

CHAPTER 21

GEOGRAPHY

Doctoral Theses

01. BISWAS (Olivia)
Faith Based Organizations and Cultural Geographies of The Walled City, Delhi.
Supervisors: Dr. Anindita Biswas and Prof. R.B. Singh
Th 24501

Abstract
(Not Verified)

The study titled 'Faith Based Organizations and Cultural Geographies of the Walled City' is a qualitative research work concerning the role of Faith Based Organisations (FBO) in creating a unique cultural landscape within the walled city of Delhi. This comprises spatial aspects of faith based commercial and residential patterns as well as the politics involved in representing the image of the walled city in different media genres such as books, newspaper series, cinema and social media pages. The walled city of Delhi, (Purani Dilli) , establishes a pattern of commix and communitarian synthesis. Old Delhi survives on economic activities such as wholesale and retail trade and historical significance attached to it and has a great variety of houses of worship, historical buildings and landmarks, based on faith. The study has utilized a mixed method approach. The main methods used were interviews, street ethnography and content analysis of textual material and media genres. The study underlined the functions and roles of the Faith Based Organizations in creation of a unique cultural landscape of the Walled City. However, it should be stressed that Faith Based Organizations are not the only force which creates and sustains the syncretic culture in this Walled City. This syncretic culture or Ganga Jamuna tehzeeb is also an outcome of other factors leading to the mixing and intertwining of different communities and traditions. A space where a mosque, a temple, a Jain temple, a church and a gurudwara, stand adjacent to each other, is in itself a witness to the living or "heart" city. This study uncovers the functioning of faith as a medium of unifying communities and creating syncretic spaces within a city. The key question that emerged after the study was the manner in which such syncretic spaces could be maintained and conserved.

Contents

1. Faith based organizations and cultural geographies of the walled city, Delhi 2. A living city: reading the socio historical landscape of old Delhi 3. Scripting cultural geographies of the walled city: defining the roles of faith based organizations in creating a unique cultural landscape in the walled city 4. At market: Mapping faith based commercial synthesis and segregation in the walled city 5. At home: mapping faith based residential synthesis and segregation in the walled city 6. Old Delhi, New media: Translating portrayal of the cultural landscape of old Delhi into media space 7. Conclusion and reflections 8. References and Appendices.

- 02 JANMAIJAYA (Mansi)
Relationship Between Monsoon Rainfall, Aerosols and its Environmental Implications in the National Capital Region.
 Supervisor : Prof. R.B. Singh
Th 24488

Abstract
(Not Verified)

The role of aerosols on the monsoon cycle is a subject of intense investigation. In the present work, attempts have been made to elucidate the impact of aerosol loading on cloud parameters such as cloud fraction, cloud optical depth/thickness, cloud effective radius, cloud top pressure and temperature, atmospheric water vapor at interannual and inter-seasonal scale. Satellite derived rainfall, aerosol and cloud products have been utilized in this study. The surface air temperature and tropospheric temperature for the study region has been analyzed at different (1000 hPa to 850 hPa) isobaric tropospheric levels during 2003-2015. The anomalies for these variables were computed and correlated with aerosols. The average seasonal Aerosol Optical Depth (AOD) in the study region is significant, particularly in the post-monsoon and winter season. The aerosol loading varies considerably over time and space. The month of June has the highest monthly average AOD. The rainfall results in significant wash-out of aerosols in the monsoon season. The high Angstrom Exponent in the region indicates a sharp aerosol particle distribution and increasing proportion of fine mode aerosol particles in the total aerosol loading over the region. The average aerosol loading and surface air temperature are inversely related. The average surface air and tropospheric temperature is decreasing significantly in the winter season. The aerosol loading does not significantly explain the variability of cloud parameters. The present study attempts to construct an emission inventory of particulate matter from agricultural biomass burning and vehicles for the National Capital Region. Population pressure, in terms of density and Land Use and Land Cover Change etc., has been studied to analyse the increasing emissions of aerosols. Aerosols have reportedly led to significant health ailments to the people in the region. Keywords: Aerosols, Monsoon, Temperature, Anomalies, Clouds, National Capital Region, Rainfall.

