

Delineating Landslide Susceptibility Zones using Analytic Hierarchy Process Method for parts of North Konkan, Maharashtra

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Abstract : *The undulating terrain of the Western Ghats and the coastal region of Maharashtra State is often affected by landslides during the rainy season, leading to significant losses to property and sometimes human lives. For effective management of this problem, landslide hazard assessment is a necessary pre-requisite. This paper uses a Multi Criteria Decision Making approach to delineate the potential landslide susceptibility zones (LSZ) in the Palghar district of North Konkan region in Maharashtra. Ten landslide preparatory and triggering factors, including slope, aspect, relief, drainage, lithology, structure, vegetation density, land use and land cover, roads and rainfall are used as input data layers. The analytic Hierarchy Process (AHP) model is run using the vector approach to determine weights for each thematic data layer. Pair-wise comparison matrices are constructed for inter- and intra-parameter comparisons through a fundamental scale of absolute numbers. To evaluate the consistency of judgments, the Principal Eigen vector approach has been adopted by calculating Consistency Index (C.I.) and Consistency Ratio (C.R.). The LSZ map produced through this method indicates that 15.34 per cent of the total geographical area falls within high to very high hazard susceptibility classes, 26.77 per cent in moderate class and 57.89 per cent in the low susceptibility class. The high to very high hazard susceptibility zones occur mostly along the foot slopes of isolated hills and the slopes of the Western Ghats, particularly along the road cuts.*

Key Words: *Landslide hazards, Analytic Hierarchy Process, Pair-wise comparison, Landslide susceptibility zonation.*

Introduction

‘Landslide hazard refers to the probability of occurrence slope failures within a specified time and areas prone to landslide’ (Varnes, 1984). The losses caused by slope failures associated with landslides can be significantly minimized if the problem can be diagnosed well in advance (Brabb, 1993).

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Rural out-migration and land-use changes in Purulia District of West Bengal, India

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Abstract : *Out-migration has emerged as a vital livelihood strategy among the rural communities in Purulia district of West Bengal, India. This phenomenon has depopulated some of the villages and increased the abandonment and underutilization of farmland. The changes in the land use practices in the rural areas have posed new challenges for the agrarian rural economy, traditional livelihood portfolios and sustainable land management practices in the district. This article compares the land use practices of migrant households and non-migrant households in selected villages of the district. The primary data for the study were collected using a mixed method. The study indicates that the underutilization and abandonment of farmland is more prevalent among migrant households compared to the non-migrant households. Moreover, the rural communities were found shifting from comparatively intensive farming to less intensive subsistence farming. Besides migration, scarcity of water resources and lack of availability of agricultural labour in the villages are the two most prominent reasons behind the underutilization and abandonment of farmland. If this situation continues in the future unabated, it may increase pressure on the rural agrarian economy, local livelihood security and sustainable land use practices. The paper suggests a local/regional approach for tackling the problems.*

Key Words: *Livelihood strategy, land-use planning, farmland, rural development, sustainability*

Introduction

Farming and out-migration are the two most significant livelihood strategies in under-developed and developing nations, which predominantly have agrarian-based economies (World Bank, 2007; Haan, 1999). Globally around 76 per cent of the extremely poor rural population is dependent on agriculture (World Bank and IMF, 2016). According to the 38th Round (1983) of the National Sample Survey (NSS) report, nearly 77 per cent of rural households in India depended on agriculture for their livelihood. However, with time, the forces of globalization, urbanization and modernisation push the masses from traditional on-farm based activities towards off-farm and non-farm based activities to meet their livelihood needs. As a result, the contribution of agriculture to GDP and

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The British Indenture System for Tea Gardens in North Eastern India and Making of the Plantation Coolies

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Abstract : *Tea plantation in the North-Eastern territories of India is one of the traditional industries founded by the British Colonial Rulers in the early 19th Century. The foothills of North-Eastern India have been selected for tea plantation as the area is endowed with unique agro-ecological provisions. The entire region was sparsely populated and the local inhabitants were generally reluctant to hard physical work which was essential for various works of tea production. Thus the British gardeners sought to recruit tea workers from remote areas far off the garden sites under a certain penal contract known as Indentureship. This labourers recruiting system could otherwise be compared to bonded labour system and directly related to economically forced migration together with the recruitments of specific institutional agreements. The present study begins with a vivid description of the introduction to the British Indenture system, encompassing the origin and development of the system, followed by analysis of the major rules and regulations related to labourer recruitments, and the roles of the Arkathis and Sardars on hiring of tribal labourers from different remote parts of India especially from the Chotanagpur plateau region. The study further focuses on the abject conditions of transportation, minimum statutory wage scales, overseas migration of the bonded labourers engaged in different plantation colonies, and finally concluding remarks have been drawn after a brief discussion on the abolition of British Indenture System during the post-Colonial time.*

Key Words: *British Indenture System, Plantation Labourers, Tea Plantation, Tribal People, and Migration*

Introduction

The plantation economy in India was first introduced by the British Colonial rulers in Bengal foothills and Assam valley with a monopoly in tea gardening, industry and trade (Misra, 1987). The prime need of the colonial plantation industry has been the cheap, obedient, and hardworking labourers with a meager wage. Before the foundation of the tea gardens, the terrains of the North-Eastern India were covered with inaccessible dense forests interspersed with hills and swamps, unsuitable for settlements and consequently the area was sparsely populated. Thus the absence of a suitable class of plantation labourers was predominant (Rao, 1946). The imported Chinese skilled

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Estimation of Spatio-temporal Changing Nature of Population and Forest Cover in West Bengal, India

