



Research Paper

Study on Fishermen's Perception Towards Pradhan Mantri Matsya Sampada Yojana Scheme in Mangalore and Udupi

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Abstract-The Pradhan Mantri Matsya Sampada Yojana (PMMSY) is a flagship scheme which aims at enhancing the fishery infrastructure, increasing fish production and promoting sustainable fisheries inside India. This study finds out the perceptions of fishermen in Mangalore and Udupi, which are two prominent coastal regions, towards the PMMSY schemes. The research investigates the awareness, overall satisfaction and utilization of fishermen with the various components of PMMSY, such as financial assistance, technology adoption, and capacity building initiatives. Using a mixed-methods approach, the study incorporates surveys and interviews which gathers quantitative and qualitative data. The sample population will comprise a diverse group of fishermen, which includes small-scale traditional fishers, boat owners, and fishery entrepreneurs. The research analyses the socio-economic impact of PMMSY towards the fishing community, examines changes in income, employment, and living standards. Additionally, the study assesses the challenges and opportunities faced by fishermen in implementing and benefiting from the PMMSY schemes. The findings of this study aims to contribute valuable insights for the policymakers, fisheries management authorities, and the development practitioners. Recommendations based on the identified perceptions and experiences of fishermen can inform policy adjustments, program refinements, and targeted interventions to enhance the overall effectiveness and inclusivity of PMMSY schemes in these coastal regions. Ultimately, the research seeks to facilitate evidence-based decision-making for sustainable fisheries development and improved livelihoods in Mangalore and Udupi.

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I. INTRODUCTION

India's coastal regions, notably Mangalore and Udupi, have been integral to the country's vibrant fisheries sector, supporting the livelihoods of a substantial population engaged in fishing activities. Recognizing the pivotal role of the fisheries sector in national development, the Government of India has implemented various policies and schemes aimed at promoting sustainable fisheries, enhancing infrastructure, and improving the socio-economic conditions of fishing communities. One such significant initiative is the Pradhan Mantri Matsya Sampada Yojana (PMMSY), a flagship scheme designed to catalyze growth in the fisheries and aquaculture sector. With a comprehensive vision encompassing both inland and marine fisheries, PMMSY aims to modernize and boost the entire value chain, from fishing to post-harvest activities. The success of PMMSY relies not only on its design and implementation but equally on the perceptions and experiences of the primary

stakeholders: the fishermen. Mangalore and Udupi, situated along the picturesque coastline of Karnataka, are vital hubs of fishing activity, contributing significantly to the state's fisheries production. Understanding the perspectives of the fishermen in these regions towards PMMSY is crucial for evaluating the scheme's effectiveness, identifying challenges faced by the fishing communities, and pinpointing opportunities for improvement.

PROBLEM STATEMENT -Despite the concerted efforts by the Government of India to boost the fisheries sector through initiatives like the Pradhan Mantri Matsya Sampada Yojana (PMMSY), there exists a critical gap in our understanding of how these policies translate into tangible benefits for the fishermen in coastal regions such as Mangalore and Udupi. The effectiveness of PMMSY is contingent not only on its design and implementation at the macro level but equally on the perceptions and experiences of the fishermen, who are the primary stakeholders in the fishing industry. Mangalore and Udupi, with their rich maritime heritage and significant contributions to the fisheries sector, provide an ideal backdrop for investigating the on-the-ground realities faced by the fishing communities. The overarching problem lies in the lack of a comprehensive assessment of the fishermen's perceptions towards the PMMSY schemes and their implications on livelihoods, socio-economic conditions, and overall well-being.

II. OBJECTIVES

1. Assess Awareness and Understanding:

To assess their understanding of the eligibility criteria and benefits provided by these schemes.

2. Evaluate Participation and Utilization:

To examine the extent of fishermen's participation in government schemes and the utilization of available resources and benefits.

3. Analyze Perception of Scheme Effectiveness:

To gauge fishermen's perception of the effectiveness of government schemes in addressing their socio-economic needs, improving their livelihoods, and addressing their concerns.

4. Identify Barriers and Challenges:

To identify and understand the barriers and challenges that fishermen face when accessing and utilizing government schemes.

5. Explore the Impact on Livelihood:

To assess the perceived impact of government schemes on the income, job security, and overall livelihoods of fishermen and their families.

