

CHAPTER 20

GEOGRAPHY

Doctoral Theses

01. CHAUDHARY (Sambhawna)
Springshed Management for Sustainable Agriculture and Livelihood in Dev Prayag, Uttarakhand.
Supervisor: Prof. Bindhy Wasini Pandey
Th 27490

Abstract

Springshed Management for Sustainable Agriculture and Livelihood in Dev Prayag, Uttarakhand Sambhawna Chaudhary, PhD Research Scholar Abstract My study is based on springshed management for sustainable agriculture and livelihood in Dev Prayag, Uttarakhand, as springs have been the main source of water for humans and the ecosystem of mountain areas, as they are dependent on natural springs for their basic as well as economic needs. The research has tried to look into the various facets of the community with respect to declining springs in Dev Prayag. For getting holistic knowledge about the whole study the area was divided in different elevation primary data was collected through field visit and secondary data collected from existing literature. Springs of the selected villages are mapped in the inventory it was concluded that 80 per cent of the springs have been found to be critical. To assess different livelihood options and opportunities and their relation to declined springs have been done by using DFID model. The locals find it increasingly difficult to adapt to the declined springs and water scarcity condition in the area and struggling to earn a sustainable livelihood. LULC have been collected from the primary and secondary sources maps of 2000, 2010 and 2023 were prepared. An attempt has been made to develop relationship between livelihood options and land use. The conversation with the locals shows that how declining springs in near future will be harmful. It further seeks to suggest some sustainable alternate livelihood opportunities and some improvements in ready existing adaptive options. Finally, it was concluded that adopting appropriate water management strategies and storing or preserving the water supply when it is in excess are essential for the long-term survival of the local population in this climate change scenario. Keywords- Springs, Dev Prayag, Livelihood, Agriculture, Land use and Land Cover Change

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1. Introduction 2. Geographical Profile of The Study Area 3. Springshed Inventory and Mapping in Dev Prayag Block 4. Impact Of Springs On Livelihood Security In Dev Prayag 5. Spatial Temporal Change of Springs in Dev Prayag 6. Programmes and Policies for Water and Livelihood 7. Summary and Findings. Bibliography. Appendix: Questionnaire.

02. NITHARWAL (Teja Ram)
Geographical Analysis of Effects of the Indira Gandhi Canal Project on Dairy Occupation from 2000 - 2015.
 Supervisor: Prof. Bindhy Wasini Pandey
Th 27493

Abstract

Geographical Analysis of Effects of the Indira Gandhi Canal Project on Dairy Occupation from 2000-2015 Teja Ram Nitharwal Ph.D. Scholar Department of Geography Delhi School of Economics Abstract: Dairy farming, a time-honoured agricultural practice dating back to 6,000 BC, has evolved into a significant industry with global implications. It plays a pivotal role in providing milk and dairy products to populations worldwide. This study delves into the transformative impact of the Indira Gandhi Canal, also known as the Rajasthan Canal, on agricultural practices and dairy production within the regions of Rajasthan and Haryana in India between 2000 and 2015. The Indira Gandhi Canal, an ambitious irrigation project, originates from the Harike Barrage in Punjab and traverses arid landscapes before reaching the Thar Desert. It serves as a lifeline, replenishing parched farmlands and empowering the agricultural sector. The contribution of canal to enhancing agricultural productivity, specifically in the context of dairy farming, is the primary focus of this research. The investigation explores the role of canal in enhancing milk production, fostering sustainable agricultural practices, and ultimately elevating the socio-economic conditions of rural communities. Dairy farming serves as a linchpin for rural livelihoods, providing income sources and employment opportunities. The study scrutinizes the extent to which dairy farming has been harnessed as an economic catalyst and an instrument of rural development. Through a comprehensive analysis of data spanning from 2000 to 2015, this study sheds light on the nexus between the Indira Gandhi Canal, dairy farming, and socio-economic development. The research provides valuable insights into the dynamics of milk production, income generation, and the overall well-being of rural communities in the region. Moreover, it underscores the canal's instrumental role in transforming traditional agricultural practices into sustainable and income-generating ventures. Keywords: Dairy farming, Indira Gandhi Canal, Socio-economic development, Milk production, Rural livelihoods.