Contents

1. Introduction 2. Geographical profile of the study area 3. Relationship between Aerosols and temperature using MODIS and AIRS satellite Observations 4. Aerosols and cloud properties 5. A study of association between rainfall and aerosols 6. Anthropogenic activities contributing to aerosol loading and its social and economic implications 7. Summary conclusion and suggestions 8. Selected bibliography 9. Annexure 10. Publications.
03. KANAUIA (Kirti)
Urban Regeneration: A Case Study of Urban Villages of NCT of Delhi.
 Supervisor : Dr. Aparajita De
Th 24499

Abstract
(Verified)

In contemporary times, a need for change in the present norms and practices of urbanisation has been realized severely and in this context; a debate between development and regeneration has ensued on the urban scene. While development acts as a mediator and facilitator for transformation, regeneration acts as a catalyst extending the process of transformation and as a means of sustaining urban development. Urban regeneration is

aimed at self- sustaining planned and regulated urban development. Urban regeneration is not a “one size fit all” approach, with the inherent versatility to mould itself in order to meet the challenges of the time in a specific area aimed at specific section of society. Thus, in urban villages of Delhi, urban regeneration is taking place due to complex transformations in terms of space, society and economy. There is a need to understand that the urban villages are points of urban regeneration of the city manifesting different developmental trajectories through which the city is continuously kept alive. It is a consequence of interplay of factors namely; planning policies and their implementation, private actors, the villagers and the changing urban scenario. Regeneration could also be understood in context of interaction between the city and the urban village imbuing rigorous intensity in their interaction and linkages. The present study is an attempt to understand how absolute space is being modified through planning and cultural interventions. It is an attempt to uncover the factors that have led to the emergence of urban villages as spaces for urban regeneration through spatio-administrative and cultural transformations and the significance of Lal Dora and Extended Lal Dora in such transformations.

Contents

1. Re/looking Urban: development and regeneration 2. Traversing the field: Research methodology data sources data gaps 3. Locating Urban regeneration: Urban villages of national capital territory of Delhi 4. Planning and regeneration: formal planning and spatio- administrative transformations 5. Culture oriented Urban regeneration: mapping regeneration through toponymy and heritage sites 6. Different trajectories of planning and Urban regeneration 7. Major finding and conclusion 8. Bibliography 9. Appendices.

04. KHETWANI (Sagar)
Drought Vulnerability, Impact and Risk Reduction: A Case Study of Marathwada Region .
 Supervisor : Prof. R. B. Singh
 Th 24896

Abstract (Not Verified)

Drought in the Marathwada region is the most frequently occurring disaster. The study focuses on Marathwada region of Maharashtra state in India. The first objective of this study attempts to assess the drought events in the Marathwada region. In order to enhance the understanding of drought events, assessment of droughts have been made through drought indices like Rainfall Anomaly Index (RNFAI), Standardized Water-level Index (SWI) and NDVI Anomaly Index. The year 2015 RNFAI results show the highest negative anomaly over Parbhani district (51.44 per cent), followed by Bid, Latur and Osmanabad with the negative anomalies of 50.16 per cent, 44.12 per cent and 40.97 per cent. There was the occurrence of extreme hydrological drought during the year 2015 in the four districts of Marathwada region, i.e., Latur, Bid, Parbhani and Nanded. For attaining the second objective of the study, visualization of spatial and temporal patterns of hydrological drought has been done with the help of Standardized Water-level Index (SWI). The analysis revealed that sub-districts like Tuljapur, Mukhed, Washi, Gangakhed, Soegaon, Deoni, Purna, Sailu, and Georai emerged as the most frequently affected. The third objective of this study is to investigate through a field-based analysis in the study area, the farmers' perception about drought impacts and factors making them more complex. Further discussion with the farmers revealed that the small and medium farmers are highly dependent on farming for meeting their day to day needs as compared to the marginal and large farmers. The fourth objective of this study attempts to develop an integrated drought vulnerability index at sub-district level to represent the spatial distribution of drought vulnerability. The analysis

revealed that sub-districts like Shirur-Anantpal, Deoni, Shirur Kasar, Dharur, Biloli, Paranda, Mukhed, Khuldabad, Patoda, Hadgaon, Palam, Badnapur and Kaij, emerged as the very highly vulnerable to drought.

