

Self-Declaration

I declare that the thesis named " **Environmental Sustainability and Livelihood Pattern of the Major Tribal People in Jhargram District, West Bengal: A Geographical Study**" is original and has been carried out by myself under the supervision of Dr. Ranjan Roy, Professor Department of Geography and Applied Geography, University of North Bengal. The doctoral thesis has not been submitted to any other institution for a degree or diploma. I have complied with North Bengal University's and the UGC Ph.D. Regulations, 2016's rules and regulations. Throughout my thesis, I have consistently acknowledged and credited all the materials obtained from external sources, including data, theoretical analysis, and text. Proper citations have been included in the text, and detailed references have been provided. In cases where I have cited written content from external resources, I have given appropriate credit by citing them accordingly. Further, I declare that I incorporated all the suggestions/questions raised by the RAC members during my pre-submission seminar. Lastly, I have maintained research ethics while writing this thesis and acknowledged the people properly involved in this work.

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CERTIFICATE

This is to certify that Sri Ananda Nanda Bera has prepared the thesis entitled "ENVIRONMENTAL SUSTAINABILITY AND LIVELIHOOD PATTERN OF THE MAJOR TRIBAL PEOPLE IN JHARGRAM DISTRICT, WEST BENGAL: A GEOGRAPHICAL STUDY" for the award of Doctor of Philosophy (Ph. D) Degree in Geography & Applied Geography, University of North Bengal, under my supervision. He has carried out his research work at the Department of Geography & Applied Geography, University of North Bengal and the thesis has been prepared based on the extensive field study for collection of primary data and secondary sources of information. The thesis in full or any part of it has not been submitted previously for any other degree or diploma.

It may further be mentioned that Ananda Nanda Bera has fulfilled all other requirements as per rules of the University of North Bengal regarding the submission of Ph.D level dissertation. I wish every success in life.

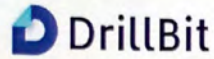
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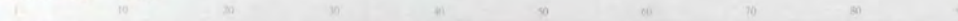
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PREFACE

Though the Jhargram district is dry-prone and environmentally fragile, its natural beauty is pleasant. The Jhargram district has the highest concentration (29.37%) of the tribal population in West Bengal (Census of India, 2011). Santhal, Bhumij, Munda, Lodha, Kora, and Mahali are the major tribal communities in the Jhargram district. Regarding per capita income, most of the tribal population in the Jhargram district is extremely impoverished. They follow very simple and traditional livelihood patterns. Tribal residents of the district of Jhargram live in remote rural areas deprived of modern amenities.

Tribal respondents in the Jhargram district depend on agricultural activity. Their means of subsistence are determined by a complex interplay of factors such as topography, community type, age, gender, education, access to water, health, and communication, as well as factors like forest cover, tribal population density, infrastructure, and health. It also depends on cultural, ecological, and political determinants.

The well-being of tribal communities in Jhargram district is significantly influenced by various factors, including their socio-economic status, living conditions, accommodation types, consumption patterns, and working environments. Additionally, the opportunities available to connect with new employment opportunities play a vital role in shaping their livelihoods. The Jhargram district's tribal population's general quality of life and economic resilience are influenced by these factors. There are so many problems in the Jhargram district that restrict the tribal people's agricultural activity. These are small land holding size, unfertile soil, poor irrigation system, low-quality seeds, use of primitive techniques, lack of market, etc. Poor tribal people are forced to depend on collecting, daily wages labour, construction labour, beekeeping, Extractive Activity (Timber & NTFP), Ethno medicine, livestock rearing cultivation, fishing, Earth Work, Soil digging work, etc.

At the same time, tribal people of Jhargram district face several environmental challenges like loss of forest cover, loss of biodiversity, habitat fragmentation, Increasing Temperature and decreasing Rainfall, Waste Production by red category industries like sponge iron, paper, cement & Brick clean industry, water pollution, groundwater contamination & depletion, groundwater depletion, use of forest wood for cooking, the insufficient share of renewable sources for energy production, destruction of natural habitats.