III. Research Methodology

Research Design-The study is of exploratory nature and is meant to assess the awareness & perception of fishermen's towards Pradhan Mantri Matsya Sampada Yojana Scheme in Mangalore and Udupi District, Karnataka.

Source of Data-To achieve the objectives, this study has used both primary and secondary data. The secondary data and information have been collected from various sources like, journals, magazines and publications etc. Primary data has been collected through structured questionnaire from the fishermen's in Mangalore and Udupi District, Karnataka. The study is carried in the month of November 2023.

Sample Design & Size-A total of 50 fishermen's in Mangalore and Udupi District, Karnataka randomly selected. Required data are collected from the structured questionnaire. The research was made by the survey in accordance to the convenience of the fishermen and request was made to them to fill up the questionnaire with correct and unbiased information. So the sample type is convenient sampling.

Tools for data analysis-The relevant data are presented in appropriate tables in this project. Some of the relevant and interesting data are presented in the form of tables, percentages and chi-square test in this paper.

Limitations of the study-This study is based on the data furnished by the fishermen and on the observations. An element of personal bias may affect the data to some extent. Further, the results of this study may be applicable only to areas similar to that of the study area. With due awareness of these limitations, an attempt is made "Study on Fishermen's Perception Towards Pradhan Mantri Matsya Sampada Yojana Scheme in Mangalore and Udupi".

Hypothesis

1. Relationship between the level of awareness of PMMSY and the level of benefits absorbed from the PMMSY

H₀ Null Hypothesis: There is no significant difference in the fishermen's perception on level of awareness of PMMSY and the level of benefits absorbed from the PMMSY.

2. Relationship between Perception of the PMMSY and the level of satisfaction of PMMSY related to fisheries

H₀ Null Hypothesis: There is no significant difference in the fishermen's perception of the PMMSY and the level of satisfaction of PMMSY related to fisheries.

3. Relationship between level of effectiveness of PMMSY in addressing the socio-economic needs and improving the livelihoods of fishermen and rating of effectiveness of implementation of PMMSY by the government bodies

H₀ Null Hypothesis: There is no significant difference in the fishermen's perception on the level of effectiveness in addressing the socio-economic needs and improving the livelihoods and the rating of effectiveness of implementation of PMMSY by the government bodies

4. Relationship between the awareness of recent technological advancements and positively impacted on the fishing practices from the recent technological advancements

H₀ Null Hypothesis: There is no significant difference in the fishermen's perception on the awareness of recent technological advancements and positively impacted on the fishing practices from the recent technological advancements

5. Relationship between the level of perceived impact of PMMSY scheme on the overall livelihoods of fishermen and the level of satisfaction

H₀ Null Hypothesis: There is no significant difference in the fishermen's perception on the perception on the level of effectiveness of PMMSY scheme on the overall livelihoods and the level of satisfaction of PMMSY scheme

6. Relationship between the level of barriers and challenges faced when accessing and utilizing the scheme

H₀ Null Hypothesis: There is no significant difference in the fishermen's perception on the level of barriers and challenges faced when accessing and utilizing the PMMSY scheme

7. Relationship between the levels of perceived impact of PMMSY scheme on the overall livelihoods of fishermen

H₀ Null Hypothesis: There is no significant difference in the fishermen's perception on the levels of perceived impact of PMMSY scheme on the overall livelihoods of fishermen

Analysis- After the percentage analysis of assessing the fishermen's understanding of the eligibility criteria and benefits provided out of the schemes, examine the extent of fishermen's participation in PMMSY scheme and the utilization of available resources and benefits, fishermen's perception of the effectiveness of PMMSY scheme in addressing their socio-economic needs, improving their livelihoods, the barriers and challenges that fishermen face when accessing and utilizing government scheme and assessing the perceived impact of this scheme on the overall livelihoods of fishermen an attempt is made to find the prominent relationship of fishermen's perception on the level of awareness of Pradhan Mantri Matsya Sampada Yojana VS Awareness of eligibility criteria to Pradhan Mantri Matsya Sampada Yojana, level of awareness of Pradhan Mantri Matsya Sampada Yojana VS level of benefits absorbed from the Pradhan Mantri Matsya Sampada Yojana, perception of Pradhan Mantri Matsya Sampada Yojana related to fisheries Vs perception on the level of satisfaction of PMMSY related to fisheries, perception on the level of effectiveness of PMMSY in addressing the socio-economic needs and improving the livelihoods of fishermen Vs rating of effectiveness of implementation of PMMSY by the government bodies, awareness of recent technological advancements in fisheries and aquaculture Vs positively impacted on the fishing practices from the recent technological advancements and level of perceived impact of PMMSY scheme on the overall livelihoods of fishermen Vs perception on the level of satisfaction of PMMSY related to fisheries by applying the chi square tests with formulated hypothesis.

