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### Assessing habitat security among handloom enterprise households in Bankura district, West Bengal: A primary income source analysis

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#### Abstract

Habitat security, encompassing adequate clothing and shelter, is crucial for sustaining rural livelihoods, particularly among communities reliant on traditional crafts like handloom weaving in regions such as Bankura District, West Bengal, India. This study assesses habitat security among handloom enterprise households, focusing on clothing and housing components. Data collection utilized survey methods, incorporating primary and secondary data sources. Results reveal income group-wise expenditure patterns on clothing and housing, indicating a positive correlation between income and expenditure. Housing characteristics show prevalent brick walls and concrete floors, with significant proportions having separate kitchens and sanitary toilets. Access to basic amenities varies, with notable reliance on pond water and cow dung as fuel sources. Impediments include suboptimal kitchen and toilet facilities, highlighting the need for improved sanitation infrastructure. Policy implications underscore the importance of government schemes promoting sanitation and clean water access to enhance habitat security and overall well-being in handloom communities.

**Keywords:** Habitat security, livelihoods, improved sanitation infrastructure

#### Introduction

Habitat security stands as a cornerstone of human well-being, encompassing the fundamental provisions of adequate clothing and shelter, along with the associated resources essential for maintaining a healthy and sustainable living environment. In the context of rural communities, particularly those reliant on traditional crafts such as handloom weaving, ensuring habitat security becomes an imperative for fostering resilient livelihoods. This is especially true in regions like Bankura District in West Bengal, India, where handloom emerges as a primary source of income for numerous households.

#### Collection of data

Data have been collected following the Survey Method. At first, a primary schedule has been prepared on the basis of existing literature concerned and a pilot survey has been made randomly by personally interrogating some members of the sample size in order to examine the module of the Habitat Security of livelihood schedule. On the basis of primary investigation, addition and alteration has been made in primary schedule and in this way, preparation of schedule was finalized. Final data collection has been made by personally interviewing and interrogating the head of the households by visiting door to door strictly with the help of pre-tested survey schedule in the study area. The secondary information has been obtained both from the village development and block development board. Informal

interviews were carried out with the persons from the villages, gram Panchayet Samities and block offices on the way to gain their view and knowledge on different aspects of livelihood security.

#### Materials and Methods

**Questionnaire used for this aspects of livelihood security are given below**

##### Habitat Security

It contains two parts such as clothing and housing.

##### Clothing

1. Is there necessary clothing for household?
2. Is there any deficit amount (Rs.) required annually per household on clothing?
3. Housing
4. Is your residence nearby metal road?
5. Is the wall concrete?
6. Is the floor concrete?
7. Is the roof concrete?
8. Is the number of rooms in the house sufficient?
9. Does the house have a separate kitchen?
10. Does the house have a stored?
11. Does the house have sanitary toilet facilities?
12. Do you get pure drinking water?
13. Do you get clean and clear water for bathing and other household activities?
14. Is LPG, electricity or solar the household's source of

fuel?

15. Is electricity or solar the household's source of lighting?

### Health Security

1. If there is any illness or birth in the household, where is treatment usually done? (Government hospital/ Allopathic doctors/ Nursing home)
2. Are the children of your family given scheduled immunization vaccines?
3. Are the members of the household free from skin diseases?
4. Are the sample households being free from any severe illness or accident during the last 5 years?
5. Are the members of the household free from chronic disease?
6. Perception of the household regarding household's health security is fully or moderately secured?

At first, in each question, for the answer "Yes =1" or "No= 0" value is put up. Secondly, for each household and for each aspect of livelihood security, total value against the set of questions (individual value for each question is equal to either one or zero) is worked out.

### Results and Discussion

Habitat Security is defined as the access of individuals to adequate clothing, shelter and its related resources to ensure that they have a healthy and sanitary environment, protection from detrimental elements to enable safe and secure livelihoods. It has two components: A) Clothing B) Housing

#### Clothing

The Table.1 demonstrates the income group-wise and gender-wise annual average expenditure of the clothing purchased by sample households of enterprise -- handloom (as primary source of income) in Bankura District of West Bengal of INDIA (2015-16). From the table, it is seen that an average number of both male and female members per households are the highest in Group-3. In each group, average expenditure on clothing per household for male is higher than that of female, except in Group-1. Positive correspondence is observed between the income group size and the total average expenditure per household. A positive correspondence is observed between the income group size and the total average expenditure on clothing per household. The Table.2 shows the income group-wise annual average expenditure per household on clothing and deficit amount for fulfillment of the requirement of clothing of sample households of enterprise -- handloom (as primary source of income) in Bankura District of West Bengal of INDIA (2015-16). From the table, it is observed that annual average expenses per household on clothing has increased with the increase in the income size and deficit amount for fulfillment of the requirement of clothing obviously decreases with the increase in the income size.

