

CHAPTER 18

GEOGRAPHY

Doctoral Theses

01. AARTI
Impact of Climate Change on Nutrition and Health in Mountain Region: Case Study of Kumaon Himalaya.
Supervisors: Dr. Subhash Anand and Prof. R. B. Singh
Th 25981

Contents

1. Introduction 2. Geographical profile of study area 3. Spatial-temporal analysis of climate change in upper Kumaon region 4. Impact of climate change on crop diversification 5. Impact of climate change on nutrition and health 6. Traditional food system and nutritional health 7. Summary, Conclusion and suggestions. Selected bibliography and appendix.

02. MAURYA (Rajan)
Changes in Forest Ecosystem Services and their Impact on Livelihood Security of Tribal Communities in Kinnaur District.
Supervisor: Prof. V. S. Negi
Th 25986

Abstract

Forests are essential natural resources for the livelihood of tribal people and the wellbeing of every ecosystem. Forest sustains and nurtures life on the earth. Ecosystem services ensure healthy ecosystem, and maintain, sustain and fulfil human life and their need in a sustainable way. Kinnaur is situated in western part of the Indian Himalayan, and is one of the twelfth administrative district of Himachal Pradesh. The district has an extent of 77° 45' E to 79° 00' 35" E and 31° 06' 50" N to 32° 06' N. Kinnaur has a total geographical area of 6,401 sq. km. According to India State Forest Report, 2019 total forest area in the district is 645.99 sq. km comprising of very dense forest (79.81 sq. km), moderate dense forest (329.28 sq. km) and open forest (236.90 sq. km). This research work aims to identify the changes in forest cover and forest area in Kinnaur district. It also intends to explore the dependency role of different forest products in livelihood security of the tribal community. Besides, another objective is to assess and analyse the local perception on forest products for sustainable development. Finally, this also aims to discuss issues, strategies and policies for the conservation and local management of the forest products. Both, primary and secondary data have been collected from the study area and different government departments and publications. A total of 384 respondents were chosen using stratified random sampling method from Forest Fringe Villages in the eight forest ranges of Kinnaur district. To show to changes in forest cover Normalized Difference Vegetation Index (NDVI) and Land Use Land Cover (LULC) with the help of satellite imageries downloaded from the United States Geological Survey (USGS) earth explorer. Primary data analysis has been done with the help of MS Excel and STATA-16. Main forest products i.e. fuelwood, fodder, medicinal plants, grazing have been taken for the study to identified the dependency on the forest products. Status of forest based livelihood options at present time (2018) and before twenty years (1998) have been assessed through primary data base. Along with livelihood status, locals visit to forest in different season, time and distance covered for the collection and extraction of forest products have also been analysed. Further, changes and availability

of forest products over a period of time and its impact on livelihood and forest have been calculated to know the dependency of local tribal people on forest products. It has been observed that changing pattern in livelihood option due to apple cultivation and diversifying livelihood options and opportunities in different parts of the forest ranges. Consequently, new diversifying livelihood options, developmental activities, and infrastructure are being considered which have significant impact on the forest based livelihood options, which can deplete the essence of traditional tribal livelihood and sustainable practices. Forest based Livelihood Security Index (FLSI) a composite index has been used to identify the dependency on forest. It includes 92 indicators and 10 components to discuss the socio-demographic, energy, agriculture, economy, forest based livelihood, changes in livelihood options and opportunities, vulnerability and management. Along with changes in forest cover, several other factors responsible for the shrinking of the forest based livelihood of tribal communities in different forest ranges of the Kinnaur district. As a result, highest FLSI reported in Bhaba Nagar (0.6094), and lowest FLSI reported in Malling (0.4393) forest range of Poo development block. Local perception on forest management has also been used to show the current program and policies of the government for the betterment of tribal people of Kinnaur and forest management. It was found with the perception that the gap has been found between policy makers, administration and the real stakeholders regarding forest based livelihood, forest management, approval of different development works. (i.e. dams construction, road construction, blasting for the new construction and widening of roads). The growing demand for apples in the national market led the expansion in horticulture product which changes the ecosystem of region. It should be done in the sustainable manner for to save the tribal essence and their culture. In the view of sustainability different demand and suggestions for the welfare of tribal community and better management of forest has also been included in this chapter.

Contents

1. Introduction 2. Geographical profile of the study area 3. Status of forest cover in Kinnaur 4. Dependency on forest based livelihood options of tribal communities 5. Development of forest based livelihood security index (FLSI) for sustainable livelihood 6. Policy and planning for tribal communities in Kinnaur 7. Summary and conclusion. Bibliography. Appendices and publication.