1. Relationship between the level of awareness of PMMSY and the level of benefits absorbed from the PMMSY

Null Hypothesis: There is no significant difference in the fishermen's perception on level of awareness of PMMSY and the level of benefits absorbed from the PMMSY.

**Table
Level of awareness and the level of benefits absorbed**

Level of benefits absorbed	Level of awareness					Total
	Very Aware	Aware	Somewhat Aware	Not Very Aware	Not Aware at All	
High	0	0	0	0	0	0
Average	1	22	6	1	0	30
Neither high nor low	0	5	7	0	0	12
Low	0	2	3	1	0	6
Least	0	0	0	1	1	2
Total	1	29	16	3	1	50

Source: Field Survey

Interpretation

Here, we apply chi-square test to examine whether there exists any relationship between fishermen's perception on level of awareness of PMMSY and the level of benefits absorbed from the PMMSY. We make a null hypothesis that, there is no significant difference in the fishermen's perception on level of awareness of PMMSY and the level of benefits absorbed from the PMMSY. Under the null hypothesis, we calculate the value of chi-square statistic is: $\chi^2 = 75.05$. From the table of chi-square probabilities, we have, $\chi^2_{0.05}(16) = 26.296$. As the computed value 75.05 is more than the table value (26.296), the hypothesis is to be **rejected** at 5 per cent level of significance. So, we conclude that, there is significant difference in the fishermen's perception on level of awareness of PMMSY and the level of benefits absorbed from the PMMSY and they are independent on each other.

2. Relationship between Perception of the PMMSY and the level of satisfaction of PMMSY related to fisheries

Null Hypothesis: There is no significant difference in the fishermen's perception of the PMMSY and the level of satisfaction of PMMSY related to fisheries.

Table
Perception of the PMMSY and the level of satisfaction

Level of satisfaction	Perception of the PMMSY					Total
	Very Positive	Positive	Neutral	Negative	Very Negative	
Highly satisfied	0	2	0	0	0	2
Slightly satisfied	1	20	3	1	0	25
Neutral	0	5	12	0	0	18
Slightly dissatisfied	0	1	1	3	0	5
Highly dissatisfied	0	0	0	0	0	0
Total	1	29	16	4	0	50

Source: Field Survey

Interpretation

Here, we apply chi-square test to examine whether there exists any Relationship between Perception of the PMMSY and the level of satisfaction of PMMSY related to fisheries. We make a null hypothesis that, there is no significant difference in the fishermen's perception of the PMMSY and the level of satisfaction of PMMSY related to fisheries. Under the null hypothesis, we calculate the value of chi-square statistic is: $\chi^2 = 91.76$. From the table of chi-square probabilities, we have, $\chi^2_{0.05}(16) = 26.296$. As the computed value 91.76 is more than the table value (26.296), the hypothesis is to be **rejected** at 5 per cent level of significance. So, we conclude that, there is significant difference in the fishermen's perception of the PMMSY and the level of satisfaction of PMMSY related to fisheries and they are independent on each other.

3. Relationship between level of effectiveness of PMMSY in addressing the socio-economic needs and improving the livelihoods of fishermen and rating of effectiveness of implementation of PMMSY by the government bodies

Null Hypothesis: There is no significant difference in the fishermen's perception on the level of effectiveness in addressing the socio-economic needs and improving the livelihoods and the rating of effectiveness of implementation of PMMSY by the government bodies.