#### Housing

The Table 3 indicates the income group-wise frequency distribution of sample households of enterprise -- handloom (as primary source of income) regarding the nature of the

house including the type of wall, type of floor and type of roof, in Bankura District of West Bengal of INDIA (2015-16). A major percentage (58.00 percent) of the households has brick walls followed by mud (38.00 percent). A major percentage (54.00 percent) of the households has concrete floor followed by mud (46.00 percent). 36 percent of the households have concrete roof followed by tiles (18 percent), asbestos (16 percent), thatched (16 percent) and tin (14 percent).

The Table.4 shows the income group-wise frequency distribution of sample households of enterprise -- handloom (as primary source of income) regarding availability of facilities in the house (kitchen, toilet, rooms., etc.) in Bankura District of West Bengal of INDIA (2015-16). It is seen that 68 percent of the households have a separate kitchen and 100 percent of the households have a toilet within its premises, out of which 62 percent is sanitary and 38 percent is local Kaccha. Average number of rooms per household is 2.80.

The Table.5 shows the frequency distribution of sample households of enterprise -- handloom (as primary source of income) on the basis of distance of the house from the important land mark (that is metal road, market, post office, bank and educational institution) in Bankura District of West Bengal of INDIA. Among the all-size classes, the maximum number (54.00 percent) of households is situated within the distance 1 km from the metal road. In case of the distance of the house from the market, maximum number households (56.00 percent) are situated in between greater than 5 km to 10 km distance from the market. Among the all-size classes, the maximum number (48.00 percent) of households is situated within the distance between greater than 1 to 5 km from the post office. The maximum number (40 percent) of households is situated both in within the distance greater 1 km to 5 km and greater 5 km to 10 km from the bank. The maximum number (50 percent) of households is situated within the distance up to 1 km from the educational institution.

The Table.6 shows the income group-wise frequency distribution of sample households of enterprise -- handloom (as primary source of income) regarding sources of water and power and nature of fuel in Bankura District of West Bengal of INDIA (2015-16). From the table, it is noticed that on an average, the source of drinking water for 46 percent of the households is tube well water, 38 percent from tap and 18 percent from well. As a whole, the sample households have the highest usage of water for bathing and other activities from pond water (48.00 percent), followed by tube well (36.00 percent), well (14.00 percent), river (8 percent) and tap (2 percent). The nature of fuel for 44 percent of the households is cow dung cake, 36 percent from LPG, 14 percent from coal dust, 4 percent woods and 2 percent from leaves. Here, it is clearly understood that the main source of power in the households is electricity. None of the households have any other source of power.

#### Impediments

About 32 percent of the households use balcony, verandah and corridor as their kitchen. About 38 percent of the households from the enterprise -- handloom have local kaccha toilet within its premises. Most of the households prefer pond water from their bathing and other activities.

Majority of the households uses cow-dung cake as the nature of fuel.

**Policy Implications:** The people should be educated about the government schemes with 100 percent household toilet and rural sanitation coverage. Government schemes like Swachh Bharat Mission need to be implemented at a larger

scale. The people should be educated about ways to reduce the use of pond water and increase the use of tube well, tap or well water for their bathing and other activities. This is because of the sources of water from tube well, tap or well is safer for health than that of river or pond. Government schemes like Pradhan Mantri Ujjwala Yojana need to be implemented at a larger scale to distribute LPG connections.

**Table 1:** Income group-wise and Gender-wise Annual Average Expenditure of the Clothing Purchased by Sample Households of Enterprise -- Handloom (as Primary Source of Income) in Bankura District of West Bengal of INDIA (2015-16 (Rs. per household p.a.)

