VILLAGE SURVEY STUDY IN WEST BENGAL

(SAHAJAPUR VILLAGE IN BIRBHUM DISTRICT)

Bidhan Chandra Roy Debanshu Majumder



Study sponsored by Ministry of Agriculture and Farmers Welfare Government of India, New Delhi

Agro-Economic Research Centre
(For the States of West Bengal, Sikkim and Andaman & Nicobar Islands)
Visva-Bharati, Santiniketan
West Bengal
2021

Village Survey Study in West Bengal (Sahajapur village in Birbhum District)

Bidhan Chandra Roy Debanshu Majumder



Study sponsored by Ministry of Agriculture and Farmers Welfare Government of India, New Delhi

Agro-Economic Research Centre
(For the states of West Bengal, Sikkim and Andaman & Nicobar Islands)
Visva-Bharati, Santiniketan
West Bengal
2021

Citation:

Roy, B.C. and Majumder, D. (2021). Village Survey Study in West Bengal (Sahajapur village in Birbhum District); Study No. 192 ; Agro-Economic Research Centre (For the states of West Bengal, Sikkim and Andaman & Nicobar Islands) Visva-Bharati, Santiniketan, West Bengal; pp –XVI+173

Research Team

Dr. B. C. Roy

Mr. D. Majumder

Mr. S. Chakraborty

Mr. S. Adak

Mr. R. Mukherjee

Mr. M. Hassan

Digitization of data

Munshi A. Khaleque Mr. N. Maji

Data Analysis and Report writing

Dr. B. C. Roy

Mr. D. Majumder

Logistic and Secretarial Services

Mr. D. Mondal

Mr. D. S. Das

Team Leader

Prof. Bidhan Chandra Roy

State and Central Project coordinator

Prof. Bidhan Chandra Roy, Hony. Director, Agro-Economic Research Centre (For the states of West Bengal, Sikkim and Andaman & Nicobar Islands) Visva-Bharati, Santiniketan, West Bengal, 731235.

Disclaimer: AERC Report No. © Agro-Economic Research Centre, Visva-Bharati, Santiniketan, West Bengal. This is a reviewed publication but the opinions and recommendations in the report are exclusively of the author(s) and this report has been prepared in good faith on the basis of information available and feedback given by the stakeholders at the date of survey.

Preface

The present study entitled "Village Survey Study in West Bengal (Sahajapur village in Birbhum District)" was undertaken at the instance the Directorate of Economics and Statistics, Ministry of Agriculture and Farmers Welfare, Government of India, Krishi Bhawan, New Delhi as a coordinated study, where the task of coordination has been entrusted with the AERC, Visva-Bharati, Santiniketan and the undersigned was responsible for formulating the study, preparation of the questionnaire, tabulation and chapter design.

Villages in general have witnessed a great deal of social, political and economic transformation in course of the post independent development practices. However, a strait jacket development plan did not materialize into a booming development of the rural sector for the very fact that each village had its own specificities and diversity and reacted to all these development impetus with a complex reality. It became clear that the complex relations within a village society could not be captured effectively by the data generated by the various government departments and data collecting organizations such as NSSO. Small scale and intensive primary village surveys were called for to get the feel of village dynamics. It is in this context the present village study attempt to enquire into the dynamics of the village with the passage of time taking into account both the endogenous and exogenous factors that influences the rural dynamics.

The study has been primarily entrusted with Mr. D. Majumder along with the undersigned, while Munshi A. Khaleque, Mr. D. Mondal, Mr. S. Chakraborty, Mr. S. Adak, Mr. R. Mukherjee, and Mr. M. Hassan provided immensely valuable assistance in data collection and tabulation under the active supervision of the undersigned. Extensive support was obtained from Mr. N. Maji and Munshi A. Khaleque in course of data digitization. Mr. D. Mondal and Mr. D. S. Das provided logistic and secretarial services. I offer my deepest thanks to all of them.

On behalf of this centre, the undersigned takes the opportunity to thank all the participating centres for undertaking such an important study. Last but not the least; we thank all our respondents in Sahajapur who ungrudgingly responded to our toiling queries in course of the survey.

Sd/-

(B. C. Roy)
Santiniketan Professor & Hony. Director
Date: 31.12.2021 A.E.R.C., Visva-Bharati

Acknowledgements
(Special thanks to the following Villagers &Officials)

| Villagers (Sahajapur) | Officials (Sahajapur) |
|-----------------------------|---|
| Mr. Subrata Kumar Mukherjee | Dr. Koyel Brahma, ADA, Bolpur-Sriniketan Block |
| Mr. Dhaneswar Mukherjee | Mr. Prasanta Banerjee, Secretary, Sian-Muluk GP |
| Mr. Mrinmoy Bairagya | Ms. Purnima Mete, Pradhan, Gram Panchayat |
| Mr. Nabam Kumar Ghosh | Mr. Mafijul Sk, Upa-pradhan, Gram Panchayat |
| Ms. Mahuli Besra | Ms. Asha Mahuli, Member, Gram Panchayat |
| Mr. Kiriti Bhusan Pal | Mr. Asim Sen, KPS, Bolpur-Sriniketan Block |
| Mr. Rabindranath Pal | Ms. Amita Mukherjee, ICDS Worker |
| Mr. Sunil Mondal | Ms. Jyotsna Laha, ICDS Worker |
| Mr. Dhanu Lohar | Ms. Suchitra Hazra, ICDS Worker |
| Mr. Dhananjoy Lohar | Ms. Anita Ghosh, ICDS Worker |
| Ms. Dolon Hembram | Mr. Sadral Ala, G. P. Coordinator |

