

## CHAPTER 19

### GEOGRAPHY

#### Doctoral Theses

01. KAUSHIK (Nancy)  
**Differential Rural Economics: A Study of Drought Prone Regions of India.**  
Supervisor: Prof. S.C. Rai  
Th 22971

*Abstract*  
*(Not Verified)*

Droughts have large spatial extent and there are difficulties in quantifying damages and personal hardships, therefore for a country like India, this research proposes an incorporative analysis of drought prone regions from macro to micro level. The present study has the following main objectives: (i) To analyse how structure of village economy as indicated by household economy differs in different agro-climatic zones of drought prone regions of India; (ii) To bring out differences by social strata and agro-climatic settings at village level; and (iii) To assess the role of Panchayat as a development agency. The study area comprises of four districts lying in different agro-climatic zones of India viz; Arid (Jaisalmer), Semi-arid (Sangli), Sub-humid (Jalaun) and humid (Puruliya); out of which two villages each are further selected. The database comprises of data from both primary and secondary data sources. The methodology of the study includes key informant interviews, structured questionnaire and informal discussions, social vulnerability composite index and priority index. Various other statistical techniques have also been used in the study. The study describes the impact of drought on rural economic structure and finds that different socio-economic groups are not equally vulnerable to drought. The occupational diversification has become part of the survival strategy of households. Based social vulnerability composite index, the study highlights the impact of drought on social structure prevailing in different agro-climatic regions on the basis of factors like age, gender and caste. The study also analyzes the effects of drought on rural educational structure along with other socio-economic and demographic factors. The present research also analyses the impact of drought on food security and the role government in general and Panchayats in particular in management of droughts.

#### *Contents*

1. Introduction 2. Geographical profile of the study areas 3. Analysis of economic structure 4. Drought and social vulnerability 5. Education and livelihood 6. Food security and drought 7. Local self governance and drought management. Summary, references, photoplates and appendices.

02. KRISHNA KUMAR  
**Dynamics of Development in Highway Corridor Zones of Bihar: Case Study of Kuchai Kot-Muzaffarpur Section of East-West Corridor.**  
Supervisor: Dr. Anjan Sen  
Th 23203

*Abstract*  
*(Verified)*

The study tries to examine the spatial dimensions of socio-economic development in the Kuchai Kot-Muzaffarpur Section (159 km) of East-West Highway corridor in Bihar. The study has three objectives: to

delineate the highway corridor zones along the Kuchaikot to Muzaffarpur sub-section of the East-West highway corridor in Bihar, to Examine the Spatial Dimensions of Socio-Economic Development, and to validate the impact of the highway corridor on the socio-economic status of the households. Three zones, each of 500 meters on the both side of the highway has been delineated with the help of Griddle Technique, used by National Capital Region Planning Board. Both primary and secondary research methodology has been used in the study. Besides, GIS techniques have been used to obtain the map. Observation, questionnaire and purposive random sample have been used to examine the impact of "Highway Corridor Zones" in the socio-economic development process. Normalization, Composite Index and Mean t-test have been used to analyse the primary and secondary data. To show the socio-economic status, twenty-five indicators related to household amenities, literacy and economic has been used to make development index. In the present study, it has been found that highway corridor is playing a positive role in the development of socio-economic status of the region. Real estate agents and rich people are buying lands and getting it fenced for investment purpose. Simultaneously, the government should focus on popularising and maintaining the religious sites and historical monuments for better future of the tourism sector in the region. The government also needs to provide better tourism infrastructure in the region. Most importantly state government needs to first make the general environment, friendly for the tourists by providing tight security and educating the locals about the benefits of the tourism sector for their socio-economic status.

#### *Contents*

1. Introduction. 2. Delineation of the highway corridor zones 3. Spatial dimensions of socio-economic development 4. Impact of highway corridor on the socio-economic status of households in the zone 5. Summary and conclusions. Selected bibliography. Appendices.

#### 03. PREETI KUMARI

#### **Dynamics of Agricultural Development and Groundwater Degradation in South Ganga-Sone Divide, Bihar.**

Supervisor: Prof. S.C. Rai

Th 22972

#### *Contents*

1. Introduction 2. Geographical background of the study area 3. Analysis of land-use/cover change 4. Agriculture development analysis 5. Groundwater analysis 6. Groundwater contamination and susceptibility to human health. Summary, references, appendices and photoplates.

#### 04. SHARMA (Arti)

#### **Role of Social Fabric in the Sustainable Development of Aligarh District.**

Supervisor: Dr. Tejbir Singh Rana

Th 23204

#### *Abstract (Not Verified)*

To achieve the objectives of the research, both primary and secondary data sources have been utilized. For primary data collection, personal interview method with a detailed questionnaire has been used. Total 400 households have been surveyed during primary data collection and these 400 samples have been distributed in Aligarh district through stratified random sampling. Chapter- 1 of thesis discussed all theoretical framework of the research. Chapter- 2 is study area i.e. Aligarh district. In chapter- 3 it has been found that there is big biasness in the opportunities available to different groups of the society. Rural areas of the district are facing more rigid supportive or preventive social norms whereas urban areas are rapidly moving toward flexible social norms. Chapter- 4 highlights that gender based division of work is very prominent in the Aligarh district. Males are highly unskilled in handling of indoor works; similarly females find themselves incapable in handling the affairs of outdoor activities. Chapter- 5 talks about penetration of technology are limited to urban areas only. Chapter- 6 shows there is sharp

difference in the level of awareness among different group of people also the zeal for enhancing the knowledge of different welfare scheme. In chapter- 7 found that people of the district are thoughtful towards flora and fauna surrounds them. They take good care of them in their capacity. They believe in the Hindu mythology, which stated, killing of any living being is a sin. Chapter- 8 discusses the final remarks of overall research and summarise them. Overall it can be concluded that there is different supportive opportunities available to different groups of people. Gender role and economic reward of one's work plays a major role in the development of an individual. Equality in practice is capable enough in providing good utilization of resources.

