

Quality Assessment of Soil in Baglan Tehsil, Nashik District, Maharashtra, India

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Abstract : Soil is an important abiotic factor in nature that provides a natural habitat for plants and animals. Soil can hold water and act as an important source of nutrients to the plants. It is formed by the combined action of climate factors like water, light, temperature and birth factors like microbes, plants and animals. The nutrient content of the soil is affected by physical, chemical and biological factors. India is an agrarian country where 67 per cent of the population is engaged in agriculture and faces decline in soil quality on a regular basis. India is an agrarian country where 67 per cent of the population is engaged in agriculture. Use of chemical fertilizers, pesticides, herbicides, fungicides, insecticides and other practices have adverse effects on the soil. All primary, secondary and micronutrients are imbalanced due to wrong practices by farmers. They are not aware of the optimum use of chemical fertilizers and pesticides. They have some limitations although some of them are aware. This paper tries to assess the quality of the soil in Baglan Tahsil of Nashik District. This paper attempts to find out the scenario of primary nutrients like Nitrogen (N), Phosphorus (P) and Potassium (K). Secondary nutrients Viz. Calcium (Ca), Magnesium (Mg) and Sodium (Na). The three other micronutrients Manganese (Mn), Copper (Cu) and Zinc (Zn) and pH, EC, OC. Investigations were undertaken on the soil quality in a region of Baglan Tahsil in Nashik district. Geo-referenced surface soil samples (0-0.15 m depth) were collected from 21 different locations). Investigations were undertaken on the soil quality in a region of Baglan Tahsil in Nashik district. The qualities of soil samples were acceptable from the majority of physico-chemical parameters but for some sites, soils need to be treated before using it for crop cultivation and concluded that the quality of soil samples under the study area is nearly fit for crop cultivation and agricultural utilization.

Key Words: Soil Quality, Primary and Secondary nutrients, pH, EC, OC

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Gender Disparity in Work Participation: An Analysis of Chakrata Block, Uttarakhand and Shillai Block, Himachal Pradesh

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Abstract : *The present study investigates the gender disparity in work participation rates between the Chakrata block of Uttarakhand and the Shillai block of Himachal Pradesh. The study makes use of secondary data from the Census of India and various governmental reports, the research employs modified Sopher's Disparity Index to quantify gender disparities in work participation. The findings reveal a stark contrast between the two community development blocks. The Shillai exhibiting a higher female work participation rate compared to Chakrata and this disparity may be attributed to cultural norms, educational opportunities, and socio-economic conditions. The study highlights that while female work participation has increased over the years, yet it is significantly lower than that of males, particularly in Chakrata. The analysis underlines the status of targeted interferences to discourse fences faced by women, such as limited access to education, traditional gender roles, and inadequate job opportunities. It is therefore imperatives to have enhanced educational initiatives, promoting community awareness, and creating supportive policies to foster an enabling environment for women's employment.*

Key Words: *Gender Disparity, Work Participation Rate, Female Workforce Engagement, Educational Opportunities, Sopher's Disparity Index.*

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Urban Ferry Infrastructure in Kolkata-Howrah: A Strategic Analysis using AHP Techniques

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Abstract : *The operational efficacy of a large-scale urban ferry system relies on a myriad of factors, originating from both the demand and supply facets. Assessing these elements necessitates the utilization of decision-making methodologies, such as the Analytic Hierarchy Process (AHP), renowned for its role in Multi-Criteria Decision Making (MCDM). Despite the robust structural integrity of the Kolkata-Howrah urban ferry infrastructure, its utilization remains notably suboptimal. This study endeavors to underscore the criteria linked to ferry terminals and routes, aiming to ascertain their relative contributions to the overall service provision. Analysis through AHP exposes substantial disparities in the quality of service across the infrastructure, presenting a hierarchy of ferry terminals and routes based on their performance metrics. Tackling these foundational issues requires a substantial overhaul in policies and planning, prioritizing grassroots challenges over administrative, economic, and social intricacies. Furthermore, this paper elucidates the sequential stages of the rudimentary AHP model, furnishing a comprehensive reference guide.*

Key Words: *Level of Service, Ferry Routes, Ferry Terminals, Priority Vector, Paired Comparison.*

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Role of Scientific Attitude on Sustainable Development Awareness among the Women of Other Backward Class: A Case of Murshidabad District

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Abstract : *In the 21st century, cultivating a scientific mind set and fostering awareness of sustainable development are essential attributes for individuals. The present inspection aims to examine the role of scientific attitudes (SA) on awareness towards sustainable development (ATSD) (social, economic and environment) among other backward class (OBC) women using a sequential explanatory mixed method. A total of 104 OBC women were chosen using stratified random sampling for quantitative analysis, and from this group, 15 participants were purposively chosen for qualitative analysis based on their high and below average levels of scientific attitude. This study employed statistical techniques, including Mean, Standard Deviation (SD), t-test, correlation, and regression used as a quantitative analysis, while content analysis was used as a qualitative analysis. The results indicate a strong and significant positive relationship between SA & ATSD and found a minimum effect of scientific attitude on awareness of sustainable development. OBC women with a high scientific attitude demonstrate greater awareness of sustainable development, particularly in areas such as environmental protection, participation in awareness programs, environmental education, gender equality, educational importance, and entrepreneurship, compared to those with a lower scientific attitude.*