CONTENTS

| 1.Introduction | |
|---|----|
| 1.1 Introduction | 1 |
| 1.1.1 Need and scope of the present study | 1 |
| 1.1.2 Objectives of the present study | 3 |
| 1.2 Background Information | 3 |
| 1.2.1 Background information about the survey | 3 |
| 1.2.2 Brief review of the earlier survey | 4 |
| 1.2.3 Historical profile of the village | 6 |
| 1.3 Review of Literature | 7 |
| 1.4 Scheme of the Chapters | 9 |
| 2. Methodology | 10 |
| 2.1 Definitions and Concepts | 10 |
| 2.2 Data Base | 12 |
| 2.3 Sampling Design | 12 |
| 2.3.1 Criteria for selection of the village | 12 |
| 2.3.2 Criteria for selection of households | 15 |
| 2.4 Survey Approach | 15 |
| 2.4.1 For village level information | 16 |
| 2.4.2 For group level information | 16 |
| 2.4.3 For household level information | 17 |
| 2.5 Dimensions Covered | 17 |
| 2.6 Analytical Tools | 17 |
| 2.6.1 Growth rates | 17 |
| 2.6.2 Percentage change | 18 |
| 2.6.3 Livelihood sensitivity matrix | 18 |
| 2.6.4 Diversification indices | 18 |
| 2.6.5 Gini co-efficient & Lorenz curve | 19 |
| 2.6.6 Body mass index | 19 |
| 2.6.7 ASER toolkit for reading and arithmetic competency | 20 |
| 2.7 Limitations of the Study | 22 |
| 3. An Overview of Study Village | 23 |
| 3.1 Village Profile | 23 |
| 3.1.1 Geographical & administrative location of the village | 23 |
| 3.1.2 Rainfall and Climate | 23 |
| 3.1.3 Soil | 25 |
| 3.1.4 Communication: Telecommunications | 26 |
| 3.1.5 Transportation facilities: Road/Rail/Others | 26 |
| 3.1.6 Natural resources: Forest/Rivers/Pond/Wells/Flora & Fauna | 26 |
| 3.1.7 Demographic Profile of the Village | 27 |
| 3.1.7.1 People | 27 |
| 3.1.7.2 Religion and caste | 28 |

| 3.1.7.3 Village settlement pattern | 29 |
|---|----|
| 3.1.7.4 Literacy | 30 |
| 3.1.7.5 Poverty | 30 |
| 3.2 Livelihood/Employment and Migration Status | 30 |
| 3.2.1 Livelihood pattern/types | 30 |
| 3.2.2 Primary/Secondary/Tertiary livelihoods | 31 |
| 3.2.3 Pattern of migration | 33 |
| 3.3 Agriculture Status of the Village | 34 |
| 3.3.1 Land utilization pattern | 34 |
| 3.3.2 Irrigation | 35 |
| 3.3.3 Cropping pattern | 36 |
| 3.3.4 Livestock resources (Cattles/Birds/Others) | 36 |
| 3.3.5 Land tenure system and land reform measures | 37 |
| 3.4 Developmental Institutions & Infrastructure | 37 |
| 3.4.1 Panchayat | 37 |
| 3.4.2 Co-operative Society | 37 |
| 3.4.3 Schools | 37 |
| 3.4.4 Financial Institutions | 37 |
| 3.4.5 Social organizations (Clubs/Society/SHG/etc.) | 38 |
| 3.5 Village Infrastructure | 38 |
| 3.5.1 Market/Hat | 38 |
| 3.5.2 Post Office | 38 |
| 3.5.3 Health facilities | 38 |
| 3.5.4 Electricity | 39 |
| 3.5.5 Drinking Water Supply | 39 |
| 3.5.6 PDS | 39 |
| 3.6 Cultural Profile of the Village | 39 |
| 3.6.1 Fairs and festivals | 39 |
| 3.6.2 Temples/Mosques/Churches etc | 40 |
| 3.6.3 Dress and ornaments | 40 |
| 3.6.4 Languages | 40 |
| 3.6.5 Food habits | 41 |
| 3.6.6 Caste systems & rituals/untouchability | 41 |
| 3.6.7 Dowry system | 41 |
| 3.6.8 Political establishments & openness | 41 |
| 3.7 Others | 42 |
| 3.7.1 Library | 42 |
| 3.7.2 ICDS centre | 42 |
| 3.7.3 Tube wells/Piped water supply | 42 |
| 3.7.4 Agro-processing (Mills/forms/factories) | 42 |
| 3.7.5 Play grounds | 43 |
| 3.7.6 Illegal activities | 43 |
| 3.7.7 Government schemes (Name & coverage) | 43 |
| 3.8 Uniqueness of the Village | 45 |
| 4. Social Dynamics | 46 |