#### *Contents*

1. Introduction. 2. Aligarh district-the study area 3. Social norms for sustainable development 4. Gender role in the utilization of resources 5. Effects of technology advancement on social norms 6. Contribution of government schemes in development 7. Identifying social norms for biodiversity 8. Final remarks. Bibliography. Appendix-I questionnaire.

05. SINHA (Sudhir Kumar)  
**Urban Sprawl in Gautam Budh Nagar District, Uttar Pradesh.**  
 Supervisor: Dr. Ravi Shekhar  
Th 23205

#### *Abstract (Not Verified)*

The world is becoming increasingly urban. In 2008 urban population touched 50 per cent and since then more people are living in urban area than rural. In India, urbanization is taking place at rapid pace since last few decades. Cities have emerged as island of development whereas rural areas have remained backward. Consequently, large number of people is migrating to urban settlements mostly to metropolitan and mega cities. This is causing urban growth and sprawl. Since Cities have emerged as engine of growth, urbanization is desirable for inclusive growth. Therefore, on the one hand urbanization has a positive impact on economy, on the other it is causing urban sprawl which must be prevented for sustainability of cities. There is a need to study and monitor urban growth and sprawl so that through proper policy formulation and intervention at appropriate time urban sprawl could be checked and controlled for sustainable urban development. This study attempts to understand process of urbanization in Gautam Budh Nagar district between 1977 and 2011 and focusses on pattern and processes of urban sprawl in the district. A detailed analysis of Sprawl has also been carried out of Noida-largest and fastest growing city of Gautam Budh Nagar. The study identifies the process of urban sprawl with the help of land use/cover maps, transition matrix, spatial metrics, successive master plans of Noida and National Capital Region, and data obtained through questionnaire survey in the study area. It was found that resource utilization in the study area has been poor. Excessive fertile agricultural land has been consumed in the process of urbanization in the district. Also it is having negative impact on water and air resources. In the light of negative consequences of sprawl in the district, study suggests remedial measures for sustainable urban development.

#### *Contents*

1. Introduction. 2. Study area 3. Data base and methodology 4. Urban sprawl in gautam budh nagar 5. State of living condition & infrastructure 6. Summary & conclusion. Bibliography. Appendix: questionnaire.

06. SINGH (Ravendra)  
**Energy Use in Agriculture and its Impact on Agricultural Productivity in Bhiwani District of Haryana.**  
 Supervisor: Dr. Mohinder Singh Kadayan  
Th 22973

*Abstract*  
(Not Verified)

Energy use in Agriculture and Its Impact on Agricultural Productivity in Bhiwani District of Haryana  
 Abstract The key objectives of this study are to analyze agricultural operation-wise, source-wise, crop-wise energy use in agriculture and its impact on agricultural productivity in Bhiwani district of Haryana. In this study the hypothesis “there is positive and significant correlation between energy use and agricultural productivity” has been applied to validate it. The present study primarily based on primary data which has been collected at farm level through a well structure questionnaire. For computing the level of energy use and its output, average has been used and ‘t’ test has been employed to check the level of significance. Results of the study reveal that the operation of fertilizer application has consumed highest amount of energy followed by irrigation, sowing, field preparation, harvesting and transportation, threshing and winnowing and marketing process respectively. Chemical fertilizers have supplied bulk of energy followed by diesel, tractor, human and seeds respectively. Bajra has been recorded as the most energy efficient crop whereas wheat was least energy efficient crop. Though, it has found that there exists positive correlation between energy use and agricultural productivity in view of wheat and mustard crop as well as combined all sample crops in the district but it is not significant. Therefore, the framed hypothesis has rejected for the same in the present study. On other hand it has also found that there exists positive correlation in case of bajra crops which is significant at 1%. So the framed hypothesis has proved and accepted for the same. Therefore, it can be suggested that the cultivation of bajra crop is more favorable than mustard and wheat crop in existing physical and socio-economic conditions of the district.

*Contents*

1. Introduction 2. Geographical profile of the study area 3. Comparative analysis of energy consumption in agriculture of Haryana 4. Energy use in bhiwani district: A micro-level analysis. 5. Impact of energy use on agricultural productivity in bhiwani district 6. Summary and conclusion. Selected bibliography and annexures.

07. SONKAR (Gopal)  
**Biomass Energy, Production and Utilisation in India: A Case Study of Son Watershed.**  
 Supervisor: Dr. Anshu  
Th 23122

*Contents*

1. Introduction 2. Conceptual framework and review of literature 3. Geographical setting of the study area-son watershed 4. Crop residues: production estimation techniques 5. Crop residues: production and utilization – son watershed 6. Socio-economic characteristic of study area and issues related with residues production 7. Residue consumption and power production in biomass power plants. 8. Summary and conclusion. Bibliography and appendices.