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Abstract : *West Bengal is the second most densely populated state of India after Bihar with an increasing decadal population growth of 13.93 in 2011. This state has a Recorded Forest Area (RFA) of 13,491 sq. km in 1901 which is 11,879 sq. km in 2021 with a Total Forest Cover (TFC) of 16,831.87 sq. km. The present study is concerned with a spatiotemporal analysis of population dynamics and forest cover in West Bengal and an assessment of the relationship between these two. Empirical outcomes have been obtained by simple linear regression, Pearson's correlation, and two-tailed significance tests based on secondary data. The study reveals that there is a negative relationship between the population and the RFA in the long term but there is no clear relationship in the case of the district-wise population and TFC at a specific time (2011).*

Key Words: *Population growth, Regression Analysis, Recorded Forest Area, Total Forest Cover, West Bengal.*

Introduction

India shares only 2 per cent of the world's forest area and 24.62 per cent (total forest and tree cover) of the country's geographical area/GA (ISFR, 2021). The National Forest Policy of India 1988, envisaged a goal of achieving 33 per cent of the GA of the country under forest and tree cover (ISFR, 2021). The per capita availability of forests in India is much lower than the world average (Ray & Ray, 2011). West Bengal is one of the most densely populated states of India with a diversified forest ecosystem. Here, only 13.4 per cent of the total land area is reserved as notified forests (Raha et al., 2014). Certainly, forest resources help in the economic development of a country or a state (Hao et al., 2019), but on the other hand, exceeding economic development destroys forest resources and leads to deforestation. Deforestation is "the conversion of forest to other land use independently of whether human-induced or not" (Food and Agriculture Organization, 2020) which affects the environment as well as human beings. The indirect causes of deforestation are exploitation by industrialized countries, overpopulation, poverty, transmigration and colonization schemes, fiscal policies, markets and consumerism, corruption, and political causes (Chakravarty et

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Contemporary Problems and Prospects of Santipur Handloom Industry

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Abstract : *Small and medium industries have been the major thrust for the governments and authorities for employment generation. Santipur Handloom, one of the heritage and famous small industries prides Bengal for several centuries. This industry is a source of livelihood and employs thousands of people for several decades. However, in recent times this industry is going through severe stress and lost its position to the power loom industry. In this context, this paper tries to explore underlying factors behind the decline of handloom textiles in Santipur and comments on remedial measures for its rejuvenation. This study is conducted by mixed method approach with the help of data collection techniques include in-depth interview, narrative analysis, participant observation, focused group discussion and collection of secondary data. Major findings reveal the policy paralysis leading to failure to include modern technology, capital infusion, low wages and lower quality of fibre affecting the industry.*

Key Words: *Small industry, employment, Handloom, Power loom, Santipur.*

Introduction

Handloom weaving is one of the subsistence activities and culture in India since Vedic times (Kurup, 2008). In Indian handloom weaving, Santipur is the centre for manufacturing variety of products (Roy, 2017). In 1409; Ganesh Danu Mardhandev started handloom weaving at Santipur. Within a short period, the popularity and demand of Santipuri Dhotis and Saris were highest within the nation and outside (East Asian countries, Middle-East and Europe) (Das, et al., 2016). Over time, technology has changed with the handlooms production (Kurup, 2008). Darga Das Kastha introduced Barrel Dobby for expediting the production (Dobby is a device attached in weaving which controls all the wrap threads by pulling on draw threads). Later, Debbendranath Mukherjee introduced the Jacquard machine and this facilitated a broader cross section of new designs (Das et al., 2016). After partition (1947), large numbers of immigrants came from East Pakistan (now Bangladesh) to Santipur and its adjoining Fulia region. Large numbers of them opted handloom weaving to sustain

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Participatory Planning and Development in Rural Purba Medinipur District, West Bengal

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Abstract : *Public participation in the Gram Sansad and Gram Sabha meetings plays a vital role in rural planning and development in India, including the state of West Bengal. People generally highlight the difficulties and shortcomings they face in their daily lives at the Gram Sansad meetings. The local Panchayat incorporates their suggestions in the village development plan. Due to socio-economic and physical diversities, the percentage share of public participation in the Gram Sansad and Gram Sabha meetings widely varies. The present work intends to focus on the scenario of participatory planning and its relation with the level of rural development and reveal the rural development scenario, participatory planning scenario among Scheduled Caste (SC) and Scheduled Tribe (ST) and non-SC/ST populations in the district and its role in the level of rural development in Purba Medinipur district. For this purpose, the authors conducted a sample survey by selecting 250 respondents with the help of the purposive sampling method. The authors used statistical tools such as mean, average distance, ranking method, total performance rank, ratio, coefficient of correlation, and standard deviation for analysis and interpretations. The study reveals that participatory planning faces several problems relating to plan implementation in the study area. Further, in the blocks where public participation is high in the discussion of the Gram Sansads and Gram Sabhas, rural development is higher and vice versa. Based on the results, the present study recommends that public participation be enhanced to achieve a higher level of rural development.*

Key Words: *Participatory planning, Gram Sansad, Gram Sabha, development, disparity, management*

Introduction

Participatory planning plays a crucial role in the planning and development of India, especially in rural areas. Local people in rural areas participate in the plan preparation and implementation of development work in villages through the participatory planning process. In participatory planning, the entire process prevails through the active involvement of the local people. However, in India, participatory planning reveals many problems in different phases of planning. In Purba Medinipur, a district belonging to West Bengal, India, the process of participatory planning is also not carried

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