| 4.1 Population and Households 4.2 Sex Composition and Age Distribution 4.3 Caste/religion wise Distribution 4.4 Literacy Pattern by Sex 4.5 Enrolment and Drop outs in Different Education Level (gender-wise) | 46 48 |
|--|--|
| 4.3 Caste/religion wise Distribution 4.4 Literacy Pattern by Sex 4.5 Enrolment and Drop outs in Different Education Level (gender-wise) | 48 |
| 4.4 Literacy Pattern by Sex 4.5 Enrolment and Drop outs in Different Education Level (gender-wise) | |
| 4.4 Literacy Pattern by Sex 4.5 Enrolment and Drop outs in Different Education Level (gender-wise) | 52 |
| | 52 |
| A C A DI / DDI Di | 53 |
| 4.6 APL/BPL wise Distribution | 55 |
| 4.7 Birth and Deaths | 56 |
| 4.8 Quality of Basic Educations (ASER Toolkit) | 56 |
| 4.9 Child Nutrition (BMI) | 60 |
| 4.10 Access to Basic Amenities and Changes Therein | 61 |
| 4.11 Participation, Inclusiveness and Empowerment | 65 |
| 4.12 Perception of Various Groups about Different Changes in the Village | 66 |
| 4.12.1 Rigidity in caste system | 66 |
| 4.12.2 Gender bias/Women empowerment | 66 |
| 4.12.3 Political bias or deprivation | 67 |
| · | 68 |
| 5. Economic System | 00 |
| 5.1 Livelihood and Employment | 68 |
| 5.1.1 Labour force and workforce distribution and changes therein | 68 |
| 5.1.2 Livelihood pattern and distribution | 69 |
| 5.1.2.1 Livelihood pattern | 69 |
| 5.1.2.2 Livelihood diversification | 71 |
| 5.1.2.3 Shift in livelihood pattern | 72 |
| 5.1.3 Pattern of migration and changes therein | 72 |
| 5.2 Agrarian System | 73 |
| 5.2.1 Distribution of land ownership and changes therein | 73 |
| 5.2.2 Major land tenure system in the village and changes therein | 74 |
| | |
| 5.2.3 Operational holding and size distribution (including changes therein) | 75 |
| 5.2.3 Operational holding and size distribution (including changes therein) 5.2.4 Land utilization and changes therein | 75 77 |
| 5.2.4 Land utilization and changes therein | F. S. S. S. |
| | 77 |
| 5.2.4 Land utilization and changes therein 5.2.5 Major farming system in the village and changes therein | 77 78 |
| 5.2.4 Land utilization and changes therein 5.2.5 Major farming system in the village and changes therein 5.2.6 Cropping pattern and changes therein | 77 78 79 |
| 5.2.4 Land utilization and changes therein 5.2.5 Major farming system in the village and changes therein 5.2.6 Cropping pattern and changes therein 5.2.6.1 Cropping pattern | 77 78 79 79 |
| 5.2.4 Land utilization and changes therein 5.2.5 Major farming system in the village and changes therein 5.2.6 Cropping pattern and changes therein 5.2.6.1 Cropping pattern 5.2.6.2 Crop diversification 5.2.6.3 Shift in cropping pattern | 77 78 79 79 80 |
| 5.2.4 Land utilization and changes therein 5.2.5 Major farming system in the village and changes therein 5.2.6 Cropping pattern and changes therein 5.2.6.1 Cropping pattern 5.2.6.2 Crop diversification 5.2.6.3 Shift in cropping pattern 5.2.7 Irrigated area by sources and changes therein | 77 78 79 79 80 81 |
| 5.2.4 Land utilization and changes therein 5.2.5 Major farming system in the village and changes therein 5.2.6 Cropping pattern and changes therein 5.2.6.1 Cropping pattern 5.2.6.2 Crop diversification 5.2.6.3 Shift in cropping pattern 5.2.7 Irrigated area by sources and changes therein 5.2.8 Average yield of different crops and changes therein | 77 78 79 79 80 81 82 |
| 5.2.4 Land utilization and changes therein 5.2.5 Major farming system in the village and changes therein 5.2.6 Cropping pattern and changes therein 5.2.6.1 Cropping pattern 5.2.6.2 Crop diversification 5.2.6.3 Shift in cropping pattern 5.2.7 Irrigated area by sources and changes therein | 77 78 79 79 80 81 82 84 |
| 5.2.4 Land utilization and changes therein 5.2.5 Major farming system in the village and changes therein 5.2.6 Cropping pattern and changes therein 5.2.6.1 Cropping pattern 5.2.6.2 Crop diversification 5.2.6.3 Shift in cropping pattern 5.2.7 Irrigated area by sources and changes therein 5.2.8 Average yield of different crops and changes therein 5.2.9 Average value of input use per acre and changes therein 5.2.10 Distribution of livestock resources and changes therein | 77 78 79 79 80 81 82 84 |
| 5.2.4 Land utilization and changes therein 5.2.5 Major farming system in the village and changes therein 5.2.6 Cropping pattern and changes therein 5.2.6.1 Cropping pattern 5.2.6.2 Crop diversification 5.2.6.3 Shift in cropping pattern 5.2.7 Irrigated area by sources and changes therein 5.2.8 Average yield of different crops and changes therein 5.2.9 Average value of input use per acre and changes therein 5.2.10 Distribution of livestock resources and changes therein 5.2.11 Tools, implements and machinery use in agriculture | 77 78 79 79 80 81 82 84 84 |
| 5.2.4 Land utilization and changes therein 5.2.5 Major farming system in the village and changes therein 5.2.6 Cropping pattern and changes therein 5.2.6.1 Cropping pattern 5.2.6.2 Crop diversification 5.2.6.3 Shift in cropping pattern 5.2.7 Irrigated area by sources and changes therein 5.2.8 Average yield of different crops and changes therein 5.2.9 Average value of input use per acre and changes therein 5.2.10 Distribution of livestock resources and changes therein 5.2.11 Tools, implements and machinery use in agriculture 5.2.12 Production and disposal of farm outputs | 77 78 79 79 80 81 82 84 84 85 |
| 5.2.4 Land utilization and changes therein 5.2.5 Major farming system in the village and changes therein 5.2.6 Cropping pattern and changes therein 5.2.6.1 Cropping pattern 5.2.6.2 Crop diversification 5.2.6.3 Shift in cropping pattern 5.2.7 Irrigated area by sources and changes therein 5.2.8 Average yield of different crops and changes therein 5.2.9 Average value of input use per acre and changes therein 5.2.10 Distribution of livestock resources and changes therein 5.2.11 Tools, implements and machinery use in agriculture 5.2.12 Production and disposal of farm outputs 5.2.13 Prevalent marketing channels and procurement arrangements | 77 78 79 79 80 81 82 84 84 85 86 |
| 5.2.4 Land utilization and changes therein 5.2.5 Major farming system in the village and changes therein 5.2.6 Cropping pattern and changes therein 5.2.6.1 Cropping pattern 5.2.6.2 Crop diversification 5.2.6.3 Shift in cropping pattern 5.2.7 Irrigated area by sources and changes therein 5.2.8 Average yield of different crops and changes therein 5.2.9 Average value of input use per acre and changes therein 5.2.10 Distribution of livestock resources and changes therein 5.2.11 Tools, implements and machinery use in agriculture 5.2.12 Production and disposal of farm outputs 5.2.13 Prevalent marketing channels and procurement arrangements 5.3 Income, Consumption and Asset profile | 77 78 79 79 80 81 82 84 84 85 86 87 |
| 5.2.4 Land utilization and changes therein 5.2.5 Major farming system in the village and changes therein 5.2.6 Cropping pattern and changes therein 5.2.6.1 Cropping pattern 5.2.6.2 Crop diversification 5.2.6.3 Shift in cropping pattern 5.2.7 Irrigated area by sources and changes therein 5.2.8 Average yield of different crops and changes therein 5.2.9 Average value of input use per acre and changes therein 5.2.10 Distribution of livestock resources and changes therein 5.2.11 Tools, implements and machinery use in agriculture 5.2.12 Production and disposal of farm outputs 5.2.13 Prevalent marketing channels and procurement arrangements 5.3 Income, Consumption and Asset profile 5.3.1 Distribution of households by income level | 77 78 79 79 80 81 82 84 85 86 87 88 |
| 5.2.4 Land utilization and changes therein 5.2.5 Major farming system in the village and changes therein 5.2.6 Cropping pattern and changes therein 5.2.6.1 Cropping pattern 5.2.6.2 Crop diversification 5.2.6.3 Shift in cropping pattern 5.2.7 Irrigated area by sources and changes therein 5.2.8 Average yield of different crops and changes therein 5.2.9 Average value of input use per acre and changes therein 5.2.10 Distribution of livestock resources and changes therein 5.2.11 Tools, implements and machinery use in agriculture 5.2.12 Production and disposal of farm outputs 5.2.13 Prevalent marketing channels and procurement arrangements 5.3 Income, Consumption and Asset profile 5.3.1 Distribution of households by income level 5.3.2 Distribution of households by consumption level | 77 78 79 79 80 81 82 84 85 86 87 88 88 |