03. MISHRA (Akhilesh Kumar)
Dynamics of River Course Through Soil Erosion and Sediment Yield Simulation in Ramganga River Basin, India.
 Supervisor: Prof. Suresh Chand Rai
Th 25977

Abstract

Soil Erosion is a phrase to describe the natural geologic phenomenon of soil displacement from the place of its formation by erosive agents like raindrops, runoff, wind, gravity, chemical reactions and anthropogenic perturbation such as tillage and its deposition at depression and protected site. Soil erosion is a paramount concern of land degradation, which encumbers to adequate agricultural production, soil quality, soil compaction, water quality, hydrological systems, and environments; thus, has long been recognized as a conspicuous problem for human sustainability. The variations in river systems, viz., the stream behaviour, the patterns of geomorphic characteristics, the interrelation between connected streams, system's inputs and outputs of matter and energy within the watershed, are noteworthy reasons for ecosystem degradation. Fluvial systems, comprising the eroding uplands, the transporting zones and the sedimentation zones downstream, are open systems susceptible to anthropic modification and climate change. Soil is one of the inexplicable components to sustain an ecosystem and biodiversity. A good soil quality acts as a medicine for good crop productivity and, once sullied, also results in decadent crop productivity and low water quality. Soil erosion and sediment yield are highly capricious phenomena resulting from asymmetrical topographic landscapes, unscientific anthropogenic interventions coupled with the consequence of soil characteristics, rainfall-runoff erosivity, slope, and steepness of the surface. Furthermore, excessive sedimentation can adversely

impact under certain conditions drainage networks, watercourses, and water resource structures like dams and reservoirs, causing irrigation and water shortages. Several biophysical and human factors contribute to water erosion and sedimentation processes, and they occur with varying intensity across the landscape. Chemical fertilizers like nitrogen and phosphorus are absorbed by finer soil particles and are easily washed away by erosive sediments and runoff. The overabundance of nutrients can contribute to the degrading of surface waters through eutrophication and ultimately contaminate the groundwater through percolation. Moreover, accelerated soil erosion can hinder the accretion of organic content in the soil, impairing both soil physical structure and soil biological functionality, hence limiting vegetation growth. Soil erosion leads to declining productivity and insufficient food production to meet the ever-growing population. In this study, the RUSLE model has been adopted to analyse the soil erosion of the Ramganga river basin. The essential predisposing factors for simulating soil erosion are land use/land cover, slope length/steepness, rainfall pattern, edaphic characteristics, and management practices, which are then assimilated with RUSLE model. Furthermore, the calculation of sediment yield (SY) has been generated using annual potential soil erosion of the catchment outlet. The basin's spatial distribution of soil loss ranges between 0 to 152.41-ton ha⁻¹ year⁻¹. About 41.76 % of the study area has a low erosion risk with values less than 0.59 t ha⁻¹yr⁻¹. The hotspot of soil erosion has revealed that the piedmont region and the lower portion of the basin is under higher erosion risk with soil erosion rate between 20.32 to 152.41 t ha⁻¹yr⁻¹. Furthermore, the maximum calculated sediment yield in the basin attributes around 118.32-ton ha⁻¹ year⁻¹. The model proves efficient in providing potential surface erosion, which helps in developing an advanced management system for controlling soil erosion.

Contents

1. Introduction 2. The study area 3. Morphometric assessments 4. Fluvial dynamics 5. Modelling soil erosion 6. Sediment yield modelling 7. Prioritizing sub-watersheds for soil and water conservations 8. Mitigation measures for basin management. Summary. References. Photo plates and appendices.

04. MISHRA (Martand Mani)
Climatic Variability and Vulnerability Assessment of Human Health in Kalahandi District of Odisha.
 Supervisor: Dr. Netrananda Sahu
Th 25980