Contents

1. Introduction 2. Geographical profile of Marathwada region 3. Geospatial assessment of drought 4. Assessment of water scarcity 5. Drought impacts and comparative analysis 6. Drought vulnerability: a spatial analysis 7. Drought adaption strategies and mitigation measures 8. Summary and conclusion. Selected bibliography and Appendix.

05. MANE (Pratidnya Prakash)
Modern Highway and Settlement Dynamics in Rural-Urban Fringe of Jaipur.
 Supervisor : Dr. P.K. Parihar
Th 24487

Abstract
(Not Verified)

Rural-Urban fringe is a dynamic region with imprecise boundary associated with growth and developmental activities taking place in and around the city region. Various developmental processes act as a catalyst in bringing about socio-economic change both at micro and macro level. These changes have positive as well as negative implications for urbanization of the region. Highways, as an agent of integration of rural and urban activities, have led to the development and expansion of Jaipur city into peripheral region. In the research work the socio-economic aspects such as literacy, occupational pattern and educational levels are changing considerably due to the availability of the highway. The highway has attracted numerous academic institutions, specialized hospitals, industries which has had tremendous impact on the way of life of people. The culture, economy and social aspects are benefitted due to the presence of the highway. The settlements in Corridor 1 are modernizing in terms of internal structure of the house and availability of amenities. The change in Corridor 2 is more related to the changing agriculture in the region. Both Corridor 2 and 3 are experiencing a shift from food crops and oilseeds towards animal husbandry and horticulture. The improvement in transportation facility has helped the Corridor 2 and Corridor 3 in increasing the agricultural income in the region. The comparative analysis of economic development shows that the highest economic development occurs in Corridor 1 as compared to Corridor 2 and 3. The distance from the city is also seen to impact the economic development. The overall study shows that the highway acts as a catalyst in economic development of settlements in the proximity to the highway and the city.

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1. Introduction 2. Historical and geographical aspects of Jaipur 2. General profile of the identified study area 4. Social economic characteristics 5. Settlement of characteristic 6. Agricultural characteristics 7. Perceived impact of the highway 8. Spatial variations in economic development 9. Summary and conclusion. Bibliography and Appendices.

06. MISHRA (Himanshu)
Impact of Climate Change on The Livelihood Of Gaddi Transhumance: Chamba, H.P.
 Supervisor : Dr. B.W. Pandey
Th 24502

Abstract
(Not Verified)

India with a diversity of ecosystems, presents a varied tribal groups throughout its length and breadth. Gaddi, a tribal community of Himachal Pradesh practices transhumance. Transhumance is the seasonal movement of people with their livestock between fixed summer and winter pastures. In mountain regions, it implies movement between higher pastures in summer and lower valleys in winter. This study is an attempt to understand the impact of climate change on livelihood of Gaddi transhumance community. The data of livelihood options, meteorological and LULC have been collected from the primary and secondary sources. The meteorological data has been further divided into different seasons and analyzed with the help of SPSS (tests). The different route maps of Gaddi transhumance have been prepared along with LULC maps of 1978, 2000 and 2018. An attempt has been made to develop relationship between livelihood options and land use of Chamba. Correlation method has been applied through SPSS to show the relationship among all attributes. After applying all the techniques and methods the results show that temperature has increased while rainfall has decreased over four decades. Other than climate change, several other factors are responsible for the reduction in the livestock population. Route maps clearly shows the changes of land use and its impacts can be easily seen on this community. The conversation with the members of Gaddi community shows that how this practice is going to extinct in near future, which is not only harmful for their own but also a message to scientific world to give special attention to this vulnerable indigenous tribal community for the better future of Himalayan ecosystem. Keywords: Chamba, Climate, Gaddi, Livelihood, Transhumance.

Contents

1. Introduction 2. Geographical profile of the study area 3. Status of climate change in Chamb 4. Livelihood options and opportunities for Gaddi in Chmaba 5. Impact of climate change on the livelihood of Gaddi transhumance 6. Programmes and policies of Gaddi transhumance in Chamba 7. Summary and findings 8. Selected bibliography. Appendix and publication.
07. MISHRA (Satyam)
Informal Economics of Religious Fairs: Studying the Magh Mela of Prayagraj (Allahabad).
Supervisor : Dr. Anjan Sen
Th 24500

Abstract
(Verified)