In connection with his workplace, the researcher has stayed in the study area for more than 13 years. In addition to its academic interest, the researcher chose this topic to generate some solutions to the problem of tribal livelihood and environmental sustainability. The present researcher also thinks that it helps policymakers develop some grassroots-level planning and judiciously implement it to promote

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List of Tables

List of the Tables	Page No.
Table 1.1 Definition of Tribal People	3
Table 1.2 Gaps in the Existing Literature	18-19
Table 1.3 Block-wise Population Distribution and Sample Size of Households in Jhargram District	22
Table 1.4 Pair-wise comparison matrix for performing the AHP method	34
Table 2.1 Area, Population and Density of Population in Jhargram, 2011	57
Table 2.2 Distribution of Rural and Urban Population by sex in Jhargram, 2011	57
Table 2.3 SC and ST Population by Sex in Jhargram, 2011	57
Table 2.4 Tribal Sex Ratio in Jhargram District	58
Table 2.5 Age-sex distribution of the tribal people in Jhargram District	59
Table 2.6 Age-Sex Structure of the tribal people in Jhargram District	59
Table 2.7 Literacy Rate by Sex in Rural and Urban Areas in Jhargram, 2011	61
Table 2.8 Occupational Structure	62
Table 2.9 Distribution of workers and non-workers in Jhargram, 2011	62
Table 2.10 Length of Roads Maintained by Administration in Jhargram District	65
Table 2.11 Available Transport Facilities in Jhargram District	65
Table 3.1 Major Tribal Communities	71
Table 3.2 Distribution of tribal Population-1971	73
Table 3.3 Distribution of the Tribal Population-1981	76
Table 3.4 Distribution of the Tribal Population-1991	76
Table 3.5 Distribution of the Tribal Population-2001	78
Table 3.6 Distribution of the Tribal Population-2011	80
Table 3.7 Block Wise Decadal Change-1971-2011	84
Table 3.8 Changing Tribal Population Density (T.P.D.) from 1971-2011	85
Table 3.9 Location Quotient Index of Block Wise from 1971-2011	86
Table 3.10 Sex Wise Tribal Population	87
Table 4.1 Educational Status	93-94
Table 4.2 Average Distance for Attaining Education Levels (in Km)	96
Table 4.3 Institutional Training	97-98
Table 4.4 Special Training	100
Table 4.5 Number of Language-Speaking	102
Table 4.6 Practice of Dowry	103-104
Table 4.7 Average Distance Covered for Other Medical Facilities (in Km.)	105
Table 4.8 Accessibility of Pucca Road	106
Table 4.9 Maintenance of Personal Hygiene	107
Table 4.10 Discriminating Behaviour Faced from the Health Provider	110
Table 4.11 Sources of drinking water	112
Table 4.12 Distance of the Water	114
Table 4.13 Availability of Toilet	116-117
Table 4.14 Availability of Bathrooms	118-119
Table 4.15 Types of Fuel Used for Cooking	120-121
Table 4.16 Availability of Electricity	129
Table 4.17 Sanitation Condition	131

