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RESEARCH ARTICLE

A GEOGRAPHICAL ANALYSIS ON CROP FARMING AREA CONVERT INTO INLAND FISHERIES AND IT'S IMPACT ON SOCIO-ECONOMIC DEVELOPMENT WITH SPECIAL FOCUS TO NORTH 24 PARGANAS DISTRICT, WEST BENGAL

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ABSTRACT:

Land use pattern refers to the organization of land for various purposes. Farmers primarily use the land for agricultural activities, accounting for a significant portion of the nation's land area. Inland fisheries refer to commercial fishing activities conducted in freshwater environments. Some fishing practices involve the capture of fish that inhabit a natural body of water. In this article, a geographical analysis on crop farming area convert into inland fisheries and its impact on socio-economic development with special focus to North 24 Parganas District, West Bengal has been highlighted.

KEYWORDS: Agricultural, Crop Farming, Fisheries, Socio-Economic.

INTRODUCTION:

To ensure that agricultural planning at the state and district levels is aligned with agro-climatic conditions, technological availability, and natural resource accessibility; to better incorporate local agricultural and allied sector needs into the state's agricultural plan; and to incentivize the state to

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enhance public investment in agriculture and allied sectors. [1-3] By addressing yield gaps in critical activities through focused interventions, we aim to enhance returns for farmers in the agricultural and allied sectors. [4] A comprehensive strategy is necessary to ensure verifiable increases in agricultural and related sector output and productivity both in the short and long term. [5-6] The aim and rationale of the study was to a geographical analysis on crop farming area convert into inland fisheries and its impact on socio-economic development with special focus to North 24 Parganas District, West Bengal.

RESEARCH METHODOLOGY:

Research methodology encompasses the specific procedures or techniques employed to identify, select, organize, and analyse information pertaining to a subject.

Study Area: North 24 Parganas district, West Bengal (8 Gram Panchayats were selected from the district).

Variables of the Study:

Independent Variables: Socio-economic status.

Dependent Variables: Agricultural land, crop farming area, inland fisheries.

Research Design: Quantitative research design.

Sampling Plan: Simple random sampling plan.

Sample Size: 800.

Source of Data: Primary Data.

Method: The researcher was collected the samples (farmers) from the study area. Structured questionnaire sheet was provided in favour of the respondents (farmers). The sheets were properly filled up by the respondents & then these were collected for data analysis.

Research Tools: Structured Research Questionnaires.

DATA ANALYSIS, RESULTS, FINDINGS AND DISCUSSION:

Table 1. Farmer's distribution based on farming type of Eight Gram Panchayat:

Farming Type	GP I (N=100)	GP II (N=100)	GP III (N=100)	GP IV (N=100)	GP V (N=100)	GP VI (N=100)	GP VII (N=100)	GP VIII (N=100)
Agricultural farmer who lease his/her land for fishing	77	70	60	46	42	90	44	60
Agricultural Farmers	17	25	25	34	30	-	48	32
Other	6	5	15	20	28	10	08	08
Total	100	100	100	100	100	100	100	100

Table 2. Age group distribution of Eight Gram Panchayat:

Age Groups (Years)	GP I (N=100)	GP II (N=100)	GP III (N=100)	GP IV (N=100)	GP V (N=100)	GP VI (N=100)	GP VII (N=100)	GP VIII (N=100)
Less than 30	31	30	28	21	22	38	19	17
31-40	44	22	30	23	26	40	38	29
41-50	16	23	24	22	26	10	24	25
51-60	7	17	12	25	23	12	16	20
Greater than 60	2	8	6	9	3	-	3	09

Table 3. Caste of Eight Gram Panchayat:

Caste	GP I (N=100)	GP II (N=100)	GP III (N=100)	GP IV (N=100)	GP V (N=100)	GP VI (N=100)	GP VII (N=100)	GP VIII (N=100)
GEN	89	88	82	87	78	04	74	71
SC	03	08	05	04	16	87	16	18
ST	01	-	-	-	01	-	-	-
OBC	07	04	13	09	05	09	10	11