Prayagraj (Allahabad), one of the major cities in the Indian state of Uttar Pradesh, also culturally regarded as the king of all sacred places, is sited picturesquely at the merging point of the rivers Ganga, Yamuna and invisible Saraswathi. Prayāga is host to the greatest of all melās (religious fairs). Once a year, during the winter month of Māgha (January and February), the great sandy flood plain of the Trivenī becomes a huge encampment of pilgrims. This is called Māgha Melā, a monthlong festival that brings in a steady flow of pilgrims from all over India. There is the attendant bustle of commerce, both secular and sacred. Numerous questions concern the informal economy of Magh Mela and people working in it. This research is exploratory in nature and it is not guided by any hypothesis, although it explores how have informal economic activities been developed in the Magh Mela, and what kind of economic activities run there? Who are these people involved in, and how do they do or do not get benefitted by the informal economy? The first

theme is to study the sanitation workers and their role at Magh Mela. The second theme is, to study the boatmen at the river banks of Ganga, Yamuna and Sangam (the confluence of both). The third broad theme is to study the traders, shopkeepers and small businesses at Magh Mela. The secondary data comes from the literary source in the form of books, journal articles, and official sources. Primary data was collected through questionnaires, ethnographic interviews, non-participant observation and visual methods. The thesis is divided into five chapters, and research outcomes suggest that though Magh Mela comes with tremendous opportunities for those working in the informal economy, yet 'decent work' conditions are a distant dream to these workers and sellers.

Contents

1. Introduction 2. Untouchables of the sacred: sanitation workers in the Magh Mela 3. Sailors of the Sangam: informal economic activities of Batmen in the Magh Mela 4. Sellers at sacred: the Artisans, Shopkeepers and small Business owners in the Magh Mela 5. Conclusion and suggestions. References. Appendices.

08

MUNESH KUMARI

Land Use, Climate Change and its Impact on Ground Water in Southern Haryana.

Supervisor : Prof. R.B. Singh

Th 24490

Abstract (Not Verified)

The present A large scale land transformation after the green revolution has altered the hydrological cycle and water balance in Southern Haryana. The land-use/cover change from forest to agriculture to built-up land has been quite noticeable over the last 50 years in the area. The present study is based upon the primary and secondary data sources for carrying out its objectives. The land-use/cover data has been obtained from satellite imageries from national aeronautic space organization. The temperature and precipitation had been collected from India Meteorological (IMD) Department, Pune, and were employed to examine the spatial and temporal variability of rainfall data series. Climate variability was evaluated by linear regression, Mann–Kendall test & Sen's Slope estimator. The water table fluctuation method and Groundwater development Index had been adopted for the computation of change in groundwater storage for each block. Groundwater quality data were collected from the regional branch of Central Groundwater Board (CGWB) at Chandigarh. Water quality Index for drinking water has been calculated using the given 11 water quality parameters viz; pH, EC, TH, NO₃, CO₃, HCO₃, Cl, F, Ca, Mg, Na & . Hydro-chemical evaluation for both drinking and irrigation water quality has been analyzed separately. To check irrigational water suitability following methods like Electrical conductivity, Kelly's ratio, Sodium Adsorption Ratio, Sodium Percent, Residual Sodium Carbonate, Permeability Index, United States Salinity Laboratory diagram and Piper trilinear were used. Given the current ground situation, it has been concluded that groundwater quality for drinking as well as irrigation in the southern Haryana, has been compromised due to over-exploitation of groundwater resources beyond replenishable levels and aggressive use of chemical fertilizers and pesticide. Hence, it is suggested that identified areas for the unsuitable quality of water for drinking as well as irrigational purposes should be adequately addressed and monitored at the micro-level.

Contents

1. Introduction 2. Geographical background of the study area 3. Dynamics monitoring of land-use/cover change 4. Climate variability analysis 4. Analysis of

groundwater status 5. Hydrochemistry of groundwater 6. Planning for adaptation and mitigation strategies 7. Summary. References and Photoplates.