List of the Tables	Page No.
Table 4.18 Nature of Accommodation	133
Table 4.19 Ownership of the House	135
Table 4.20 Materials used for the roof	137
Table 4.21 Materials Used for the Floor	139
Table 4.22 Nature of the wall of the house	141
Table 4.23 Building materials of the house	142-143
Table 4.24 Household Items (assets)	144-149
Table 4.25 Land Holding Size	158-159
Table 4.26 Production system	161-162
Table 4.27 Materials Collected from Forest	165-166
Table 4.28 Changing Pattern of Occupation	171
Table 4.29 Sources of Income	174
Table 4.30 Per Capita Income of different blocks	178
Table 4.31 Nature of utilization of money	181
Table 4.32 Source of indebtedness	184-185
Table 4.33 Purpose of Indebtedness	186
Table 4.34 Consumption of cereal	189-190
Table 4.35 Consumption of Fuel	191-193
Table 4.36 Medicine Usage	194-195
Table 4.37 Pursuit of Education	197-198
Table 4.38 Consumption of pulses	199-200
Table 4.39 Consumption of vegetables	201-202
Table 4.40 Consumption of fruits	203-204
Table 4.41 Consumption of Meat and Eggs	205-206
Table 4.42 Consumption of Fish	207-208
Table 4.43 Consumption of Rice Beer	210-211
Table 4.44 Consumption of Mahua Beer	212-213
Table 5.1 Cropping Intensity	218
Table 5.2 Cropping Pattern	221
Table 5.3 Techniques Used to Cope with Erratic Weather	223-224
Table 5.4 Types of Farming	225-226
Table 5.5 Major Sources of Water for Agriculture	228-229
Table 5.6 Land Used for Agriculture	231
Table 5.7 Environmental Degradation and Pest-Related Agricultural Diseases	233
Table 5.8 Agriculture Activity Practiced Promote Sustainability	235
Table 5.9 Hybrid Seeds in Agriculture	236-237
Table 5.10 Tools Used for Agricultural Activity	238
Table 5.11 Chemical Fertilizer Used in Agriculture	239-240
Table 5.12 Amount of Chemical Base Pesticide Used in Agriculture	241
Table 5.13 Harnessing Indigenous Knowledge for Soil Fertility	242
Table 5.14 Harnessing Indigenous Knowledge to Prevent Soil Erosion	244-245
Table 5.15 Indigenous Knowledge is Helpful for Preserve Biodiversity	245
Table 5.16 Indigenous Knowledge and Physical, Cultural and Economic Health	247

List of the Tables	Page No.
Table 5.17 Indigenous Knowledge and Regulation of Pests and Diseases in Agriculture	249-250
Table 5.18 Indigenous Knowledge and Soil Organic Matter and Soil Water Retention	251
Table 5.19 Indigenous Knowledge and Cultivation of Medicinal Plants	253
Table 5.20 Indigenous Knowledge to Maintain Yields and Livestock	254-255
Table 5.21 Level of Health Consciousness	258-259
Table 5.22 Qualities of Government-Provided Health Facilities	262-263
Table 5.23 Transportation Facility for Health Services	264-265
Table 5.24 Preference of Treatment	267
Table 5.25 Average Distance Covered to Reach Health Centres	269
Table 5.26 Statistical Test Results for Distance Differences among Blocks	272
Table 5.27 Reasons for diseases	273-274
Table 5.28 Healthcare Service Utilization	276
Table 5.29 Financial Constraints in Getting Health Service	277-278
Table 5.30 Availability of opportunities for proper health education	279
Table 5.31 Factors to the low prevalence of diseases	281-282
Table 5.32 Shapiro-Wilk, Levene and Welch ANOVA for Various factors.	282-283
Table 5.33 Indicators used for assessment of Sustainability	285
Table 5.34 Parameters weighting values	285-286
Table 5.35 Block & Tribe Wise Sustainability Index	287
Table 5.36 Normal distribution of blocks (Shapiro-Wilk Test)	288
Table 5.37 One-Way ANOVA	288
Table 5.38 Multiple Comparison of Means - Tukey HSD, FWER=0.05	288
Table 5.39 Tuckey HSD among Tribes	289
Table 5.40 Mean, SD and CV	290
Table 6.1 Soil Quality Index (SQI)	302
Table 6.2 Water Quality Testing Method	306
Table 6.3 Water Quality Sample	307
Table 6.4 Relative Variability of Each Parameter	308
Table 6.5 Water Quality Index Scale	308
Table 6.6 Distribution of Water Sample	308
Table 6.7 Water Quality Index in Various Locations	308-309
Table 6.8 Classes of different factors used in the study	322
Table 6.9 Relative importance table of influencing factors for mapping environmental Sustainability	325
Table 6.10 Environment sustainability classes in different blocks of the Jhargram district	327
Table 6.11 Tribal Human Vulnerability Index of Jhargram District	330
Table 7.1 Ecosystem Measurement Scale	341
Table 7.2 Types of Habitat Fragmentation	342
Table 7.3 Literacy Rate & Livelihood Challenges	348