Abstract

Climatic variability plays an important role in deciding human health and survival. Variability in climate is described as short-term (in months and years) changes in the climatic elements. Climatic variability mainly occurs due to the climatic change (long-term changes in the climatic factors) happening because of natural and anthropogenic activities. The combination of three major elements of climate i.e., rainfall, temperature, and humidity are known to have a major impact on human health in a particular geographical region. For decades, the human population was unaware of the concept of health. World Health Organization in the year 1957, has described human health as not only the absence of diseases but a state of complete physical, mental and social well-being. Climatic variability is a key factor in deciding the pattern of infectious diseases and their intensity of outbreak. It has both a direct and indirect impact on diseases. Directly it is associated with morbidity and mortality whereas indirectly it is associated with the alteration in the ecological factors which further enhances the range of diseases. There is the involvement of three factors in the spread of infection i.e., vector, host, and the surrounding environment. Climate sensitivity signifies that infectious agents and organisms are directly dependent upon the local climatic factors for their survival. They need a particularly suitable climate for their reproduction and growth. The state of Odisha in India occupies a special place when we discuss the tribal society, their culture, custom, and beliefs. In Odisha, the Kalahandi district in terms of scheduled tribe population covers nearly 28.5 percent of the total population. This tribal population is living in the most vulnerable condition without having sufficient health facilities. They are the ones who are suffering from natural calamity, poverty, unavailability of clean drinking water, communicable

and non-communicable diseases, and above all the issue of health services. For several years they are constantly neglected. The geographical isolation of these tribal populations has made them dependent upon the traditional form of medicine. Several issues are highly attached to the practice of the traditional medicinal system. There is a lack of research in the field of traditional medicine and the practitioners are not highly trained. They are at times responsible for creating a zone of vulnerability among these people. Some questions need a proper answer when we think about the human health of Kalahandi i.e., the climatic variability, trend and pattern of diseases, vulnerability of the population, and their knowledge, perception, and their awareness regarding the health issues, diseases, and health services. The present study purposes at understanding the climatic variability, trend and pattern of diseases, human health vulnerability assessment, and understanding the knowledge and perception of local population regarding their health and changing environment. Climatic variability has a significant impact on the trend and pattern of different kinds of diseases. The study of trend and pattern helps in identifying the places which are highly exposed. Exposure is an important component for calculating the vulnerability index in a particular region. Vulnerability assessment is correlated with the sensitivity and adaptive capacity of the population. After knowing the reality and vulnerability it is important to validate it with the ground reality. Keeping this in mind in the last stage of the study we did a primary survey.

Contents

1. Introduction 2. Study area 3. Trend analysis of climatic factors in Kalahandi 4. Analysis of Vector-borne and Waterborne diseases 5. Human health vulnerabilities in the blocks of Kalahandi 6. Knowledge, perception, and behaviour about climatic variability and human health 7. Summary and conclusion. Appendices.

05. PRASAD (Sant)

Urban Health, wellbeing and Innovation in Varanasi City.

Supervisor: Prof. B. W. Pandey

Th 25979

Abstract

Over 50 per cent of the global population currently resides in urban areas, and that proportion continues to grow rapidly. Urban areas also contribute a significant share of Gross Domestic Product (GDP) in world economy. In India, the urban population is currently 31.16 per cent of the total population and it contributes over 60 per cent of India's GDP. It is projected that urban India will contribute nearly 75 per cent of the national GDP in the next 15 years. Cities are often referred to as the engines of economic growth. There is an alarming need for the cities to get smarter to handle this large-scale urbanization and finding new ways to manage complexity, increasing efficiency, reducing expenses and improving quality of life. In the context of global environmental, economic and social change, perhaps no phenomenon is more striking than urbanization. Already, more than half of the world's population lives in urban places. Urban lifestyles and the increasing diversity of urban conditions have not only created new social hierarchies and cultural rules, but also a new set of roles for health care systems and changing patterns of access to and demand for health and other resources within and between cities. Urbanization represents both opportunity and risk, and a fresh set of challenges for those concerned with protecting and promoting human health and wellbeing. Proximity gives rise to both benefits and dis-benefits – economies of agglomeration and scale, but also dis-economies of congestion and institutional overload. A review of historical and epidemiologic data suggests that no unique logic can explain the diversity of observed patterns of urban health. Rather, health in urban areas is strongly linked – for good or ill – to the various processes inherent in urbanization itself, to the distinctly local social and systemic responses to these processes and finally to the quality of the natural, built and social environment. In the context of worldwide improvements in health indicators, urban areas stand out as generally healthy places, but are nonetheless characterized by strong social and spatial inequalities. Yet, if urban change is universally transformational, it is not universally replicated: modern urbanization in the developing world is not simply a recapitulation of European experiences of the 19th century. Rather it is an original process in a quite different environmental, economic, historical and cultural context.