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1. Introduction 2. Geographical Profile 3. The Impact of Indira Gandhi Canal on Agricultural Practices And Milk Production: A Comprehensive Study 4. Dynamics of Dairy Livestock Populations Along The Indira Gandhi Canal (2000-2015): Trends, Patterns, And Implications 5. The Socio-Economic Impact Of Dairy Farming on Rural Livelihoods: Livelihood Diversification And Improvement 6. Enhancing Dairy Farming Practices Through A Comprehensive Analysis of Government Policies and Programs In The Indira Gandhi Canal Project Region 7. Summary & Conclusion. Bibliography. Appendix Questionnaire.

03. NOORSABA KHATOON
Assessing the Spatial Dimension of Food Security in Western Uttar Pradesh.
 Supervisor: Prof. Swati Rajput
Th 27494

Abstract

Agriculture is vital in Western Uttar Pradesh, but challenges such as low productivity, high population density, environmental degradation, and socioeconomic disparities affect food security. This study analyzes agricultural performance using district-level data from 1980 to 2020, influenced by climate, soil quality, and farming practices. Climatic trends show rising temperatures and decreasing rainfall, leading to drier conditions that reduce crop yields by 3 to 12 percent per degree increase in temperature. Drought patterns also changed, with Kharif experiencing low-intensity droughts and Rabi facing more severe droughts. A food security index highlights district performance, identifying high and low-performing areas. The relationship between socioeconomic status and food security shows that higher education and social group status increase food security, with higher agricultural income also improving it. A survey of 150 households across six villages revealed that 100% of respondents believe climate change has significantly impacted agriculture, affecting soil, water availability, production, and yields. Priority solutions include water harvesting technology, developing water resources, and improving healthcare and educational infrastructure. Additional priorities are pest and disease management, nutritional education, and access to agricultural inputs. To ensure sustainable food security, introducing high-yield crops, optimizing water management, improving infrastructure, and providing targeted subsidies are essential. Implementing nutritional programs and a climate resilience strategy is vital to protect agricultural livelihoods and maintain food availability. Policymakers should adopt an intersectional approach to recognizing vulnerabilities based on religion, caste, gender, and socioeconomic status, promoting inclusive and equitable development for a prosperous society. In conclusion, this survey provides a roadmap for addressing agricultural challenges. Effective water management, resilient crops, and enhanced support services are crucial. Developing climate adaptation programs tailored to district needs will help farmers cope with changing conditions, build resilience, and ensure a sustainable agricultural future. This report emphasizes the importance of targeted interventions and coordinated efforts to improve livelihoods in marginalized regions, enhancing food security and sustainability.

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1. Introduction 2. Geographical Profile: Western Uttar Pradesh 3. Agriculture Production and Food Security in Western Uttar Pradesh 4. The Impact of Climate Shocks on Agriculture Productivity and Returns in Western Uttar Pradesh 5. Socioeconomic Disparities and Inequality in Western Uttar Pradesh 6. Field Survey Report: Climate and Agricultural Challenges in Vulnerable Districts in Western Uttar Pradesh 7. Conclusion and Policy Recommendations. Bibliography. Appendix.

04. RAJORIA (Prastha)
Impact of Peer-To-Peer (P2p) Accomodation Economy on The Tourism in The Post Covid Era: A Case Study of Rajasthan.
 Supervisor: Prof. Anshu
Th 27496

Abstract

Abstract Among India`s all states, Rajasthan is the most picturesque state and famous for its sunset views. Every year, millions of visitors go to Rajasthan to see the palaces and the pink city of Jaipur, which serves as the capital of the state.