| 5.3.5 Food security issues at village level | 96 |
|--|-----|
| 5.3.6 Production and disposal of non-farm outputs | 97 |
| 5.4 Indebtedness | 97 |
| 5.5 Perception of Various Groups about Economic Changes in the Village | 99 |
| 6. Ecology, Vulnerability and Sustainability | 101 |
| 6.1 Natural Resource Profile of the Village | 101 |
| 6.1.1 Flora and Fauna in the village and changes therein | 101 |
| 6.1.2 Land, Water, Soil, Forest and Livestock resources in the village | 102 |
| 6.1.3 Ground water level, pollution and changes therein | 105 |
| 6.1.4 Input use (fertilizer, FYM, pesticide, etc) in agriculture and changes | |
| 6.2 Land use Classifications and Changes Therein | 111 |
| 6.3 Natural and Manmade Disasters | 111 |
| 6.3.1 Frequency of extreme climatic events and changes over time | 111 |
| 6.3.2 Vulnerability to extreme climatic events and coping measures | 112 |
| 6.3.3 Adaptation strategies to mitigate the adverse impacts | 112 |
| 6.3.4 Adequacy and efficacy of relief measures after calamity events | 113 |
| 6.4 Perception about Ecological Changes in the Village | 113 |
| 6.4.1 Change in climate | 113 |
| 6.4.2 Change in rainfall pattern | 113 |
| 6.4.3 Changes in monthly temperature | 117 |
| 6.5 Impact of Covid-19 Pandemic | 119 |
| 7. Policy and Governance | 123 |
| 7.1 Nature and Coverage of Government Schemes | 123 |
| 7.2 Perception about Government Schemes | 126 |
| 7.3 Participation in Local Governance | 127 |
| 7.4 Perception about caste/ gender/ political bias or deprivation | 128 |
| 7.5 Perception about major socio-economic problem of the village | 130 |
| 7.6 Suggestions for overall development of the village | 130 |
| 8. Summary and Policy Recommendations | 133 |
| 8.1 Summary | 133 |
| 8.1.1 Background and objectives of the present survey | 133 |
| 8.1.2 Methodology and coverage | 134 |
| 8.1.3. Profile of the village Sahajapur | 136 |
| 8.1.4 Social dynamics in Sahajapur | 138 |
| 8.1.5 Economic system in Sahajapur | 141 |
| 8.1.6 Ecology, vulnerability and sustainability issues in Sahajapur | 144 |
| 8.1.7 Policy and governance issues in Sahajapur | 147 |
| 8.2 Policy Recommendations | 148 |
| 8.3 Conclusion | 152 |
| Bibliography | 153 |
| Annexures | 156 |