Income Group	Average number of members per household		Average expenditure on clothing per household		Total Annual average clothing expenditure per household
	Male	Female	Male	Female	
Group-1 (n= 11)	1.64	1.27	810.23	943.41	1,753.64
Group-2 (n= 20)	2.15	1.60	948.47	928.33	1,876.80
Group-3 (n= 19)	2.47	2.16	1,541.15	1,315.85	2,857.21
Group-4 (n= 0)	-	-	-	-	-
Group-5 (n= 0)	-	-	-	-	-
Total (n= 50)	2.16	1.74	1,099.95	1,062.60	2,162.55

n= Number of sample households

**Table 2:** Income group-wise Annual Average Expenditure per Household on Clothing and Deficit Amount for Fulfillment of the Requirement of Clothing of Sample Households of Enterprise -- Handloom (as Primary Source of Income) in Bankura District of West Bengal of INDIA (2015-16) (Rs. per household p.a.)

Income Group	Total Annual average expenditure per household on clothing	Annual average deficit amount required per household
Group-1 (n= 11)	1,753.64	1,590.22
Group-2 (n= 20)	1,876.80	1,056.67
Group-3 (n= 19)	2,857.21	920.56
Group-4 (n= 0)	-	-
Group-5 (n= 0)	-	-
Total (n= 50)	2,162.55	1,189.15

n= Number of sample households

**Table 3:** Income group-wise frequency distribution of sample households of enterprise -- handloom (as primary source of income) regarding the nature of the house in Bankura District of West Bengal of INDIA (2015-2016)

Income Group	Nature of House															
	Type of wall					Type of floor					Type of roof					
	Mud	Brick	Bamboo	Tin	Total	Concrete	Mud	Marble	Tiles	Total	Thatched	Asbestos	Tin	Concrete	Tiles	Total
Group-1 (n= 11)	5 (45.45)	5 (45.45)	0 (0.00)	1 (9.09)	11 (100.00)	5 (45.45)	6 (54.55)	0 (0.00)	0 (0.00)	11 (100.00)	3 (27.27)	2 (18.18)	2 (18.18)	3 (27.27)	1 (9.09)	11 (100.00)
Group-2 (n= 20)	6 (30.00)	13 (65.00)	0 (0.00)	1 (5.00)	20 (100.00)	12 (60.00)	8 (40.00)	0 (0.00)	0 (0.00)	20 (100.00)	2 (10.00)	4 (20.00)	2 (10.00)	6 (30.00)	6 (30.00)	20 (100.00)
Group-3 (n= 19)	8 (42.11)	11 (57.89)	0 (0.00)	0 (0.00)	19 (100.00)	10 (52.63)	9 (47.37)	0 (0.00)	0 (0.00)	19 (100.00)	3 (15.79)	2 (10.53)	3 (15.79)	9 (52.94)	2 (47.37)	19 (100.00)
Group-4 (n= 0)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Group-5 (n= 0)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total (n= 50)	19 (38.00)	29 (58.00)	0 (0.00)	2 (4.00)	50 (100.00)	27 (54.00)	23 (46.00)	0 (0.00)	0 (0.00)	50 (100.00)	8 (16.00)	8 (16.00)	7 (14.00)	18 (36.00)	9 (18.00)	50 (100.00)

Figures in parentheses indicate the percentages to the total (row-wise in three parts) n= No. of sample households

**Table 4:** income group-wise frequency distribution of sample households of enterprise -- handloom (as primary source of income) regarding availability of facilities in the House (Kitchen, Toilet, Rooms. etc.)

Income Group	Does the house have a separate kitchen			Does the house have a toilet within its premises				Number of rooms (Avg.)
	Yes	No	Total	Sanitary	Local Kaccha	No	Total	
Group-1 (n= 11)	5 (45.45)	6 (54.55)	11 (100.00)	6 (54.55)	5 (45.45)	0 (0.00)	11 (100.00)	2.18
Group-2 (n= 20)	15 (75.00)	5 (25.00)	20 (100.00)	11 (55.00)	9 (45.00)	0 (0.00)	20 (100.00)	2.70
Group-3 (n= 19)	14 (73.68)	5 (26.32)	19 (100.00)	14 (73.68)	5 (26.32)	0 (0.00)	19 (100.00)	3.26
Group-4 (n= 0)	-	-	-	-	-	-	-	-
Group-5 (n= 0)	-	-	-	-	-	-	-	-
Total (n= 50)	34 (68.00)	16 (32.00)	50 (100.00)	31 (62.00)	19 (38.00)	0 (0.00)	50 (100.00)	2.80

Figures in parentheses indicate the percentages to the total (row-wise in two parts)  
n= No. of sample households

**Table 5:** Frequency distribution of sample households of enterprise -- handloom (as primary source of income) on the basis of distance of the house from the important land mark in Bankura District of West Bengal of INDIA (2015-16)