The state has achieved remarkable strides in agriculture and infrastructure in recent past, despite its arid landscape. Culturally and historically, the state is very significant geopolitically. Women looking for work have a leg up in the tourism industry, which employs about 10% of the world's population, brings in much needed foreign currency, and benefits a diverse range of individuals throughout its value chain, including farmers, artisans, and rural laborers. Technology is becoming an even more powerful force in the tourist sector. Yes, the present situation of booking and searching for a vacation has been greatly influenced by OTAs like Expedia, TripAdvisor, Ctrip (now Trip.com), and The Priceline Group. Travelers and data-owning platforms are now in a position of power. This new forum gives travellers a voice before, during, and after trips to a worldwide audience, which in return empowers booking platform owners by influencing the decisions of future customers could make. As a result of this innovation, conventional tourist services are facing new competition, and the already complicated tourism business is facing an additional level of complexity. The study also tries to investigate the other unexplored areas of P2P accommodation economy such as - role could peer-to-peer accommodation networks play in poverty alleviation, growth in multi-unit ownership and/or management substantial enough to become a viable self-employment model in its own right; the environmental impact of P2P accommodation etc. Hence the statement of problem selected is Peer to Peer Accommodation: A Mix Bag of Opportunities and Challenges in the Post-Covid World. Peer-to-peer accommodation network hosts offer services that are very similar to those offered by established commercial tourism accommodation providers. Peer-to-peer lodging networks are unable to plan supply; therefore, they must find ways to encourage both hosts and visitors to use their underused or underutilized space. Marketing is the usual go-to method for businesses when trying to entice new clients. In order to attract visitors, peer-to-peer lodging networks aggressively promote themselves. At the end, P2P Accommodation proves out be an alternative accommodation for the tourists due to the new experience, homely atmosphere, safety and other parameters.

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1. Introduction 2. Geographical Profile of the Study Area 3. Role of P2P Accommodation Economy in Tourism Industry 4. Impact of P2P Accommodation on the Sustainability of the Tourism 5. Resilience and Carrying Capacity of the State in Post Covid World 6. SWOC Analysis of P2P Accommodation Economy in Tourism Industry 7. Suggestions and Measures to Improve the P2P Accommodation Economy 8. Findings, Recommendations and Conclusions. Bibliography. Appendix: Questionnaire.

05. SANJEET KUMAR

A Comparative Geospatial Analysis of Traditional and Contemporary Natural Resource Management Systems in Tawang District, Arunachal Pradesh.

Supervisor: Prof. Anshu

Th 27497

Abstract

This study conducts a comprehensive analysis of natural resource management (NRM) systems in Tawang District of Arunachal Pradesh, India, utilizing comparative geospatial techniques. Four primary objectives guide the research. Firstly, it quantifies changes in natural resources using spatio-temporal methods. Secondly, it investigates traditional ecological knowledge among the Monpa Community. The third objective compares cultural and formal institutions involved

in NRM. Lastly, it evaluates the effectiveness of Community-Based Natural Resource Management (CBNRM) through a case study of Zemithang Circle. The study hypothesizes that integrating cultural and formal institutions enhances NRM effectiveness. Two research questions guide the inquiry: whether contemporary institutions marginalize traditional NRM systems and the influence of state and policy on the NRM framework. A mixed-method approach integrates quantitative and qualitative techniques, including field surveys, focus group discussions, interviews, and stakeholder meetings. Geospatial analysis examines land-use, land cover changes, and the Normalized Difference Vegetation Index (NDVI) from 1990 to 2020, illustrating the erosion of traditional systems and their replacement by central government mechanisms. Likert scale-based perception analysis gauges individual attitudes and opinions on natural resource degradation and governance performance. The study's interdisciplinary nature aims to contribute to NRM understanding not only in Tawang but also beyond. Its findings can inform policy and resource management strategies, especially where traditional practices intersect with modern approaches.

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1. Introduction 2. Conceptual Framework and Review of Literature 3. Geographical Overview of the Study Area 4. Geospatial Analysis for Resource Mapping 5. Sustainable Resource Management in the Monpas Livelihood System health 6. Traditional and Contemporary Resource Management System 7. Community - based Natural Resources Management: Zemithang Circle. Summary, and Conclusion. References. Appendix. Publication.

06. SUMAN SAURABH

Livelihood Vulnerability and Resilience to Natural Hazards in Rudraprayag District, Uttarakhand.