LIST OF TABLES

| Table 3.1: An overview of the village Sahajapur | 24 |
|---|----|
| Table 3.2: Demographic profile of Sahajapur | 27 |
| Table 3.3: Population characteristics by caste and religion | 29 |
| Table 3.4: Type of residential buildings and cost therein (2019-20) | 30 |
| Table 3.5: Distribution of households by primary occupation (2019-20) | 31 |
| Table 3.6: Primary and secondary occupation-wise distribution of households | 33 |
| Table 3.7: Primary and tertiary occupation-wise distribution of households | 34 |
| Table 3.8: Land use pattern in the village Sahajapur | 36 |
| Table 3.9: Composition of livestock in the village Sahajapur | 37 |
| Table 4.1: Population distribution of households by caste | 46 |
| Table 4.2: Distribution of households by family size | 47 |
| Table 4.3: Distribution of households in Sahajapur by family type (2019-20) | 48 |
| Table 4.4: Age and sex distribution of the population in the village Sahajapur | 49 |
| Table 4.5: Distribution of population by age and marital status | 50 |
| Table 4.6: Population characteristics by caste and religions in the village Sahajapur | 51 |
| Table 4.7: Educational status by sex | 53 |
| Table 4.8: Enrolment level of children in schools by caste, sex and type of school | 54 |
| Table 4.9: Gender wise dropout in various educational level | 55 |
| Table 4.10: PDS card type by caste | 55 |
| Table 4.11: Birth rate and death rate by categories of households during 2015-2020 | 56 |
| Table 4.12: Level of learning outcomes across the class of study | 57 |
| Table 4.13: Level of reading competency of children by sex | 58 |
| Table 4.14: Level of arithmetic competency of children by sex | 58 |
| Table 4.15: Level of learning outcomes across the class of study | 59 |
| Table 4.16: Pattern of malnutrition among the children by castes and sex | 62 |
| Table 4.17: Domestic service connection of electricity | 63 |
| Table 4.18: Use of sanitary toilets by castes | 63 |
| Table 4.19: Source of drinking water for households | 64 |
| Table 4.20: Membership of village organizations across caste | 66 |
| Table 4.21: Membership of village organizations across income | 66 |
| Table 5.1: Distribution of working population across caste and gender | 68 |
| Table 5.2: Distribution of population with respect to working status | 69 |
| Table 5.3: Occupational distribution of households by caste | 70 |
| Table 5.4: Number of occupations pursued by households | 71 |
| Table 5.5: Changes in occupational distribution (primary occupation) | 72 |
| Table 5.6: Pattern of land distribution across the caste categories | 74 |
| Table 5.7: Distribution of land holdings in the village Sahajapur | 76 |
| Table 5.8: Land use pattern in the village Sahajapur | 77 |
| Table 5.9: Total area sown by caste (in Acres) | 77 |
| Table 5.10: Agricultural land distribution across size classes of operational holding | 78 |
| Table 5.11a: Cropping pattern in the village Sahajapur in 2019-20 | 80 |
| Table 5.11b: Number of crops grown by the farmers across farm size categories | 81 |

| Table 5.12: Changes in cropping pattern in the village Sahajapur | 82 |
|---|-----|
| Table 5.13: Changes in cropping pattern in Sahajapur during 1955-56 to 2019-20 | 83 |
| Table 5.14: Irrigation facilities by source (% of area irrigated) | 84 |
| Table 5.15: Yield of major crops in the village Sahajapur | 85 |
| Table 5.16: Input use in agriculture (paddy) per acre and changes therein | 86 |
| Table 5.17: Agricultural tools and machineries | 87 |
| Table 5.18: Production and disposal of output | 89 |
| Table 5.19: Marketing channels for paddy in Sahajapur 2019-20 | 90 |
| Table 5.20: Composition of income of households in Sahajapur by livelihood groups | 91 |
| Table 5.21: Composition of income in Sahajapur by castes | 91 |
| Table 5.22: Average number of income sources across livelihood groups and castes | 92 |
| Table 5.23: Composition of expenditure of households in Sahajapur by livelihood | 92 |
| groups | 32 |
| Table 5.24: Composition of expenditure in Sahajapur by castes | 93 |
| Table 5.25a: Asset profile of households in Sahajapur (in Rs.) | 94 |
| Table 5.25b: Asset profile of households in Sahajapur (in Rs.) (Contd.) | 94 |
| Table 5.25c: Asset profile of households in Sahajapur (in Rs.) (Contd.) | 95 |
| Table 5.26: Mode of savings across social groups in Sahajapur in 2019-20 | 96 |
| Table 5.27: Food security issues at village level | 97 |
| Table 5.28: Disposal of major off-farm produces and price realization | 97 |
| Table 5.29a: Borrowing details during last 5 years across social groups | 98 |
| Table 5.29b: Borrowing details during last 5 years across land size-class | 98 |
| Table 5.30a: Perception of people about economic changes | 99 |
| Table 5.30b: Perception of people about other changes | 99 |
| Table 6.1: Ground Water Monitoring Wells around the village Sahajapur | 106 |
| Table 6.2: Average Depth of Ground Water Level in Sahajapur | 107 |
| Table 6.3: Chemical composition of ground water samples of Sahajapur | 109 |
| Table 6.4: Use of chemical fertilizer in Paddy (during 2019-20) | 108 |
| Table 6.5: Monthly rainfall pattern in Sahajapur | 116 |
| Table 6.6: Month wise temperature in Birbhum (in degree Celsius) | 117 |
| Table 6.7: Impact of Covid-19 lockdown on learning competencies | 121 |
| Table 7.1: Coverage under different government sponsored schemes | 124 |
| Table 7.2: Participation in Gram Sabha/Gram Samsad meeting by caste and | 128 |
| economic status | |
| Table 7.3a: Perception about relative status of household in village | 128 |
| Table 7.3b: Reasons for such perception about relative status | 129 |
| Table 7.3c: For advice whom villagers approach | 129 |
| Table 7.4: perception of people about major socio-economic problems | 131 |
| Table 7.5: Suggestions for development | 131 |