Income Group	Distance of the house from (km)																			
	Metal Road				Market				Post Office				Bank				Educational Institution			
	Up to 1 km	>1-5 km	>5- 10 km	> 10 km	Up to 1 km	>1-5 km	>5- 10 km	> 10 km	Up to 1 km	>1-5 km	>5- 10 km	> 10 km	Up to 1 km	>1-5 km	>5- 10 km	> 10 km	Up to 1 km	>1-5 km	>5- 10 km	> 10 km
Group-1 (n= 11)	7 (25.93) (63.64) <sup>1</sup>	4 (20.00) (36.36) <sup>1</sup>	0 (0.00) (0.00) <sup>1</sup>	0 (0.00) (0.00) <sup>1</sup>	1 (33.33) (9.09) <sup>1</sup>	5 (33.33) (45.45) <sup>1</sup>	5 (17.86) (45.45) <sup>1</sup>	0 (0.00) (0.00) <sup>1</sup>	4 (26.67) (36.36) <sup>1</sup>	3 (12.50) (27.27) <sup>1</sup>	3 (30.00) (27.27) <sup>1</sup>	1 (100.00) (9.09) <sup>1</sup>	1 (16.67) (9.09) <sup>1</sup>	5 (25.00) (45.45) <sup>1</sup>	2 (10.00) (18.18) <sup>1</sup>	3 (75.00) (27.27) <sup>1</sup>	4 (16.00) (36.36) <sup>1</sup>	4 (23.53) (36.36) <sup>1</sup>	3 (37.50) (27.27) <sup>1</sup>	0 (0.00) (0.00) <sup>1</sup>
Group-2 (n= 20)	9 (33.33) (45.00) <sup>1</sup>	9 (45.00) (45.00) <sup>1</sup>	2 (66.67) (10.00) <sup>1</sup>	0 (0.00) (0.00) <sup>1</sup>	0 (0.00) (0.00) <sup>1</sup>	7 (46.67) (35.00) <sup>1</sup>	12 (42.86) (60.00) <sup>1</sup>	1 (25.00) (5.00) <sup>1</sup>	5 (33.33) (25.00) <sup>1</sup>	11 (45.83) (55.00) <sup>1</sup>	4 (40.00) (20.00) <sup>1</sup>	0 (0.00) (0.00) <sup>1</sup>	3 (50.00) (15.00) <sup>1</sup>	7 (35.00) (35.00) <sup>1</sup>	9 (45.00) (45.00) <sup>1</sup>	1 (25.00) (5.00) <sup>1</sup>	7 (28.00) (35.00) <sup>1</sup>	9 (52.94) (45.00) <sup>1</sup>	4 (50.00) (20.00) <sup>1</sup>	0 (0.00) (0.00) <sup>1</sup>
Group-3 (n= 19)	11 (40.74) (57.89) <sup>1</sup>	7 (35.00) (36.84) <sup>1</sup>	1 (33.33) (5.26) <sup>1</sup>	0 (0.00) (0.00) <sup>1</sup>	2 (66.67) (10.53) <sup>1</sup>	3 (20.00) (15.79) <sup>1</sup>	11 (39.29) (57.89) <sup>1</sup>	3 (75.00) (15.79) <sup>1</sup>	6 (40.00) (31.58) <sup>1</sup>	10 (41.67) (52.63) <sup>1</sup>	3 (30.00) (15.79) <sup>1</sup>	0 (0.00) (0.00) <sup>1</sup>	2 (33.33) (10.53) <sup>1</sup>	8 (40.00) (42.11) <sup>1</sup>	9 (45.00) (47.37) <sup>1</sup>	0 (0.00) (0.00) <sup>1</sup>	14 (56.00) (73.68) <sup>1</sup>	4 (12.50) (23.53) <sup>1</sup>	1 (12.50) (5.26) <sup>1</sup>	0 (0.00) (0.00) <sup>1</sup>
Group-4 (n= 0)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Group-5 (n= 0)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total (n= 50)	27 (100.00) (54.00) <sup>1</sup>	20 (100.00) (40.00) <sup>1</sup>	3 (100.00) (6.00) <sup>1</sup>	0 (0.00) (0.00) <sup>1</sup>	3 (100.00) (6.00) <sup>1</sup>	15 (100.00) (30.00) <sup>1</sup>	28 (100.00) (56.00) <sup>1</sup>	4 (8.00) (8.00) <sup>1</sup>	15 (100.00) (30.00) <sup>1</sup>	24 (100.00) (48.00) <sup>1</sup>	10 (100.00) (20.00) <sup>1</sup>	1 (100.00) (2.00) <sup>1</sup>	6 (100.00) (12.00) <sup>1</sup>	20 (100.00) (40.00) <sup>1</sup>	20 (100.00) (40.00) <sup>1</sup>	4 (100.00) (8.00) <sup>1</sup>	25 (100.00) (50.00) <sup>1</sup>	17 (100.00) (34.00) <sup>1</sup>	8 (100.00) (16.00) <sup>1</sup>	0 (0.00) (0.00) <sup>1</sup>