Supervisor: Prof. Bindhy Wasini Pandey

Th 27498

Abstract

Livelihood Vulnerability and Resilience to Natural Hazards in Rudraprayg District, Uttarakhand SumanSaurabh, PhD Research Scholar Abstract Himalaya being a highly vulnerable region in terms of natural disasters where the effect of such disasters are further compounded by other influencing co-factors such as geographical location, topography and unique economic, political, cultural characteristics of the region (Dolan and Walker, 2004). The increasing frequency of extreme climate events and geo-hazards pose a threat to livelihood, increases migration and marginalization of Himalayan people which make mountain communities more vulnerable to hazards and disasters. The research on Rudraprayag District has categorically looked into spatial distribution of natural hazards across the district and its occurrences in last 20 years. It has also enquired about livelihood options available to the local community and limitation to livelihood options through survey. An in depth survey of 268 Households was conducted across 18 villages and 2 towns of Rudraprayag district and with interviews and Focus Group Discussion with SHGs to understand the intricacies of Livelihood, Adaptation Capacity and Resilience of Local Community. On the basis of Primary Survey and Secondary Sources, Livelihood Vulnerability Index (LVI), Adaptation Capacity Index (ACI) and Resilience was computed. Stata-15 Software has been used for complex statistical calculation incorporating Chi-Square Test and Logistic Regression to understand the relationship of variables. Maps and Diagrams have been prepared using Arc GIS and MS Excel. This research develops

a robust, integrated approach for increasing resilience to natural hazards in the Himalayan region with a specific focus on the Rudraprayag District. By identifying and assessing urgent adaptation needs, local coping strategies and adaptive measures, the research seeks to address academic, strategic and policy requirements, contributing to a more resilient and sustainable future at both local and global levels. Keywords: Livelihood, Hazards, Adaptation Capacity, Resilience, Sustainable Future.

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1. Introduction 2. Geographical Background of Rudraprayag District 3. Spatial Distribution and Occurrence of Natural Hazards. 4. Livelihood Vulnerability of the Local Community 5. Adaptation and Resilience of Local Communities 6. Management Strategies for Strengthening Livelihood Opportunities and Resilience to Natural Hazards 7. Conclusion. Bibliography. Appendix: Questionnaire.

07. VIPIN CHANDRA LAL

Assessment of Kutch Region as an Emerging Geopark and Geotourism in Gujarat.

Supervisor: Prof. Vishwa Raj Sharma

Th 27492

Abstract

Geopark displays the geological importance of the site with the concept of tourism and the unified geological heritage lay global importance as an emerging geopark in the Kutch region. The Kutch district of Gujarat is excessively qualified to give the title of the first geopark of India. This region has illustrative potential and heritage-rich geology including 9 geo-stations and 71 geosites. This study delves into the evaluation of the Kutch region's potential as an emerging geopark and geotourism destination within the state of Gujarat, India. Geoparks have gained prominence as sites of geological significance, offering opportunities for sustainable tourism and educational experiences. The Kutch region, renowned for its diverse geological formations, cultural heritage, and unique ecosystems, presents a compelling case for the development of a geopark. This research employs a multidisciplinary approach, integrating geological assessments, environmental analyses, and stakeholder perspectives to ascertain the region's geotourism viability. Geological features, such as seismic activity, sedimentary deposits, and fossil records, are examined to establish the geological significance of the area. Concurrently, environmental factors and sustainability measures are explored to ensure the preservation of natural and cultural assets. Stakeholder engagement through surveys and consultations helps gauge local community interests and concerns. The findings reveal that the Kutch region possesses considerable geotourism potential, with its distinctive geological history and cultural heritage forming a strong foundation. However, careful planning, community involvement, and sustainable management strategies are imperative to mitigate potential adverse impacts and ensure the long-term success of the proposed geopark. This study contributes to the broader understanding of geotourism development and underscores the importance of a holistic approach to create a successful and sustainable geopark that benefits both visitors and local communities. Key words: Geopark, Geotourism, Geology, Landscape, livelihood, fossil.

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1. Exploring Kutch's Geopark and Geo-tourism: A Comprehensive Insight 2. Feasibility Analysis for Establishing A Geopark in the Kutch Region 3. A Comprehensive Framework for Geopark Conservation and Geotourism Management 4. Conservations, Management of Geoparks and Geotourism for Sustainable Future in Rann of Kutch, Gujarat 5. Summary and Conclusion. Bibliography. Appendix: Questionnaire.