List of Figures

List of the Figures	Page No.
Figure 2.1 Age-Sex Structure of the Jhargram District (2021-2022)	60
Figure 3.1 Decadal Change in Tribal Population Concentration in Jhargram District-1971 & 2011.	86
Figure 3.2a Block-wise Decadal Change of Sex Composition in Jhargram District-1971	88
Figure 3.2b Block-wise Decadal Change of Sex Composition in Jhargram District-2011	88
Figure 4.1 Educational Status	94-95
Figure 4.2 Average Distance for Attaining Education Levels (in Km)	96
Figure 4.3 Institutional Training	98-99
Figure 4.4 Special Training	101
Figure 4.5 Number of Language Speaking	103
Figure 4.6 Practice of Dowry	104-105
Figure 4.7 Average Distance Covered for Other Medical Facilities (in Km.)	105
Figure 4.8 Accessibility of Pucca Road	107
Figure 4.9 Maintenance of Personal Hygiene	108-109
Figure 4.10 Discriminating Behaviour Faced from the Health Provider	110-111
Figure 4.11 Sources of Drinking Water	113
Figure 4.12 Distance of the water source	115
Figure 4.13 Availability of Toilet	117
Figure 4.14 Availability of Bathrooms	119
Figure 4.15a Different Types of Fuel Used for Cooking	122
Figure 4.15b Different Types of Fuel Used for Cooking	122
Figure 4.15c Types of Fuel Used for Cooking	123
Figure 4.15d Types of Fuel Used for Cooking	124
Figure 4.15e Types of Fuel Used for Cooking	125
Figure 4.15f Types of Fuel Used for Cooking	125
Figure 4.15g Types of Fuel Used for Cooking	126
Figure 4.15h Types of Fuel Used for Cooking	127
Figure 4.15i Types of Fuel Used for Cooking	128
Figure 4.16 Availability of electricity	130
Figure 4.17 Sanitation Condition	132
Figure 4.18 Nature of Accommodation	134
Figure 4.19 Ownership of the House	136
Figure 4.20 Materials Used for the Roof	138
Figure 4.21 Materials Used for the Floor	139-140
Figure 4.22 Nature of the wall of the house	141
Figure 4.23 Building materials of the house	143-144
Figure 4.24a Household Items (assets)	149
Figure 4.24b Household Items (assets)	150
Figure 4.24c Household Items (assets)	150
Figure 4.24d Household Items (assets)	151
Figure 4.24e Household Items (assets)	152
Figure 4.24f Household Items (assets)	152

List of the Figures	Page No.
Figure 4.24g Household Items (assets)	153
Figure 4.24h Household Items (assets)	155
Figure 4.24i Household Items (assets)	156
Figure 4. 25 Land Holding Size	160
Figure 4.26 Production System	162
Figure 4.27 Materials collected by the tribal people	166-167
Figure 4.28 Changing pattern Occupation	172
Figure 4.29 Sources of Income	174-175
Figure 4.30 Nature of utilization of money	181-182
Figure 4.31 Source of indebtedness	185
Figure 4.32 Purpose of Indebtedness	187-188
Figure4.33 Consumption of cereal	190-191
Figure 4.34 Fuel consumption	193
Figure 4.35 Medicine Usage	196
Figure 4.36 Pursuit of education	198
Figure 4.37 Consumption of pulses	200
Figure 4.38 Consumption of vegetables	202
Figure 4.39 Consumption of fruits	204
Figure 4.40 Consumption of Meat and Eggs	206
Figure 4.41 Consumption of Fish	209
Figure 4.42 Consumption of Rice Beer	211
Figure 4.43 Consumption of Mahua beer	214
Figure 5.1 Average distance covered by the tribal respondent to reach different health centres (in kilometres)	272
Figure 6.1 Graphical presentation of SQI for Upland and low land	303