LIST OF FIGURES

| Figure 2.1: Location of the district Birbhum in West Bengal | 13 |
|---|-----|
| Figure 2.2: Administrative map of Birbhum district(Location of Bolpur Block) | 14 |
| Figure 2.3: Terrain map of Sahajapur | 15 |
| Figure 2.4: ASER kit for competency in Bengali language | 21 |
| Figure 2.5: ASER kit for competency in Mathematics | 21 |
| Figure 3.1: Administrative map of Sahajapur | 23 |
| Figure 4.1: Changes in age group-wise distribution of population in Sahajapur | 49 |
| Figure 4.2: Population pyramid of Sahajapur during 2019-20 | 51 |
| Figure 5.1: Lorenz curve for land distribution across all the households in Sahajapur | 75 |
| Figure 5.2; Lorenz curve for distribution of land across the cultivators in Sahajapur | 76 |
| Figure 5.3: Cropping pattern in Sahajapur during 2019-20 | 80 |
| Figure 5.4: Shift in cropping pattern in Sahajapur between 1955-56 and 2019-20 | 83 |
| Figure 6.1: Annual rainfall in Sahajapur (in mm.) | 114 |
| Figure 6.2: Monthly rainfall fluctuations in Sahajapur | 115 |
| Figure 6.3: Trends in annual minimum and maximum temperature in Sahajapur | 119 |
| | |



Executive Summary

Backdrop

India's villages are living repositories of ancient, diverse traditions that have survived down the ages through a combination of constancy and adaptation to changing circumstances that has no valid option but to protect the interests of its villages because they will remain important and highly populated for a long time to come. Villages constitute the nucleus of our society and in West Bengal, two-third of the population is residing in villages. The progress of the state, hence, depends on the wellbeing of the rural society. Villages in West Bengal, however, have witnessed a great deal of social, political and economic transformation in course of the post independent development practices. Contribution of agriculture as a source of livelihood is declining and rural peoples are now diversifying their livelihood portfolios into various non-farm and off-farm activities. Over the years since independence, both the state government as well as central government has formulated various schemes that have helped the rural people to improve their economic situations. Since villages are terrain where development policies and schemes are tested, continuous village survey is capable of pointing out the efficiencies and efficacies of such schemes (Himanshu et al, 2016). A continuous village survey thus can provide a clear picture about diagonally opposite view regarding success or failures of development schemes, besides providing panel data for policy formulations. It also helps in measuring the changes in villages over time.

Despite several efforts on the part of state, civil societies as well as by the villagers themselves, the rural areas are still submerged in the problems of lack of education, poverty, unemployment, malnourishment, etc. How are the interventions reaching down to the village level? Are the resources and administrative machinery too inadequate to achieve rapid changes? What is the pattern of changes in village economies? What is their process? What further possibilities are indicated by the process of actual change? These are some of the questions which the present study attempts to tackle. It is in this context the present village study is an attempt to enquire into the dynamics of the village with the passage of time taking into account both the endogenous and exogenous factors that influences the rural dynamics.

Objectives of the present study

The overall objectives of the study are -

- To create a longitudinal panel dataset, to capture the socio-economic dynamics of the villages. The purpose is to assess the pace, process and pattern of rural change by means of repeated survey in the selected villages followed by re-surveys of the same villages at an interval of 5 years.
- 2. The focus would be on agricultural change and changing pattern of rural livelihoods and its implication for future development. The study also evaluates the efficacy of government interventions in rural areas and key drivers of changes in village economy.

Methodology and coverage

This particular study is a resurvey conducted in Sahajapur village in Birbhum districts of West Bengal during 2019-21 which had been first studied in the 1950s by AERC, Visva-Bharati under the series 'Rural Change' and again re-surveyed in 1972-73 (Mondal et al, 1974); 1982-83 (Sen and Sengupta, 1983) and again in 1987-88 (AERC, 1990). The study is

based on both primary and secondary data. It also takes into account the unconventional or informal opinions and views in respect of social, political, cultural and ecological issues which cannot be recorded through formal household surveys. Therefore, the present survey was conducted at three levels: Village Level, Group Level; and Household Level. Accordingly, information was collected from the official records; stake holders' meetings; secondary sources, focus group discussions, and household surveys. The household level primary data has been collected through complete enumeration of all the 355 households residing in the village. Focus group discussion (FGD) and stakeholder meetings were also used to gather information at village or group level. The study covered various dimensions of social, economic, agrarian, farming, ecological parameter. Being a re-survey, it also focuses on the socio-economic changes that have taken place between the two periods. The study also attempts to identify the driving forces of such change.

Profile of the village Sahajapur

The village shows all the characteristics of the representative rural community in terms of social, economic and ethnographic diversity of the district of Birbhum. The village is situated at a distance of 41.9 kilometers from the district head-quarter Suri with a total 355 households. The nearest town, Bolpur is eight kilometers away and is connected by a metal road. The nearest railway station is in Bolpur and nearest domestic and international airports are at a distance of 65 and 158 respectively. The climate of the village is generally dry, mild and healthy. The village receives a moderately high rainfall, the annual average being 1430 mm. The village comes under the Red and Laterite agro-climatic zone, with porous soil. As the area is arid there is no forest cover in close vicinity.

