lockdown period are presented in Table-10.

10. DAILY INCOME DURING LOCK DOWN

Daily income	% of respondents
Below 500	65%
500-1500	20%
1500 and above	15%

Source: Compiled by the author

It can be seen from Table-10 that 65 percent of the respondents are getting rupees below rupees 500 per day. This is a very critical situation to the selected respondents to live with this less amount to survive their families. During the lockdown period the alternative livelihood sources of the respondents have been shown in Table-11.

11. ALTERNATIVE LIVELIHOOD DURING LOCKDOWN

Livelihood	% of respondents
Vending vegetables	5%
Vending fruits	5%
Others	15%
Simply sitting at home	75%

Source: Compiled by the author

Table-11 illustrates that 75 percent of the respondents have no employment during the lockdown period but 5 percent of the respondents are vending the vegetables and the 5 percent they went to sell the fruits. The marketing related problems of the selected respondents are presented in Table-12.

12. MARKETING PROBLEMS

Reason	% of respondents
Decrease in demand	52%
Storage problems	3%
Lack of transportation	15%
Lack of supply	30%

Source: Compiled by the author.

The various marketing related problems have presented in Table-12. More than 50 percent of the respondents said that the main marketing problems are decrease in the demand and lack of supply. The loan repay status is presented in Table-13

13. LOAN REPAY STATUS AFTER LOCK DOWN

Status	% of respondents
Yes	32%
No	68%

Source: Compiled by the author

More than 60 percent of the selected respondents are unable to pay their loans afterlockdown. The rent repay status is presented in Table-14.

14. RENT REPAY STATUS FOR SHOPS

Status	% of respondents
Yes	22%
No	78%

Source: Compiled by the author

DOI: <http://ijmer.in.doi./2022/11.05.130>

As much as 78 percent of the respondents are unable to pay their rents for shops during the lockdown period. The risk coverage insurance details are shown in Table-15.

15. RISK COVERAGE INSURANCE

Status	% of respondents
Yes	8.8%
No	92.2%

Source: Compiled by the author

Table-15 shows that 92.2 percent of the selected respondents do not have risk coverage insurance and only 8.8 percent of the respondents have risk coverage insurance. The particulars of the business target have been presented in Table-16.

16. BUSINESS TARGET

Status	% Respondents
Yes	28%
No	72%

Source: Compiled by the author

Table-16 shows that more than 70 percent of the respondents are not reaching their targets which they got before COVID-19.



Selling Fishes in the time of COVID Pandemic situation



The researcher observing Fish processing and Retail Marketing

DISCUSSION

In the present study it revealed that the lockdown induced debt among fish farmers and they are unable to carry out their day to day activities. The most important issue is that they have to pay the rent during lockdown period for their shops for which their owners are insisting them. It became a big headache to the fish merchants. They are not meeting the business target which they were earning before lockdown. Then the hypothesis is accepted.

RECOMMENDATIONS: The following are the recommendations to improve the economic status of the Fisheries.

- Domestic consumption of fishes to be promoted by circulating the beneficial effects of fish protein for boosting the immunity through different printed, TV programs and social media, online door delivery markets roles should be improved.
- Government should encourage fish stalls with different types of fish dishes in hygiene conditions.
- Digitalization of marketing linkage and development electronic portal of producer organization could be the best option for wholesaling and retailing the fish with stable price.
- To do this Union Digital Centre in coordination with the District Fisheries Development Officer can take the proper initiatives to make it affordable for producers and sellers in remote areas.
- Digital innovation, accelerated shifts towards web-based applications, online services and improved product traceability and sustainability are some of the results likely to emerge from the crisis.
- Short and long-term interest free financial assistance for real stakeholders for aquaculture to be ensured by the government.
- To avoid contamination through processing and packaging it is important to emphasize the need to implement robust hygiene practices and social distancing.
- Special attention and support must be given to women fish vendors who are exposed to a greater risk of infection, since markets are a place of close contact and have limited sanitation and hygiene facilities. Sexual exploitation, domestic violence, and abuse in times of crises should be controlled particularly in case of the most vulnerable women and children.



Cover Page



DOI: <http://ijmer.in.doi./2022/11.05.130>

- Private sector should play an important role to develop the fisheries and aquaculture as agriculture is not for livelihood but now it became an agri-business. Corporate companies should take this as a challenge to hit the unprecedented crisis.

CONCLUSION: COVID-19 outbreak has been deemed a global health emergency, and its impact on developing countries like India is one of heightened concern. With 1.3 billion populations and the precarious situation of the economy in the pre-COVID period, prolonged lockdown would be ruinous for the economy. Especially agriculture and the allied sector will be in a most vulnerable condition. India, with its apt governance, took the situation as a challenge and in all ways of possibilities to combat the pandemic. At the same time, the government and policymakers need to be prepared to minimise the impact of the shock and V-shaped recovery of the economy in the post COVID period.

References

1. Bennet J. et.al. (2020 May 22) The COVID-19 Pandemic, Small-Scale Fisheries and Coastal Fishing Communities. Coastal Management.0892-0753(1521-04210) <https://doi.org/10.1080/08920753.2020.1766937>
2. FAO. 2020. How is COVID-19 affecting the fisheries and aquaculture food systems. Rome. <https://doi.org/10.4060/ca8637en>.
3. FAO. (2020) Q&A: COVID-19 Pandemic-impact on fisheries and aquaculture
4. Fisheries, aquaculture and COVID-19: Issues and policy responses (2020 June 4). OECD Policy Responses to Coronavirus (COVID-19). oecd.org/agriculture/topics/fisheries-and-aquaculture.
5. Jeya Seelan, (2020). Issues and Challenges of Fisher folk women during COVID -19 Lockdown: A Sociological Case Study Analysis with Special Reference to Puducherry, Journal of Critical Reviews 7(19):3616-3617.
6. Jessica Echard &Rebecca Weil from Bad to Worse: The Impact of COVID-19 on Commercial Fisheries Workers Julie Sorensen ORCID Icon, published online: 12 Sep 2020, Download citation
7. Kapila Manoj et al (2020). survey on assessing the impact of COVID-19 pandemic on aquaculture sector, India. Journal of Interdisciplinary Cycle Research. XII(IX) 192-198.
8. OECD (2020), Fisheries, aquaculture and COVID-19: Issues and Policy Responses to Coronavirus (COVID-19). oecd.org/agriculture/topics/fisheries-and-aquaculture.
9. Pavithra KM (2020). Data: To reach 20 million tonnes of fish production by 2022-23, the current growth rate needs to double. FACTLY.
10. Purkait et al, (2020) Impact of Novel Coronavirus (COVID-19) Pandemic on Fisheries Sector in India: A Minireview. Indian Journal of Pure & Applied Biosciences, 8(3),487-492, DOI:
11. S. M. Rafiqzaman. (2020). Case Study on the Impact of Pandemic COVID-19 in Aquaculture with its Recommendations. American Journal of Pure and Applied Biosciences,2(2),36-38. <https://doi.org/10.34104/ajpab.020>.