Moreover, even among regions which are socio – culturally and economically similar, 21st century urbanization retains a strong local and individual character, unique to the particular context. Thus, the challenge for researchers is to analyse the complex relationships between urbanization and health, to explore new health challenges under conditions of pervasive urbanization, to identify universal commonalities and local specificities in the urban experience of health, and, in the context of globalization, to recognize the growing interdependencies between far-flung cities. Currently, there is limited understanding of the complex causal processes that shape urban population health and inequalities in health at local, regional and global scales. Food, nutrition, water, landscape, waste, transport, infrastructure, housing, energy, safety and security, access to health care and the urbanization process itself are interdependently linked to urban health, each influencing the other. Causes and consequences of wellbeing are woven in a complex web of social–cultural–technological conditions and associated human decisions. Running through all aspects of this picture are health and power inequalities and differential impacts along axes of human diversity such as age, income, gender, race, migrant status and social class. These interacting phenomena have always been with us, but they play out on an increasingly urban stage, especially in the developing world, where cities and towns are focal points in the search for environmental sustainability and economic development. Urbanization is a complex process typically characterized by substantial social, ecological and environmental change, with health consequences that can be difficult to forecast. Complicating efforts to address these factors are, on the one hand, the absence of an intuitive culture of public health among urban decision-makers, and on the other, the generally low awareness among epidemiologists and public health professionals of specific issues related to urban governance and planning. In developing countries particularly, urban health and urban planning have developed along separate tracks. In many parts of the world there are serious gaps in those systems of urban governance whose purpose is to facilitate improvements in urban health and wellbeing.

Contents

1. Introduction 2. Geographical profile of the study area 3. Spatial pattern of built-up and urban heat island 4. Urbanization and land use land cover change pattern 5. Urban land use dynamics and spatial expansion 6. Air pollution: Status, driving forces and impact on health 7. Summary and conclusion. Selected bibliography. Annexure and questionnaire.

06. RANJAN (OM Jee)
Spatial Analysis of Physio-Climatic Changes and its Impact on Human Adaption in Tawang Chu River Basin of Arunachal Pradesh.
 Supervisor: Prof. Subhash Anand
 Th 25985

Abstract

Little is known about the vulnerability of mountain ecosystems to climate change in detail. These mountainous regions of the eastern Himalayas, where small changes in temperature can convert snow and glaciers into the water, and where rapid changes in climatic zones occur over short distances from extreme slopes, are important for biodiversity, water availability, agriculture, and other human activities. Which will have an impact on the general human welfare. The nature of the mountains – with fragile and poorly accessible landscapes, sparsely populated settlements and poor infrastructure – means that research and evaluation are limited where they are needed most. And this is especially true for the Tawang-Chu River valley in the eastern Himalayas, which are located in Indian territory with few resources. One of the major challenges is to know about the potential impacts of climate change in order to assess or estimate the current situation. *Today, climate change, natural disaster, poverty and backwardness have significant impacts on our society. Therefore, it is important to adapt to climate change, natural disaster, poverty and backwardness, in order to reduce their negative impacts on our society.* Specially, Climate change influences the socio-economic condition of a place. As such it has a great impact on the population of mountainous area on agriculture, livestock, forestry, tourism, etc.

Furthermore, climate change has a powerful effect on human health which is directly proportional to the fluctuations of the change in climatic conditions. The central effort of the human development approach is that, the purpose of development is improving human life and not just enhancing income, *but to take advantage of opportunities for socio- economic development and to enable businesses, other new markets and services*. Every region has a unique ecosystem within which human society lives and this ecosystem is its natural habitat. It is here that the basic needs of human society to survive are met; fresh air, water, food, shelter and protection from the weather- related disturbances, natural hazards and place to breed its young. Moreover, we all need to adapt to our habitat to be able to survive. This means adaptation to be able to survive the climatic conditions of the ecosystem, and other spatial and a human generated threat. Hence, an adaptation is a modification or change in living style or behavior that helps it to make a standard living style with minimum disaster.

Contents

1. Introduction 2. Geo-anthropogenic attributes of Tawang-Chu river Basin 3. Spatio-temporal analysis of physio-climatic changes in Tawang-Chu river Basin of eastern Himalaya 4. Drainage network-catchment-delineation and temporal assessment of physiographic-ecology of Tawang district 5. Temporal changes in socio-economic dimensions in the Tawang-Chu river Basin 6. Climate vulnerability and human adaption in the Tawang-Chu river Basin 7. Conclusion. Bibliography. Appendix and questionnaire.

07. SURAJ PAL

Analysing Social Stigma and Health Risks among Men Having Sex with Men: A Case Study of Selected Indian Cities.