The gross cropped area in the village is 391.97 acres with cropping intensity of only 130.24. The rice-based cropping pattern is dominant in the village. Paddy in the only crop being cultivated by the farmers both during Kharif as well as in Summer with little area under potato, oil seeds, and vegetables in Rabi. Though the village comes under Mayurakshi canal irrigation system, agriculture is mostly rain dependent as the availability of canal water is limited to the rainy season. Over the years rearing of cattle, particularly bullock for cultivation, have declined. The farmers prefer to hire tractors or power tillers for tilling the land rather than maintain a pair of draft animals. On the contrary, rearing of goats, poultry birds both indigenous and of improved broilers and ducks has emerged as a growing business among a section of villagers mainly from the scheduled caste and scheduled tribe communities. Rearing of pigs is also very common among the tribal families.

Social dynamics in Sahajapur

There have been notable improvements in respect of educational, medical, social and nutritional aspects in the village as well as in checking population growth particularly during last two decades. The population of the village considerably grew till late 1990s. Thereafter, a reversal of fertility rate is observed. The age structure of population of the population changed substantially in favour of middle-aged peoples. Other important social changes are fast spread of female literacy, significant reduction in child mortality, and eradication of malnutrition among all section of the society. However, sex ratio got reversed against female and there is a breaking down of joint family system. This is a matter of serious concern.

Literacy among the residents of Sahajapur has improved substantially over the years from a mere 13.4 per cent in 1955-56 to 85.4 per cent in 2019-20. Over 96 per cent of children are enrolled and used to go to school regularly, but basic learning is an issue. There is a substantial learning deficiency across all the classes in terms of both reading competency as well as arithmetic ability. Overall, only 37 per cent students in the age-group of 5-15 years can read a story and only 23 per cent of the school going students can do simple divisions. It is surprising to note that two third of the Standard-I student cannot even recognize letters and as high as 83.3 per cent of them are unable to recognize the digits. This is a matter of serious concern as most of such students are first generation learners from the scheduled caste and scheduled tribe categories. So far as child nutrition is concerned, Sahajapur presents a satisfactory picture. By and large more than 90 per cent of the children in Sahajapur, across the caste and gender, are within the normal range of BMI and there is not a single incidence of severely underweight or in obesity category in the whole village. Further, in terms of child nutrition, no more there exists any gender or caste bias which was very common till 1980s.

Economic system in Sahajapur

There has been number of significant developments, in the economic system. Road, electrification, rural housing, health facilities, provision for safe drinking water and communication facilities have improved a lot. Average household income, consumption and productivity of crops have also increased substantially. The demand for consumer durable goods like two-wheelers, cell phones, television, refrigerator, etc. seems to be rising rapidly resulting in to higher cost of living. Construction of pucca residential houses certainly shows a tremendous growth and is, perhaps, the only major avenue in which physical investment seems to be taking place in the village. However, no significant improvements are noticeable in respect of development in agricultural infrastructure or livestock enterprises.

The feature of landlessness seems to be very high in the village. As evident from the Lorenz Curve and Gini co-efficient (0.79), the distribution of cultivable land in the village is highly skewed and increasing over time. It's not only that more than 63 per cent households are land less but also the average size of holding is very low (2.32 acres) that possess difficulties in using modern farm technologies. As a result, agriculture is no more a preferred enterprise among the villagers and for only 6.5 per cent of the villagers it is main source of their earning. They are primarily dependent on wage-earning, petty business, bamboo crafts, and backyard poultry/piggery keeping. In the absence of secured and dependable source of irrigation the farmers seem to bank on kharif paddy which is cultivated both during monsoon as well as in summer. There seems to be little avenue for extensive crop diversification. Over the years, the varietal diversification too has reduced substantially. Rearing of cattle, particularly bullock for cultivation has declined while keeping poultry, goat and pigs has increased. As a more cost-effective method the farmers prefer to hire tractors for cultivation rather than maintain a pair of draft animals.

Ecology, vulnerability and sustainability issues in Sahajapur

The sustainability and resilience of rural economy to a large extent depends on the natural resource base of that area. The village Sahajapur is no exception to this. The soil of the village is well drained but moderately acidic, low in organic matter, phosphorous and medium in potash content. The soil fertility in the village is declining over time due to mono-

cropping of paddy and very little use of organic manures. The villagers are aware about the problem but trying to compensate the loss in soil fertility by using more of chemical fertilizer. What is more disturbing feature is that of imbalanced use of chemical fertilizers. As per soil testing report, the recommended doses of fertilizer use per acres are 13.20, 31.19 and 26.72 kgs of Urea, DAP and MoP, respectively. But the corresponding actual use is 30, 20 and 10 kg per acres, respectively.

The water quality parameters in and around the village shows that water is more or less within the safe category for drinking purposes (free from pollutants like arsenic, fluoride, iron, chloride and heavy metals) and very much suitable for irrigation as the indices like pH, EC, TDS, SAR, etc. are within the permissible limits. However, though the water quality is still within the safe limits, it started deterioration in recent years in terms of several quality parameters. Drought and heat wave are two main natural disasters occurring in the village frequently, though their frequency of occurrence have reduced from once in five years to once in 8 years now. As evident from the long-term rainfall data, a very high degree of inter year fluctuation is there resulting in to frequent drought or water stress. What is alarming is that there is an increasing trend in the fluctuation in annual rainfall as well as in monthly rainfalls during last 10 years. However, the gap between highest and lowest temperature in the year is narrowing down over time.

Policy and governance issues in Sahajapur

During our survey, we could identify 23 to 28 schemes for agriculture and rural development in operation in the village, but in terms of reach and coverage, only around half of such schemes are being implemented very successfully. The performance of all-most all the schemes for agricultural development are very poor. Poverty alleviation programmes made a better performance than the agricultural development programmes. Regarding preference for the schemes, both the villagers and officials are more interested in schemes having immediate tangible material benefit (cash or kind) transfers rather than long term qualitative/intangible benefits. The Gram Panchayat is trying their best to support the livelihood of the villagers but also appeared to take more interest in distributing material and financial benefits to the intended beneficiaries.