09. NIRBHAV
Landslide Risk Assessment along the Major Transport Corridor: A Case Study of Kullu-Rohtang Pass.
 Supervisors : Prof. R.B. Singh
Th 24492

Abstract
(Not Verified)

Among every part of the Indian sub-continent is susceptible to one or other kind of natural disasters depending on its geographical conditions. In terms of reported human life loss in India, landslides are seventh placed. Various natural disasters, landslides is the most hazardous and damage causing in the mountain ecosystem which is directly influenced by many natural as well as anthropogenic factors such as lithology and geomorphology structure, rock type, soil cover, rainfall, drainage, land use/land cover, road construction, instability of slope, urbanization, deforestation, mining, vehicle movement. Landslides have an adverse effect on tourism sector which further leads to economic loss of the area. The study reveals the importance, need and methods of landslide mitigation along the major transport road corridor from Kullu to Rohtang Pass. Mainly rock slides and debris slides are observed in the study area. Landslide inventory maps give comprehensive data about mass-movement process. The accuracy, type and certainty of the information displayed in the maps is directly proportional to the quality of the landslide inventory. The present study attempts to provide answers for research questions related to landslide risk assessment for the study area. To give answers of these mentioned research questions four objectives are formulated viz; (1) To prepare comprehensive landslide inventory on the basis of historical data and field work. (2) To prepare the landslide hazard zonation map for the study area. (3) To analyse the landslide risk assessment along the transport corridor. (4) To assess micro-level adaptation and mitigation methods for landslide risk and corridor management. To achieve these objectives, the methods have been used are Inventory Mapping, AHP and Fuzzy Membership Method. Key Words: Hazard, Landslide, Risk, Assessment, Vulnerability and Transport Corridor

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1. Introduction 2. Geographical profile of the study area 3. Landslide inventory and monitoring 4. Landslide hazard zonation mapping 5. Landslide risk assessment 6. Landslide risk mitigation methods 7. Summary and conclusion. Selected bibliography. Appendix: Questionnaire.

10. PAARCHA (Aruna)
Modelling Urban Growth Dynamics and Sustainability In Dehradun City.
 Supervisors : Prof. R.B. Singh
Th 24897

Abstract
(Not Verified)

Dehradun had become the capital of newly formed state of Uttarakhand in 2000. Following this change in status, there has been various government's policy that aimed to attract large amount of institutional and commercial activities to come up in Dehradun. This has increased the built-up area basically from the conversion of vegetation and others areas including agricultural land. The process of urban

sprawl is taking place at the expense of these classes. Analysis of urban growth enable the urban planners and decision-makers in making suitable development policies to counter negative impacts urban growth on the environment. Rapid and unplanned Urbanization is changing the natural landscape and influencing the existing Land use and Land cover (LULC) as a result of this the surface temperature has been increasing. Considering this trend, it is very crucial to monitor and measure the spatial pattern of Urbanization. Steady growth of LST can disturb the ambient habitat for the man and other ecosystem members. So, there is an urgent need for continuous monitoring of city's land use land cover dynamics and to devise rational, scientific and sustainable urban land use policies so as to check the phenomenon of intensification of UHI. Urban growth modelling provides valuable insight to policy makers and planners who anticipate, forecast and evaluate the change detection and envisage futuristic changes or trends of development. This also lets them understand the impacts of future spatial development and explore the potential impacts of different policies and regulatory schemes on the land use patterns. Keywords: LULC, LST and Urban growth modelling.

Contents

1. Introduction 2. Geographical profile 3. Spatio temporal pattern of land use and land cover(2001-2017) 4. Monitoring Urban spatial growth using geospatial technology 5. Changes in Urban impervious surface and its impact on land surface temperature 6. Growth modelling using artificial neural network 7. Urbanization and sustainability 8. Summary and conclusion. Selected Bibliography and Appendices.

11. PANDA (Arpita)
Climate Risks and Impact on Agricultural Adaptability in KBK (Kalahandi, Bolangir,Koraput) District of Odisha.
 Supervisor : Dr. Netrananda Sahu
 Th 24498

Abstract (Not Verified)