Table
Level of effectiveness and Rating of effectiveness

Rating of effectiveness	Level of effectiveness					Total
	Highly effective	Slightly effective	Neutral	Slightly ineffective	Highly ineffective	
Very Effective	1	1	0	0	0	2
Effective	0	18	5	2	0	25
Moderately Effective	1	6	10	0	0	17
Ineffective	0	2	1	2	0	5
Very Ineffective	0	0	0	0	0	0
Total	2	27	16	4	0	50

Source: Field Survey

Interpretation

Here, we apply chi-square test to examine whether there exists any Relationship between level of effectiveness of PMMSY in addressing the socio-economic needs and improving the livelihoods of fishermen and rating of effectiveness of implementation of PMMSY by the government bodies. We make a null hypothesis that, there is no significant difference in the fishermen's perception on the level of effectiveness in addressing

the socio-economic needs and improving the livelihoods and the rating of effectiveness of implementation of PMMSY by the government bodies. Under the null hypothesis, we calculate the value of chi-square statistic is: $\chi^2 = 72.97$. From the table of chi-square probabilities, we have, $\chi^2_{0.05} (16) = 26.296$. As the computed value 72.97 is more than the table value (26.296), the hypothesis is to be **rejected** at 5 per cent level of significance. So, we conclude that, there is significant difference in the fishermen's perception on the level of effectiveness in addressing the socio-economic needs and improving the livelihoods and the rating of effectiveness of implementation of PMMSY by the government bodies and they are independent on each other.

4. Relationship between the awareness of recent technological advancements and positively impacted on the fishing practices from the recent technological advancements

Null Hypothesis: There is no significant difference in the fishermen's perception on the awareness of recent technological advancements and positively impacted on the fishing practices from the recent technological advancements.

Table
Awareness of recent technological advancements and positive impact

Positive impact	Awareness of recent technological advancements					Total
	Very Familiar	Familiar	Somewhat Familiar	Not Very Familiar	Not Familiar at All	
Not at all	0	0	0	0	0	0
Slightly	0	19	2	0	0	21
Moderately	1	9	9	1	0	20
Very much	2	6	0	1	0	9
Extremely	0	0	0	0	0	0
Total	3	34	11	2	0	50

Source: Field Survey

Interpretation

Here, we apply chi-square test to examine whether there exists any Relationship between the awareness of recent technological advancements and positively impacted on the fishing practices from the recent technological advancements. We make a null hypothesis that, there is no significant difference in the fishermen's perception on the awareness of recent technological advancements and positively impacted on the fishing practices from the recent technological advancements. Under the null hypothesis, we calculate the value of chi-square statistic is: $\chi^2 = 72.26$. From the table of chi-square probabilities, we have, $\chi^2_{0.05} (16) = 26.296$. As the computed value 72.26 is more than the table value (26.296), the hypothesis is to be **rejected** at 5 per cent level of significance. So, we conclude that, there is significant difference in the fishermen's perception on the awareness of recent technological advancements and positively impacted on the fishing practices from the recent technological advancements and they are independent on each other.

5. Relationship between the level of perceived impact of PMMSY scheme on the overall livelihoods of fishermen and the level of satisfaction

Null Hypothesis: There is no significant difference in the fishermen's perception on the perception on the level of effectiveness of PMMSY scheme on the overall livelihoods and the level of satisfaction of PMMSY scheme.

Table
Perception on the level of effectiveness and the level of satisfaction

Level of satisfaction	Perception on the level of effectiveness					Total
	Highly effective	Slightly effective	Neutral	Slightly ineffective	Highly ineffective	
Highly satisfied	0	2	0	0	0	2
Slightly satisfied	2	20	3	1	0	26
Neutral	0	4	11	2	0	17
Slightly dissatisfied	0	2	2	1	0	5
Highly dissatisfied	0	0	0	0	0	0
Total	2	28	16	4	0	50

Source: Field Survey

Interpretation

Here, we apply chi-square test to examine whether there exists any Relationship between the level of perceived impact of PMMSY scheme on the overall livelihoods of fishermen and the level of satisfaction. We make a null hypothesis that, there is no significant difference in the fishermen's perception on the perception on the level of effectiveness of PMMSY scheme on the overall livelihoods and the level of satisfaction of PMMSY scheme. Under the null hypothesis, we calculate the value of chi-square statistic is: $\chi^2 = 85.09$. From the table of chi-square probabilities, we have, $\chi^2_{0.05} (16) = 26.296$. As the computed value 85.09 is more than the table value (26.296), the hypothesis is to be **rejected** at 5 per cent level of significance. So, we conclude that, there is significant difference in the fishermen's perception on the perception on the level of effectiveness of PMMSY

scheme on the overall livelihoods and the level of satisfaction of PMMSY scheme and they are independent on each other

6. Relationship between the level of barriers and challenges faced when accessing and utilizing the scheme

Null Hypothesis: There is no significant difference in the fishermen's perception on the level of barriers and challenges faced when accessing and utilizing the PMMSY scheme.