By and large, the villagers are satisfied with the functioning of the gram panchayat and other government agencies working towards implementing various schemes. However, there is a conflict between the state government and central government over naming, sharing financial burden, and in operational guidelines issued by the central government for various schemes for agriculture like PM-KISAN, PM-FBY, PM-KMY, etc. As a result, agriculture being the state subject, state government machineries is reluctant to implement such central schemes rather introduced parallel schemes with full financial support from the state government. Implementation of state government schemes (Kanyasree, Bangla Fasal Bima Yojana, Krishak Bandhu, Bangla Awaas Yojana, Rupasree, Sasthya Sathi, etc.) is better coordinated than the corresponding central sector schemes (Beti Bachao Beti Padao, PMFBY, PMKISAN, PMAY, Ayushman Bharat, etc.).

The pandemic Covid-19 and subsequent lockdown impacted the village significantly. The more significant negative impact was on education, non-farm & off farm employment, and supply chain for agricultural inputs as well as outputs. Initially, the daily wage earners tried

to cope up with the situation either through borrowing or on drawing down the inventories. However, with the phased relaxation of restrictions, the severe negative impact was softened after few months. But education sector continues to be badly affected due to prolonged/continuous lockdown since March 15, 2020. This has not only resulted into poor learning but also significant loss of learning among the school going children in the village, particularly the poor and first-generation learners. There is a digital divide and this is a matter of serious concern as the digital divide is layered on the existing socio-economic division in the village.

Policy Recommendations

The analysis of the foregoing sections does not leave any room for doubt that there is an advancement of the economy of Sahajapur during last six decades and more particularly since 1980s. The improvement however, is not in commensurate with the advancement took place in the district or state. There is spectacular improvement in terms of road, telecommunication, residential units, education, health, and nutrition. Unfortunately, very little progress is made in terms of agricultural development, creation of off-farm and non-farm employment opportunities, and thus in eradicating poverty among the vast majority of the villagers. Large number of initiatives has already been taken by the government but still the rate of unemployment and poverty is alarmingly high. Therefore, based on the findings of the study and considering the aspirations of the villagers the following policy recommendations are suggested:

- i. The main economic problem in the village is very high level of poverty among the scheduled caste and tribes and lack of employment opportunities for educated youths. So as a strategy to reduce their economic vulnerability, creation of off-farm and non-farm employment opportunities are must.
- ii. The tribals, poorest of the poor in the village, are expert in bamboo crafting. Santiniketan, being an international tourist destination and only 8 km away from the village, linking the artisans with market may bring new opportunities for them.
- iii. The main problem that hinders the agricultural economy of the village is monocropping with kharif paddy due to lack of irrigation facilities during summer and rabi. Considering the availability of water resources and its long-term sustainability, conjunctive use of ground-water along with surface water needs to be promoted. That can ensure sustainable agricultural growth through diversification.
- iv. Considering the available resources and demand, goat, duck and poultry farming represent a golden opportunity for off-farm livelihood diversification for unemployed youths in the village.
- v. The school and education department need to take special initiatives to reduce the huge learning deficiencies in government schools. Further, the prolonged closure of schools due to Covid-19 aggravated the problem for the students from scheduled caste and tribes who are first generation learners with very poor economic background. So, schools have a greater role to play as such students neither can expect any academic support from their parent nor can afford for private tutor.
- vi. Since the mother tongue of the tribal children is different than the medium in which they are forced to take learning in schools and ICDS centres, starting tribal schools or recruiting tribal teachers can be of great help. It is also important in protecting the tribal language (*Mahali*) which is already listed as an endangered language.

- vii. Finally, in order to meet the expectation of the villagers following needs to be done on priority:
 - a. In order to preserve the endangered 'Mahali' language, ensuring government support for the proposed school "Saheed Sankar Mahali Smiriti Vidyalaya".
 - b. Re-opening of the village library which is closed since 1975-76
 - c. Construction of a community hall for the village
 - d. Construction of canal bridge to facilitate commuters in and around the village
 - e. Establishment of a rural bank branch within the village
 - f. Ensuring timely distribution of seed minikit and timely availability of fertilizers.
 - g. Repairing the government sub-mersible tube wells which are not functioning since long.
 - h. Housing for all the BPL families under PMAY/BAY scheme.

Conclusion

From the earlier discussions, it appears that the main driving forces of social and economic change in the village are development in physical infrastructure in terms of road and telecommunication; as well as government interventions through basic health, primary education and child nutrition. Undoubtedly, these changes are having a series of chain reactions within the system. But a sound rehabilitation of the village economy in terms of employment generation and agricultural development seems hardly been taken place. The different forces of change however affect different categories of households differently. There seems to be a general apathy among the village youth for working in the agriculture sector. In fact, they are apathetic towards any self-help or entrepreneurship for employment generation within the village itself rather prefers to work as a wage earner in the nearby town. In general, the people are happy with the politics of doles. Therefore, the development schemes need to re-orient from short term cash transfer to long term employment generation for educated youth.



Agro-Economic Research Centre (For the States of West Bengal, Sikkim and Andaman & Nicobar Islands) Visva-Bharati, Santiniketan West Bengal-731235

E-mail: dir.aerc@visva-bharati.ac.in Phone: +91-03463-261447 Web: www.visva-bharati.ac.in

©Agro-Economic Research Centre, Visva-Bharati, Santiniketan. This is a reviewed publication and for office use only. The opinions and recommendations in the report are exclusively of the author(s) and this report has been prepared in good faith on the basis of information available and feedback given by the stakeholders at the date of survey.