Climate varies over seasons and years instead of day-to-day like weather. Agriculture is inherently sensitive to climate conditions .Compared with some sectors , agriculture is often considered to be especially adaptable.The districts Kalahandi,Bolangir and Koraput popularly known as the KBK region is a typical region that has drawn the attention of the world because of persistent poverty and mal-nutrition. These districts ranks lower than other districts in the state. The entire thesis has been divided into four objectives. Those are :To trace out the land use and land cover mapping in study area,To visualise the behaviour and pattern of climatic parameters in study districts., To understand climate induced vulnerability in agriculture, To study the link between climatic variability and agriculture adaptation strategies.Both Primary and secondary datasets have been used for the study. Monsoon plays a pivotal role in defining the rainfall pattern over the studied region, which ultimately affect the crop productivity pattern. The region faces heavy rainfall during monsoon season, that is from June to September. Therefore, the correlation of crop yield anomalies from 5 year running mean with Monsoon Index has been calculated for JJA, JAS and JJAS season to quantify the impact of this climatic variability mode (Indian Monsoon). Climate adaptation measures are crucial if the long term impacts of climate change on crop production and livelihoods of farmers are not to be compromised. In an attempt to investigate the extent of adaptation to climate change, farmers were questioned on their

adaptation measures. Most respondents (90% in Bolangir, 80% in Koraput, 70% in Kalahandi) in the study area have adjusted their farming practices to long-term climate change. Therefore, the study attempts to quantify the overall impact of climate variability on agricultural pattern.

Contents

1. Introduction
 2. The study area
 3. Assessment of land use and land cover change in KBK (Kalahandi, Bolangir & Koraput) districts
 4. Trends analysis of seasonal rainfall and temperature pattern in KBK district of Odisha
 5. Temporal and spatial analysis of cropping pattern in KBK districts
 6. Association between climate parameters and cropping pattern
 7. Summary and conclusion. Annexure.
12. RAI (Jeetesh)
Spatial Restructuring, Urban Governance and Rights to the City: The Case of Delhi.
 Supervisor : Dr. Aparajita De
Th 24496

Abstract (Not Verified)

This thesis examines the theoretical concepts surrounding the notions of 'spatial restructuring, urban governance and rights to the city', with the specific case of Delhi. Based on three years of ethnographic fieldwork in Delhi, the thesis begins with an examination of the relationship between spatial restructuring, urban governance and living conditions, in particular of the urban poor. This is followed by the explanation of current information on inequalities in living conditions, and the dynamic context of influences on patterns of urban development. The study focuses on the discussions of a number of concepts intrinsically linked to democracy in general and to local participatory democracy in particular, such as participation, deliberation, local development and governance. The entire analysis involved a mixture of qualitative content analysis and interpretation of results from the interviews and other materials. Documentation of the major events of collective significance, around crises or state action, comes from both key informant and participant observations. Detailed intensive interviews have also been collected at evolving preferences. Interpretation of the underlying narratives and histories on the side of slum dwellers, intermediaries and State actors comes from interviews and qualitative content analysis. My analysis allowed me to see how the State is embodied in everyday life; the boundaries between formal law and practices that mimic the law and acquire legitimacy through practices; the role of networks that are generated as intermediaries between the community and the functionaries of the state; and the processes through which ideas of and aspirations to citizenship are learnt in the course of everyday life. This work will add to the growing literature on the poor that views them not as passive recipients of the largesse of the State, but as actors who make choices, learn and act within a highly constrained environment.

Contents

1. City, contestations and the Urban poor in globalized times
2. Research design and methodology
3. Restructuring of Urban space for 'globalizing world class' city: Delhi as a case study
4. Spatial restructuring of Urban space and dispossession of Urban poor in Delhi
5. Exclusion of Urban poor and the role of citizenship rights in ensuring access to basic services
6. Policy-polity gaps in Urban governance and

policy implication: case of Delhi 7. Conclusion and suggestions. Bibliography. Appendices.

13. RISHIDEO (Jitendra)
Floods and Related Geomorphic Hazards in Lower Gandak River Basin, Bihar.
 Supervisor : Dr. Ramashray Prasad
Th 24497

Abstract
 (Not Verified)

The river Gandak is notorious for bringing devastating floods each year in the plain particularly in Bihar. The recurrence of flood in the Gandak Lower Basin is one of the biggest natural disasters triggered by human interference. In spite of several measures taken by the government to minimise the flood and flood related hardships and losses, it is continuously on rise. Very high slope in the upper catchment, fragile young Himalayan rocks in association with heavy monsoonal downpour brings excessive silt load ultimately gets deposited in lower plain causing channel shift and flooding. From central northwest part of river in the plain, embankments are under threat due to more instability of the channel changes. The problem of erosion along the right bank of the river is more serious than the left bank. Therefore, the present study on "Floods and Related Geomorphic Hazards in Lower Gandak River Basin, Bihar" is undertaken with the objectives to study and analyze the geomorphic behavior, geomorphic hazards, impact of flood, flood management and suggest remedial measures for Lower Gandak River Basin in Bihar. The erosion and shifting courses of Gandak channels have been examined with the help of LANDSAT and IRS Satellite images for the year of 1976, 1996 and 2016. Four statistical methods are used to determine the expected recurrence of flood discharge at different time interval for taking up any structural measures in moderating the discharge. These are Gumbel's Method, Log-Normal Method, Ven Te Chow's Method, and Pearson Type III Method. This study is the synthesis of the real situations existing in the flood affected area with recommendations to tackle them properly.