Supervisors: Dr. Pankaj Kumar and Dr. Praveen Kumar Pathak

Th 25982

Abstract

Sexual identity, behaviour and attraction among individuals are generally understood to be fluid, ranging from being heterosexual to homosexual. Thus, people can be categorized into these three broad groups based on their sexual orientations: (a) Heterosexual (people who identify themselves as 'straight'. In other words, whose sexual or romantic attractions/behaviours lie entirely for the opposite sex); (b) Homosexual (people who identify themselves as 'gay' or 'lesbian'. In other words, whose sexual or romantic attractions/behaviours lie entirely for the same sex); and (c) Bisexual (people who identify themselves between 'heterosexual' and 'homosexual'. In other words, whose sexual or romantic attractions/behaviours lie for both sexes). The concept of MSM is believed to be based on some assumptions regarding sexual or gender identities. This term has been unstable since coined and began to appear as a statistical group in epidemiological studies since the 1980s. This MSM category was included as a risky group of men who used to involve in sex with other men and were vulnerable to HIV/AIDS. MSM individuals label themselves as Top (men who play an insertive role during anal intercourse and are sexually aggressive), Bottom (men who play a receptive role during anal intercourse and are sexually passive) or Versatile (men who play both insertive and receptive roles during anal intercourse depending upon the situations) to indicate their sexual position preference with male partners. Apart from these three, there is one more category of Side men, who do not indulge in penetrative or anal sex while making love with male partners. Sexual minorities have been a part of marginalized sections of society. Stigma against Men who have Sex with Men (MSM) has made this section of the population vulnerable to discrimination at various levels. This segment (MSM) of the population is mostly hidden and not identified easily in the demography. This characteristic of MSM leads to new challenges in multiple dimensions. They are vulnerable to many curable and non-curable diseases, which they carry without any treatment. Most bisexuals act as a bridge population between heterosexuals and homosexuals, so their risky behaviour (for example transmission of STDs and HIV) is a threat to all over the population. Scientific research

related to the live trajectories and different lived experiences of MSM is scarce and very limited. The present study is an attempt to fill the gap in the broader field of population and health geography with a specific focus on the issues of MSM, their lived experiences across selected urban contexts in India.

Contents

1. Introduction 2. Profile of study respondents 3. Early life transition, family and development challenges among MSM 4. Forms of discrimination and stigma among MSM 5. Risky behaviours, health status and health service utilization among MSM 6. Coping strategies and social support network among MSM 7. Summary and conclusion. Bibliography and Annexures.

08. UPADHYAY (Aakash)

Climate Change and its Impact on Water Resources and Agriculture in the Sikkim Himalaya.

Supervisor: Prof. Suresh Chand Rai
Th 25983

Abstract

The emissions of greenhouse gases (GHGs), aerosols and changes in land use and land cover (LULC) during the industrial period have substantially altered the atmospheric composition and consequently the planetary energy balance and are thus primarily responsible for the present-day climate change. This climate change leads to various global environmental, socioeconomic and health problems. The world is battling hunger amid fears of climate uncertainty, indicating greater food crises looming for humankind. Indian Himalayan region, the water tower of the world, is highly vulnerable to adverse impacts of climate challenges like snowmelt, increased runoff, rising temperature, declining agricultural productivity, increased water scarcity and long-term livelihood sustainability of its people. Mountains are among the most fragile ecosystems with rich flora and fauna and are the lifeline of the communities downstream. They house some of the most endemic species and the poorest of peoples, directly dependent on biophysical resources. The importance of the mountain ecosystem and its fast-changing face led to the adaptation of CBD in 2004, aiming to reduce the mountain's vulnerabilities. The present study finds that Rangit Basin, Sikkim Himalaya is observing climate change, facing some fundamental challenges, shaking the region to its very base. Climate adversely impacts the indigenous rural communities and their resource base, making them vulnerable to food scarcity and livelihood security. The State has adopted a series of green practices like organic farming, promoting indigenous agricultural practices and upholding the essence of an agrarian society. When the world is facing climatic uncertainty, it is tough to cope with the modern lifestyle. We must understand the local issues within the basin and look for local, cost-effective, sustainable adaptive measures to rising challenges. Combating climate change in a fragile, sparsely populated and entirely agrarian economy, focused research, including documentation and demonstration of coping mechanisms is needed. These mountain communities are known for their Indigenous local knowledge base across the Himalayan belt, which they have been sustaining for generations. Here a detailed assessment of local challenges, farmers' perception, scientific intervention, documentation of local knowledge and sustainable practices could help these areas cope with climate change, become resilient and adapt to the new normal. The study entitled "Climate Change and its Impact on Water Resources and Agriculture in the Sikkim Himalaya" has made an effort to document the ongoing contemporary challenges faced by farming communities of the Rangit Basin due to climate change and co-relate their indigenous and local practices as an adaptive tool to climate change.