Key Words: *Scientific Attitude, Awareness towards Sustainability, Other Backward Class, Sequential Explanatory Mixed Method Research, Content Analysis.*

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Experimental Application of Smart Tourism in India: The case of Hampi

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Abstract : *The concept of smart tourism is gaining prominence today as more and more people are relying on the internet. Several European cities are using smart technology in use of energy, water resources, transport for tourists, information about tourist attractions, local culture and history. A Mission has been set up to identify the smart tourist destination of Europe every year. A similar initiative may be taken in India. But it is an expensive step and needs to be carefully analysed before execution. This paper has chosen the UNESCO World Heritage Site of Hampi as a suitable tourist destination where the smart tourism technology can be tried out before gradually spreading to other spots. It outlines the various strategies which can be implemented here and also tries to weigh the pros and the cons of such steps. If properly applied, Smart tourism can vastly improve the tourist experience and help the tourism sector truly become the engine of economic growth.*

Key Words: *Smart tourism, Hampi, economic growth, UNESCO*

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Rethinking Maternal Health through a Spatial Lens: A Case Study

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and Amrita Chaudhuri⁴**

Abstract : *Maternal health refers to the health of women during pregnancy, childbirth, and the postnatal period. Each stage should be a positive experience, ensuring mothers and children reach their full potential for health and well-being. (WHO, 27/4/22). India is committed to achieve the Sustainable Development Goals (SDGs, 2015) in which maternal health status is an important parameter. To concretize such a commitment, the country has launched the National Rural Health Mission (NRHM, 2005), which aims to improve rural health facilities in general, and especially to increase access to quality healthcare for women in rural areas. This study highlights the maternal health of women, with a case study of Bilkanda-I and Bilkanda-II Gram Panchayat, under the Barrackpore subdivision of North 24 Parganas district, and Bagna village under Gaighata Block in the Bongaon subdivision of North 24 Parganas district. The research work also focuses on the role of Gram Panchayat in the maternal health sector of the study area. The methodology adopted for this study is based on primary as well as secondary data. The collected data have been analyzed using GIS techniques for mapping and cartographic representation. BMI Index has been calculated, and SWOT analysis has been used.*

Key Words: *Nourishment, Maternal Health, Social Wellbeing, Hospital access, Government services, Road network.*

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Integrated Assessment of Water Quality and Heavy Metal Pollution Using WQI, HPI and Multivariate Analysis in the Noai River, West Bengal, India

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Abstract : *This study assesses the effects of rapid land use changes on water quality and heavy metal pollution in the Noai River through a comprehensive methodology that incorporates the Water Quality Index (WQI), Heavy Metal Pollution Index (HPI), Principal Component Analysis (PCA), and spatio-temporal land use/land cover (LULC) analysis. Nine carefully chosen sampling locations, encompassing upstream agricultural, midstream industrial-urban, and downstream transitional areas, were examined for key physicochemical characteristics and heavy metals (Pb, Cd, Hg, Cr) in accordance with APHA standards. Findings indicate significant degradation of water quality in the midstream segment. WQI ratings varied from 143 to 2009, classifying the majority of sites as unsuitable for potable use. HPI readings over the critical threshold (100) at seven stations, with severe contamination noted at industrial-urban locations (HPI reaching 1209). PCA identified two principal components accounting for 83.74 per cent of total variation, with PC1 (72.27 per cent) indicative of anthropogenic pollution, defined by elevated loadings of TDS, conductivity, BOD, COD, and heavy metals, whilst PC2 (11.47 per cent) represented physical and hydrological factors. Land Use and Land Cover (LULC) research from 1990 to 2025 reveals a 170.68 per cent rise in built-up areas and a 57.85 per cent decrease in vegetation cover, with the most significant urban expansion occurring between 1990 and 2000. The spatial correlation between urban growth hotspots and high WQI and HPI values substantiates a robust connection between land use and water quality. The results underscore the pressing necessity for wastewater treatment facilities, regulation of industrial discharges, and ecological restoration techniques to avert further deterioration of this peri-urban river system.*

Key Words: *Water Quality Index (WQI); Heavy Metal Pollution Index (HPI); Principal Component Analysis (PCA); Heavy metal contamination; Multivariate analysis.*

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A Critical Geographical Reading of the Literary Images of a Locality of Varanasi City through the Memoir *Kashi Ka Assi*