Contents

1.Introduction 2. Geographical background of Gandak river basin 3. Gandak river morphology and its behaviour 4. Flood impact in the lower Gandak plain 5. Flood frequency analysis 6. Gandak river flood control and management 7. Summary and conclusion 8. Bibliography 9. Annexures.

14. SONI (Kamini)
Fire Disasters in Delhi: A Spatial Analysis.
 Supervisor: Prof. Anu Kapur
Th 24494

Abstract
 (Not Verified)

The present doctoral research is titled "Fire Disasters in Delhi: A Spatial Analysis". Selecting Delhi as a unit of study, it investigates the spatio-temporal pattern of fire, fires in different types of landuses, impact and response to fires in Delhi. In this research, a "fire disaster" is defined as an outbreak of fire in various types of landuses that results in the loss of life and property and disrupts the normal functioning of an individual and society within a short period of time. Land use here means various types of usage a land is put to, for example commercial, industrial, residential, institutional and others where fire occurs. Impact is defined as the effect or pervasive influence of any event or happening, autonomous or designed. The term response refers to the actions and steps taken in short and long run to

restore the pre-disaster situation. The main question raised in this research are: What is the spatio-temporal pattern of fire in Delhi? What are the land uses that are prone to fire? What are the impacts of these fires? And are the firefighting services adequate enough to cater to the growing number of fires in Delhi? What is the response to these fires. To address these research questions, a methodology was set out to understand the pattern of occurrence of fires in Delhi; compare the number of fires in various land uses; understand the commonalities and differences in vulnerability of each of the land uses; assess and analyze the impact of fires and study the administrative, institutional and legal responses to fire. With these objectives, the key argument drawn was: "Fires are not accidents but an outcome of the organized irresponsibility" The theory of organized irresponsibility has been investigated through a spatial lens in this thesis.

Contents

1. Introduction 2. Type and temporal characteristics of fire in Delhi 3. Spatial patterns of fires in Delhi 4. Land use wise fire in Delhi 5. Firescape 6. Response to fire in Delhi 7. Summary and conclusion. References.

- 15 TRIPATHI (Vivek)
Crime, Space and Media: A Study of Spatial Distribution of Crime in Delhi.
 Supervisor : Dr. Aparajita De
Th 24489

Abstract (Verified)

Crime is the deviated action or behaviour of some people which is often reported in media. The medium and method of representation of these crime incidents in media involve multiple factors. Politics of representation is one of those multiple factors that produce a constructed reality of crimescapes. Space is produced and reproduced through media representation, and it changes the characteristics of the represented space in the context of crime. The nuanced interplay of these conjoined terms crime, space and media have been explored, examined and discussed in this study. It has been argued that criminal behaviour presents a spatial pattern. Every space is governed by some rules. Each space has its core rubrics of behaviour and breaching these rubrics can produce probability for deviance. Both crime and media operate over space. Media selectively represents some specific types of crime and overly highlights them, thus, producing hyper-reality. Media influences and shapes the perception of the people about crime (Surette, 2015). Media works as an environmental stimulus (Cherry, 2018). Media sets the agenda and develops discourses that influence the way people look at particular spaces & human activities over those spaces (McCombs, 2014). It has been found that the conception of crime among the people and its representation in media is directly linked. The actual scenario of crime in Delhi is very much different than the crime news reports in media. Representation of crime in media has produced a false crimescape of Delhi. Media being the main source of information about crime to the people of Delhi has influenced their idea about crime, perception about safe and unsafe people and spaces. Hyper reporting of Media reporting has labelled Delhi as a very dangerous and unliveable city.