List of Maps

List of the Maps	Page No.
Map 2.1 Location map of the Study Area (Prepared by the Researcher, with Arc GIS)	48
Map 2.2 Geology of the Jhargram District	49
Map 2.3 Geomorphology of the Jhargram District	50
Map 2.4 Drainage map of the Jhargram District (Prepared by the Researcher)	52
Map 2.5 Soil map of the Jhargram District	54
Map 2.6 Distribution of Male and Female Population (2011)	56
Map 2.7 Distribution of SC, ST and Other Population (2011)	58
Map 2.8 Percentage of Male and Female Literacy (2013)	61
Map 2.9 Types of Workers in Jhargram District	63
Map: 2.10 Nature of Workers in Jhargram District	64
Map 2.11 Major Road networks in Jhargram District	66
Map 4.1 Per Capita Income of different blocks	178
Map 5.1 Cropping Intensity Map	220
Map 6.1 a) Thematic Layers of Changes in NDBI	300
Map 6.1 b) Thematic Layers of Changes in NDVI	300
Map 6.2 a) Thematic Layers of Soil Quality Index	305
Map 6.2 b) Thematic Layers of Water Quality Index	305
Map 6.3 a) Thematic Layers of the Waste Management Index	311
Map 6.3 b) Thematic layers of Percentage of households without safe sanitation	311
Map 6.4 a) Thematic Layers of Moisture Index	313
Map 6.4 b) Thematic Layers of SPI-3 (Standardized Precipitation Index - 3 months)	313
Map 6.5 a) Thematic layers of NDVI	314
Map 6.5 b) Thematic Layers of Average Power Consumption	314
Map 6.6 a) Thematic Layers of LST (Land Surface Temperature)	317
Map 6.6 b) Thematic Layers of Average annual rainfall (2018-2022) in m.m.	317
Map 6.7 a) Thematic Layers of Slope	318
Map 6.7 b) Thematic Layers of Relative relief	318
Map 6.8 a) Thematic Layers of Tribal population density	320
Map 6.8 b) Thematic Layers of Decadal change in tribal population (2001-2011)	320
Map 6.9 a) Thematic Layers of Crop Moisture Index	321
Map 6.9 b) Thematic Layers of Soil Moisture Index	321
Map 6.10 a) Environmental sustainability map using E-TOPSIS	326
Map 6.10 b) Environmental sustainability map using AHP methods	326
Map 6.11 Human Vulnerability Index Map	331

List of Photo Plates (378-384)

Plate 1 Well with Lid
Plate 2 Tap Water for Drinking
Plate 3 Soil Sample Lowland
Plate 4 Soil Sample Upland
Plate 5 Spring as a Drinking Water Source
Plate 6 Tap Water source for Village People
Plate 7 Soil Sample Upland
Plate 8 Soil Sample Lowland
Plate 9 Open Well
Plate 10 Open Well Drinking Water Source
Plate 11 Lowland Soil Sample
Plate 12 Upland Soil Sample
Plate 13 Researcher in Field
Plate 14 Open Well Use for Animal Drinking
Plate 15 Upland Soil Sample
Plate 16 Tube Well Drinking Water Source
Plate 17 Dulung River
Plate 18 Chilkigarh Raj Palace
Plate 19 Temple in Raj Palace
Plate 20 Jhargram Raj Palace
Plate 21 Tribal Religious Festival
Plate 22 Tribal Marriage Programme
Plate 23 Kanak Durga Temple
Plate 24 Chilkigarh Bio reserve
Plate 25 Soil Sample Collection from Field
Plate 26 Researcher with Soil Scientist
Plate 27 Tribal Village
Plate 28 Forest Belt in Jamboni Block