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Abstract : *Cities have always been living entities. Over time, they evolved into genre de vie. Litterateurs have used cities as the backdrop for their imaginative literary works. Varanasi city has been used as a backdrop in many literary works (e.g., Abdul Bismillah,1987; Munshi Premchand,1927; Shivprashad Singh,1973; Kashi Nath Singh, 2002; Dr. Tulsiram, 2014). Each of these literary works creates a specific image of the city. This paper is the critical geographical reading of Kashinath Singh's Kashi Ka Assi, a literary work, that materialized in the Assi locality of Varanasi city between the 1990s to early 2000s. The memoir delineates how the local intelligentsia, through their everyday interactions expressed in characteristic Banarasi (pertaining to Varanasi) slang-marked more by profanity than by colloquialism of cultural specificity to articulate the complex interrelations between cultural topography, lived experience, and social life within the Assi locality. The study employs qualitative discourse analysis to explore the spatial and cultural dimensions expressed within the selected literary text. This method supports a critical understanding of how language and dialogic interactions within narratives create meanings of place, identity, and belonging. By examining recurring discursive motifs and their socio-cultural resonances, the analysis demonstrates how the text creates and articulates the spatial and ideological configurations that shape the locality's literary geography. Particularly, it investigates how the memoir produces a selective and idealized portrayal of the Assi locality-embodied through notions of Banarasipan (Varanasiness) and Akkhadpan (presumptuousness) as a genre de vie-and how this representational framework simultaneously legitimizes expressions of vulgarity, misogyny, and caste-based prejudice in public discourse, while implicitly marginalizing other urban spaces and subjectivities within the city.*

Key Words: *WImage of the city, locality, stereotype, social exclusion, public space, discourse analysis, kashi ka assi*

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A Geographical Study on Chhau Dance-form of Purulia District, West Bengal

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Abstract : Folk dance is an expression of human culture as a result of the interaction between people and their environment. 'Chhau', a vibrant folk dance-form in West Bengal, has gained worldwide popularity due to its eye-catching mask and dance style, which are its main attractions. The main focus of this study is to assess the relationship between the 'Chhau' dance-form and physical environment. The study also aims to elucidate the evolution of a specific variant of this dance-form within a particular landform by drawing comparisons with other dance-forms in Purulia, West Bengal. Changes in the physical environment led to changes in the costumes, traditions, and culture of the community, which in turn contribute to the movement of the dance-form, beats, and musical arrangement, along with the costumes and dance styles. In order to determine the relationship between the physical environments and dance style, different types of thematic maps, such as elevation maps, and soil moisture index maps are processed from secondary data and semi-structured interviews of 47 practitioners are analysed. From the analysis, we can conclude that this dance-form is gradually adopted by the local people of Purulia district, influenced by their surrounding environment, which is evident in its vigorous style and distinguishes it from other dance-forms in Bengal. 'Chhau' dance incorporates facial expressions and gestures that reflect their physical environment, which includes harsh terrain, harsh climate, and infertile soil. Thus, different frames of ideology that are adopted from the landscape are transmitted to the cultural expression such as dance in successive generations.

Key Words: Chhau, Environment, Soil Moisture Index, Cultural expression, Dance-form and style.

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Understanding Health Related Empowerment of Community Members: Looking Beyond the Convention of Rural Space

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Abstract : *Communities' role in health decisions can improve the health outcomes however from the health service point of view the community till date are participants in the practices and policies of health services and not active decision makers particularly in rural parts of India. In this backdrop the objective of this study intends to examine whether the community has gained empowerment in health decisions at the grassroot level or not. A comparative study of two Blocks namely Khargram in Murshidabad District and Onda in Bankura District of West Bengal was conducted. For this study 591 respondents were selected from each Block. Six major domains were identified to measure the Community Empowerment Index. Principal Component analysis is used to compute Factor Score for each domain. Using Factor Score as weight factor Score Coefficient, Component Score is computed. Using proportion of weight on factor score, a Standardised Index (after Hightower 1978) was constructed. The six selected domains are used to reach to an Overall Standardized Index where individual domains are weight assigned and an overall value is achieved. The values are classified into first to fifth quintiles. The results reveal that in Onda Block out of the total respondents 81 per cent belong to fairly empowered to moderately empowered category. In Khargram 79 per cent respondents belong to lowly empowered to moderately empowered category. Only 1 per cent community members in Khargram and 6 per cent in Onda belong to highly empowered category. Since assessment of community health empowerment is a neglected domain so far in Primary Healthcare System hence the constructed Health Empowerment Index is a significant addition in this field. The index does not stress whether a community is better or worse, it rather depicts the differences and measures of community empowerment from one spatial unit to another, so that the heterogeneity can be minimised and lacked communities can include the processes followed by empowered communities in health sector.*

Key Words: *Blocks, community, domains, empowerment, health, heterogeneity*

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Population Dynamics in Champawat District, Uttarakhand: A Census-Based Analysis of Demographic Change (1921–2011)

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Abstract : *Using Census data, this study investigates demographic changes in Champawat District of Uttarakhand between 1921 and 2011. Attention has been given to indicators such as population growth, density, literacy, sex ratio, child population and migration. The district experienced a consistent rise in population over the study period, although the pace of growth became slower during the later decades. This pattern may be linked with an ongoing demographic transition. Literacy levels, particularly among females, improved considerably, while the child sex ratio remained relatively unfavorable. Migration also emerged as an important factor affecting the spatial distribution of population in different parts of the district. Overall, the observed demographic patterns reflect regional disparities and suggest the need for more balanced planning and careful management of resources in this Himalayan district.*

Key Words: *Population Dynamics, Demographic Change, Census Analysis, Migration, Population Projection.*

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