Contents

1. Crime, space and media: an introduction 2. Research methodology 3. Study area: Spatial distribution of crime in Delhi 4. Media representation of crime in Delhi 5. Mediatized crimescapes of Delhi 6. Narrative and experience of crime in Delhi 7. Conclusion and findings .Bibliography. Appendices.

16. TYAGI (Sindhu)
Spatio-Temporal Analysis of Shoreline and Morphological Change along Andhra Pradesh Coast.
 Supervisor : Prof. Suresh C. Rai
Th 24495

Abstract
 (Not Verified)

The present research is on the shoreline behaviour along Andhra coast because of it is a unique area of great importance, which attract to the people for inhabit. They are among the most important ecosystems, providing numerous ecological, economic, cultural, and aesthetic benefits and services. Coastal zones are highly dynamic area of interaction between terrestrial and marine processes. The shoreline is a dynamic linear feature between land and sea and constantly changes with time due to natural process and human activities. Shoreline changes can be long term or short term in different time and environment. These changes have positive and negative impact in terms of accretion may create a more usable land and erosion that loss the economic and ecological viable land and may cause the problem to residential and infrastructures like road, salt pan etc. Therefore, development program can be achieved only when there is a thorough knowledge of accurate demarcation and monitoring of shoreline are necessary for understanding the coastal processes. So in this context, present study comprise of five major objectives, investigated to changes in shoreline position for the past, present and future, relation with sea level rise and land use land cover change along the coast. Moreover, review of literatures, primary survey, and statistical analysis has adapted to analyse and draw conclusion for this research. The result of the study such as accreted/eroded area with varying rate, land use/cover change, trend of sea level and future shoreline position could be contribute as inputs for policy maker for develop new policies and strategies for sustainable development. The result and probable cause of finding would be discussed in the research work. Key words: Shoreline change rate, Sea level rise, Land use/cover, Accretion/Erosion

Contents

1. Introduction 2. The study area 3. Analysis of shoreline oscillations among different periods 4. Monitoring long term shoreline changes 5. Prediction of future shoreline from historical shoreline change rate 6. Sea level rise and its impacts on shoreline changes 7. Dynamics monitoring and systematic analysis of land use/cover change 8. Summary and References.

17. USHA RANI
Management of Municipal Solid Waste for Urban Sustainability in Meerut City.
 Supervisor : Dr. B.W. Pandey
Th 24493

Abstract
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The municipal solid waste now has becoming the main cause for the degradation of urban environment. The generation rate of municipal waste has increased a lot in spatio-temporal context as a result, a significant amount of garbage found uncollected which later on accumulates and found as the heaps of garbage at various places in the Meerut city. The major objective of the thesis is to examine the existing methods of municipal solid waste

management in Meerut city and suggest sustainable solution. Collected primary and secondary data have been analysed with using the suitable statistical methods and GIS & cartographic techniques. The methods of collection, segregation, transportation and disposal of wastes are not upto the mark and no sustainable practice is being used by the MNN. Somewhere, due to absence of dustbins people disposing their waste wherever they find space (vacant plot, drains, along road, street, transformer) which turns into creating the hotspots. There are numerous vulnerable hotspots, where waste overflow the bins and rag pickers, dogs, pigs, cows, birds found together spread it and which results in creating unhygienic conditions in surrounding environment. 85% respondents also argued that there is prevailing of unhygienic insanitary conditions in the study area. The rag pickers are suffering from many occupational health hazards whereas they are contributing in environmental management a lot positively. Majority of the respondents were are not satisfied with the services given by the MNN. For the better SWM, 31 per cent wants the fixing of accountability of MNN staff, 28 per cent given the suggestion of regular collection of waste. There is dire need to enhance the participation level of people from generation to disposal, and implementation of 4 R's (Reduce, Reuse, Recycling, and Resource recovery) for the sustainable municipal SWM in Meerut city.

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1. Introduction 2. Geographical profile of study area 3. Conceptual framework of Urban sustainability 4. Generation, segregation and collection of municipal solid waste in Meerut city 5. Transportation and disposal of municipal solid and its implications in Meerut city 6. Role perception and participation of people and rag pickers in municipal solid waste management in Meerut city 7. Institutional arrangement for municipal solid waste management 8. Summary, findings and suggestions. Bibliography and Appendices.

18. VIDHI

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Supervisor : Dr. Subhash Anand

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