N.B: Figures in parentheses indicate the percentage to the total (column-wise in five parts)

Figures in parentheses in superscript indicate the percentage to the number of sample households (n) (row- wise in five parts)

n= Number of sample households

**Table 6:** Income Group-wise Frequency Distribution of Sample Households of Enterprise -- Handloom (as Primary Source of Income) Regarding Sources of water and power and Nature of Fuel in Bankura District of West Bengal of India (2015-16)

Income Group	Source of water											Nature of Fuel								Source of Power		
	Drinking						Bathing and other activities					wood	leaves	straw	Cow-dung cake	Coal dust	kerosene	electricity	LPG	electricity	others	
	Tap	Tube well	Well	River	Pond	Others	Tap	Tube well	Well	River	Pond	Others										
Group-1 (n= 11)	4 (36.36)	5 (45.45)	2 (18.18)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	3 (27.27)	0 (0.00)	0 (0.00)	8 (72.72)	0 (0.00)	2 (18.18)	1 (9.09)	0 (0.00)	4 (36.36)	2 (18.18)	0 (0.00)	0 (0.00)	2 (18.18)	11 (100.00)	0 (0.00)
Group-2 (n= 20)	8 (40.00)	9 (45.00)	3 (15.00)	0 (0.00)	0 (0.00)	0 (0.00)	1 (5.00)	6 (30.00)	5 (25.00)	0 (0.00)	8 (40.33)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	10 (50.00)	2 (10.00)	0 (0.00)	0 (0.00)	8 (40.00)	20 (100.00)	0 (0.00)
Group-3 (n= 19)	7 (36.84)	9 (47.37)	3 (15.78)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	9 (46.37)	2 (10.53)	0 (0.00)	8 (42.11)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	8 (42.11)	3 (15.79)	0 (0.00)	0 (0.00)	8 (42.11)	19 (100.00)	0 (0.00)
Group-4 (n= 0)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Group-5 (n= 0)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total (n= 50)	19 (38.00)	23 (46.00)	8 (16.00)	0 (0.00)	0 (0.00)	0 (0.00)	1 (2.00)	18 (36.00)	7 (14.00)	4 (8.00)	24 (48.00)	0 (0.00)	2 (4.00)	1 (2.00)	0 (0.00)	22 (44.00)	7 (14.00)	0 (0.00)	0 (0.00)	18 (36.00)	50 (100.00)	0 (0.00)

Figures in parentheses indicate the percentage to the total number of sample households (n) in groups and as a whole (row-wise in four parts)

n= Number of sample households

### Conclusion

The study underscores the critical importance of habitat security, comprising adequate clothing and shelter, for fostering resilient livelihoods among rural communities, particularly those reliant on traditional crafts like handloom weaving. Through meticulous data collection methods, including surveys and interviews, the study provides insights into the clothing and housing conditions of households in Bankura District, West Bengal, India, where handloom serves as a primary income source. The findings reveal income group-wise patterns in clothing and housing expenditure, highlighting the need for tailored interventions to address disparities. While significant proportions of households have access to basic amenities such as separate kitchens and sanitary toilets, challenges remain, including suboptimal kitchen and toilet facilities, reliance on pond water, and fuel sources like cow dung. It emphasizes the imperative for policy interventions to improve sanitation infrastructure, promote clean water access, and enhance living conditions in handloom communities. Initiatives such as the Swachh Bharat Mission and Pradhan Mantri Ujjwala Yojana hold promise in addressing these challenges, necessitating broader implementation at scale to ensure comprehensive habitat security and improved well-being for rural households. By prioritizing habitat security, policymakers can contribute to the resilience and sustainability of livelihoods in Bankura District and similar regions, thereby fostering inclusive development and prosperity.

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