Geographical Review of India **86** (2) June - 2024, 111- 129

Assessment of Drinking Water Quality and Vulnerability in the Eastern part of Indian Sundarbans Region

Selim Molla[1] and Abhay Sankar Sahu[2]

Abstract : *At present, assessment of quality and vulnerability of drinking water is a crucial work to humans specifically in economically poor and physically constricted areas. This study focuses on quality assessment and vulnerability of drinking water in six blocks of the eastern part of Indian Sundarbans region. Methods like WQI and DWVI have been applied to find out drinking water quality and vulnerability respectively. Mathematical calculation and descriptive statistics are used to process data and determine the final result of each block. Results reveal that the worst quality of public drinking water supply prevails in Hasnabad and Hingalganj blocks and again highly vulnerable blocks are Haroa and Hasnabad in the study area. Hasnabad among all other blocks is in the top position in terms of poor quality of drinking water and its vulnerability if we consider both indices together.*

Key Words: *Indian Sundarbans, Drinking water quality, Water quality index, Drinking water vulnerability index*

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Geographical Review of India **86** (2) June - 2024, 130- 144

Crop Classification and Acreage Estimation using Multi-spectral and Temporal Earth Observation Data: A Case study of Varanasi District, Uttar Pradesh

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Abstract : *This study has been done to generate a cropping map of two major cropping seasons, i.e. Kharif and Rabi seasons, of the study area. Landsat 8 OLI multi-temporal data acquired in February 2017 and Sentinel 2-B data of October 2017 were used to classify six crop types for both cropping season in Varanasi District, Uttar Pradesh. The study employs vegetation indices, image differencing, and supervised classification techniques. All these digital image processing techniques were performed in ERDAS Imagine software. Supervised algorithms were calculated for acreage estimation and crop maps of the seasons for achieving the required accuracy. The overall accuracy (Kappa value) exceeds 91 per cent. Among the various crops, rice and wheat are the most accurately classified, followed by sugarcane, maize, jowar, bajra, and mustard, while peas, pulses, and gram are least accurately classified and to an extent, cause some sort of confusion. The achieved estimation percentage is suitable for planning and management of the crops.*

Key Words: *Crop classification, Multi-temporal satellite data, Supervised classification, Landsat 8 OLI, Sentinel 2-B*

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Geographical Review of India **86** (2) June - 2024, 145- 167

Socio-Economic Impact of Brick-Kiln Industry on the People Living in the Vicinity of Asansol City of West Bengal

Suvra Maji[1] and Sarfaraz Alam[2]

Abstract : *Brick kilns are found randomly scattered on the periphery of many Indian cities due to the high demand for bricks in construction industries in urban areas. Many brick kilns are situated in the municipal wards of the outer zone of Asansol city. Though part of the city, some of the peripheral wards of Asansol city resemble villages where open spaces are available in abundance. They supply bricks to the construction industry in the city. Due to the rising demand for bricks in Asansol city, the area under brick kilns has gradually increased. Most of the brick kilns are built on agricultural and fallow land. This has resulted in land use change and environmental degradation in their surrounding areas. Besides, brick kilns have created new economic opportunities and facilities in the neighbourhood and improve linkage with the city. At the same time, they have also threatened some of the traditional economic activities carried out by the people living around the brick kiln areas. Given these, the paper analyses the perception of local people about the socio-economic impact of brick kilns on people living within its vicinity.*

Key Words: *Brick making, Economic opportunities, Occupation, Agricultural land, Urban periphery*

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Geographical Review of India **86** (2) June - 2024, 168- 180

Investigating the Socio-economic Condition and Occupational Health Hazards of Brick Kiln Workers: A Case Study of Brick Kilns Along the River Ichhamati, Basirhat-I, West Bengal

Pinki Ghosh[1], Rituparna Biswas[2] and Susanta Pramanik[3]

Abstract : *More than 150 brick kilns are located along the banks of the river Ichhamati in North 24 Parganas district, West Bengal. This research aims to analyze the demographic, socio-economic and health-related challenges faced by workers in these brick kilns in the Basirhat-I area located on the bank of Ichhamati river in North 24 Parganas of West Bengal, India. The majority of laborers are migrants, followers of Islam and have limited literacy levels with extremely poor socio-economic backgrounds. Brickmaking entails significant risks, including debt bondage and its labour-intensive nature exposes workers to various occupational hazards. This case study of the brick kiln industry demonstrates that workers are frequently forced to work long hours and put their kids to work in addition to being trapped in debt bondage. The children are also deprived of regular, formal education. Collaboration between state government officials and brick kiln owners is essential to address these issues effectively. The study proposes solutions and suggestions to alleviate the challenges faced by brick kiln workers.*

Key Words: *Brick kiln, Workers, Socio-economic condition, Health issues, Bondage labourer.*

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Geographical Review of India **86** (2) June - 2024, 181- 197

Rural Homelessness in India: Distribution, Trends and Policy Appraisement

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Abstract : *Despite being familiar with the countryside, rural homelessness in India remains almost unacknowledged state. The issue has insignificantly been reflected in academic studies and policy papers. Although rural homelessness declined by nearly 28.34 per cent during 2001-11, still nearly 0.83 million rural people in the country live in houseless states (Census of India, 2011). Even after launching different rural housing schemes, many rural folks are still compelled to reside under the open sky. The larger States of the country have shared the bulk proportion of rural homelessness, but the magnitude of the problem in other States may not be denied. The present study aims to appraise the Spatio-temporal dynamics of rural homelessness with the help of Census data from 2001 and 2011. Further, the endeavour strives to spot the prime responsible factors of rural homelessness and to evaluate the ongoing schemes of alleviating homelessness in rural areas. Poverty, landlessness, and displacement in native areas are identified as crucial causes of rural homelessness, forcing the rural poor to shift to nearby urban centres for better livelihood opportunities.*

Key Words: *Homelessness, Displacement, Rural Homelessness, Rural housing schemes.*

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Geographical Review of India **86** (2) June - 2024, 198- 213

An Assessment of Happiness and Well-being of Older Adolescent Females of a Mining-Industrial Region, Paschim Barddhaman District, West Bengal

Rituparna Ghosh*

Abstract : *Happiness and well-being are inextricably related to each other. An individual's level of happiness is generally linked with one's well-being- mental as well as physical. Adolescence is a very vital phase in one's life. Adolescence is "the period of life spanning the ages between 10 to19 years (Upadhye and Upadhye, 2017). Mental health problems are very common among adolescents, one out of seven adolescents suffer from mental disorder and one out of six persons are adolescents (World Health Organization, 2021). Physical and mental changes occur during this phase of life. Mental health condition of adolescents is neither recognized nor treated. Mental disorder has several serious consequences; one such is difficulty in the process of education. Existing literatures have established a strong positive relation between happiness, mental health and well-being. An attempt has been made to assess the state of happiness of adolescent females and infer their well-being from the same. The study is based on perception survey, conducted on 60 adolescent females on the basis of a structured questionnaire. The selected study area is mining-industrial region of Paschim Bardhaman district of West Bengal. The rural-urban framework of the region will provide a comparative base for analyzing the state of happiness.*

Key Words: *Adolescence, Mental disorder, Mental health, Well-being, Happiness level, Perception survey, Rural-urban divide, Mining-industrial region.*

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