Table
Level of barriers and challenges faced when accessing and utilizing the scheme

Barriers and challenges	Level of perception					Total
	Maximum	Average	Neither high nor low	Low	Least	
Infrastructural and Technological Gap	6	18	19	7	0	50
Lack of Human Resource Development	0	23	14	11	2	50
Financial Inclusion and Social Protection	3	19	25	2	1	50
Regulatory and Legal Compliance	6	18	19	6	1	50
Total	5	78	77	26	4	200

Source: Field Survey

Interpretation

Here, we apply chi-square test to examine whether there exists any Relationship between the level of barriers and challenges faced when accessing and utilizing the scheme. We make a null hypothesis that, there is no significant difference in the fishermen's perception on the level of barriers and challenges faced when accessing and utilizing the PMMSY scheme. Under the null hypothesis, we calculate the value of chi-square statistic is: $\chi^2 = 52.14$. From the table of chi-square probabilities, we have, $\chi^2_{0.05}(12) = 21.03$. As the computed value 52.14 is more than the table value (21.03), the hypothesis is to be **rejected** at 5 per cent level of significance. So, we conclude that, there is significant difference in the fishermen's perception on the level of barriers and challenges faced when accessing and utilizing the PMMSY scheme and they are independent on each other.

7. Relationship between the levels of perceived impact of PMMSY scheme on the overall livelihoods of fishermen

Null Hypothesis: There is no significant difference in the fishermen's perception on the levels of perceived impact of PMMSY scheme on the overall livelihoods of fishermen.

Table
Levels of perceived impact of PMMSY scheme on the overall livelihoods

Impact of on the overall livelihoods	Level of impact					Total
	Maximum	Average	Neither high nor low	Low	Least	
Increased fish production and self-sufficiency	4	33	7	5	1	50
Enhanced income and livelihoods	9	15	19	2	0	50
Employment generation	11	18	15	5	1	50
Sustainable development	11	21	11	6	1	50
Empowerment of women	7	17	10	9	7	50
Export promotion	12	22	10	4	2	50
Total	54	131	72	31	15	300

Source: Field Survey

Interpretation

Here, we apply chi-square test to examine whether there exists any Relationship between the levels of perceived impact of PMMSY scheme on the overall livelihoods of fishermen. We make a null hypothesis that, there is no significant difference in the fishermen's perception on the levels of perceived impact of PMMSY scheme on the overall livelihoods of fishermen. Under the null hypothesis, we calculate the value of chi-square statistic is: $\chi^2 = 41.00$. From the table of chi-square probabilities, we have, $\chi^2_{0.05}(20) = 31.41$. As the computed value 41.00 is more than the table value (31.41), the hypothesis is to be **rejected** at 5 per cent level of significance. So, we conclude that, there is significant difference in the fishermen's perception on the levels of perceived impact of PMMSY scheme on the overall livelihoods of fishermen and they are independent on each other.

IV. Conclusion

The study aims to comprehensively evaluate fishermen's perceptions towards the Pradhan Mantri Matsya Sampada Yojana Scheme in Mangalore and Udupi. Through assessing awareness, understanding, participation, and utilization, the research seeks to provide insights into the effectiveness of government schemes in addressing socio-economic needs and improving livelihoods.

By examining variables such as awareness and knowledge, perception of government schemes, government policy and implementation, technology advancements in fisheries and aquaculture, and satisfaction with the government scheme, the study aims to paint a nuanced picture of the impact on fishermen and their families.

The conclusions drawn from this research are anticipated to shed light on the effectiveness of the schemes in enhancing income, job security, and overall livelihoods. Additionally, identifying barriers and challenges faced by fishermen in accessing and utilizing government initiatives can contribute valuable information for policy refinement and implementation improvements. The study's findings could serve as a basis for enhancing the targeted impact of fisheries and aquaculture development programs in the region.

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