Table 4. Occupation:

Occupation	GP I (N=100)	GP II (N=100)	GP III (N=100)	GP IV (N=100)	GP V (N=100)	GP VI (N=100)	GP VII (N=100)	GP VIII (N=100)
Agriculture	18	22	27	32	29	17	19	07
Fishing	03	05	02	07	-	8	12	24
Business	34	31	29	13	19	22	17	27
Labour	24	27	33	29	7	37	39	22
Govt. Service	13	09	07	11	13	12	10	08
Other	08	06	02	08	32	04	03	12

Table 5. Education:

Education	GP I (N=100)	GP II (N=100)	GP III (N=100)	GP IV (N=100)	GP V (N=100)	GP VI (N=100)	GP VII (N=100)	GP VIII (N=100)
Illiterate	02	01	04	03	06	01	02	04
Primary	13	11	08	09	07	03	14	19
Secondary	24	27	21	19	28	21	31	17
Higher Secondary	39	37	49	48	40	52	37	43
Graduation & above	22	24	18	21	19	23	17	17

Table 6. Year of Fish Farming:

Year	GP I (N=100)	GP II (N=100)	GP III (N=100)	GP IV (N=100)	GP V (N=100)	GP VI (N=100)	GP VII (N=100)	GP VIII (N=100)
	N =78	N=71	N=59	N=47	N=42	N=89	N=43	N=61
Less than 5	16	11	23	07	03	18	13	21
05-10	23	29	18	19	26	29	23	27
10-15	13	14	12	10	07	24	7	13
Greater than 15	21	17	06	11	06	18	-	-

Table 7. Previous and Present Economic Status:

Gram Panchayats Code	Present Earn of capital from fishery land of agriculture land owners (approx)	Previously land owners earn money from agriculture and others (approx)
GP I	INR 800/- / Decimal	INR 250/- / Decimal
GP II	INR 750/- / Decimal	INR 200/- / Decimal
GP III	INR 800/- / Decimal	INR 280/- / Decimal
GP IV	INR 870/- / Decimal	INR 160/- / Decimal
GP V	INR 750/- / Decimal	INR 350/- / Decimal
GP VI	INR 900/- / Decimal	INR 250/- / Decimal
GP VII	INR 750/- / Decimal	INR 200/- / Decimal
GP VIII	INR 900/- / Decimal	INR 250/- / Decimal

Table 8. Profit Distribution:

Profit (Annual/ Farmer)	GP I (N=100)	GP II (N=100)	GP III (N=100)	GP IV (N=100)	GP V (N=100)	GP VI (N=100)	GP VII (N=100)	GP VIII (N=100)
	N =78	N=71	N=59	N=47	N=42	N=89	N=43	N=61
Less than INR 40,000/-	25	27	32	17	07	24	14	13
INR 40001/- to INR 60000/-	27	19	12	14	17	32	18	24
INR 60001/- to INR 100000/-	12	10	09	09	11	19	05	14
INR 100001/- to INR 150000/-	09	08	04	07	04	08	04	06
INR 150001/- above	05	07	02	-	03	06	02	04

CONCLUSION:

It is clear that shrimp and fish farming in brackish inland waters can significantly contribute to the socioeconomic development of a developing nation such as India. The current trend shows a decline in agricultural land and an increase in soil salinity due to the rapid expansion of brackish water shrimp and fishery farming. A significant decrease in crop productivity has been observed. The higher yields of shrimp and fishery farming compared to other agricultural practices are contributing to an increase in the average income of the population. Food grain availability is expected to remain stable in the near future; however, it is essential to cultivate brackish water shrimp and crops separately while also preserving fertile soils to maintain ecological and environmental balance. Consequently, economic activities such as brackish water shrimp farming and fish cultivation can contribute to the socioeconomic development of the studied regions.

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