Contents

1. Introduction 2. The study area A. Physical Characteristics B. Cultural Characteristics 3. Climate change analysis 4. Farmer's perception of climate

change in Agriculture 5. Morphometric analysis 6. Analysis of hydrological parameters in springs 7. Land-use and cropping pattern 8. Adaption strategies and mitigation measures. Summary References. Photo plates and Annexures.

09. YADAV (Shikha)

Wastewater Management for Urban Sustainability: A Case Study of Delhi.

Supervisor: Prof. Subhash Anand

Th 25978

Abstract

Water is an indispensable asset that humans have on Earth. This resource though most vital for life on this planet is facing an increasing stress both by its mismanagement and non-management. With the increasing population, demand for quality water throughout the world and India in particular is increasing. A lack of coordination and initiation at the institutional level is a major cause of water mismanagement in India. Also with multiple authorities' in charge, fragmented responsibility, lack of accountability and undue political involvement, wastewater management has taken a backseat. The present study has been undertaken with a prime focus on water management scenarios across India in general and particularly in the National Capital Territory of Delhi by analyzing in a detail the generation, collection and treatment of wastewater. The secondary data based on major drains and primary information on five sewerage treatment plants has been analysed for parameters like pH, BOD, COD, etc. Statistical techniques like SPSS, VAR model, correlation analysis, coefficient of variation, water quality index, Mann- Kendall test for trend analysis and Granger- Causality test have been used to arrive at certain conclusions. Community participation is a very important aspect in water management as the treatment of wastewater and its reuse form the basis of success of such programmes. Based on the primary data of 400 respondents, the study finds that the knowledge about water reuse is still skewed in population especially low income groups with majority of households having concerns and many unaware of its reuse. The awareness level needs to be addressed with proper strategic planning so that their involvement in that awareness programme can be maximized. A Trio water model which may fix the problem of water management of Delhi has been suggested which includes the journey of water, starting from raw water treatment up to reusing reclaimed water. This model has been assessed qualitatively on different criteria which show a positive enabling environment for the implementation of this model in Delhi.

Contents

1. Introduction 2. Geographical profile of the study area 3. Conceptual framework 4. Spatio-temporal analysis of wastewater management in Delhi 5. Community perception on wastewater reuse in Delhi 6. Model and strategies for sustainable wastewater management in Delhi 7. Institutional arrangements for wastewater management 8. Summary, conclusion and suggestions

M. Phil. Dissertation

10. ASHWANI

Vulnerability of Tribal Communities to Climate Variability: Lahaul and Spiti, Himachal Pradesh, India.

Supervisor: Dr. Pankaj Kumar

11. BHATI (Anjali)

Organic Farming and Sustainable Livelihood: A Case Study of Ghaziabad Uttar Pradesh.

Supervisor: Prof. Subhash Anand

12. JAISWAL (Sunil)
Agriculture Development and Food Security: A Case Study of Dimapur Nagaland.
Supervisor: Prof. Subhash Anand
13. JYOTI
Spatio-Temporal Changes in Apple Cultivation in Last Two Decades (2000-2020), Kinnaur District, Himachal Kinnaur District, Himachal Pradesh.
Supervisor: Prof. B. W. Pandey
14. KIRTTI PRABHA
Evaluating Agriculture Sustainability in Mahendergarh District, Haryana.
Supervisor: Dr. Rajesh Kumar Abhay
15. PATHAK (Nilakshi)
Cyberfeminism and Gendered Violence in Digital Spaces: A Study of feminist Pages on Social Media.
Supervisor: Prof. Anindita Datta
16. SHARMA (Pooja)
Assessment of Soil Erosion by Rusle Model using Geospatial Techniques in Mandakini Basin, Uttarakhand, India.
Supervisor: Dr. Prabudhh Kumar Mishra
17. SINGH (Pooja)
Digital Place-Making and Travelling: A Study Offbeat and Responsible Travel Experiences.
Supervisor: Dr. Aparajita De
18. SINGH (Santosh Kumar)
Geographical Analysis of Traditional Water Conservation Methods in Himalaya: A Case Study of Dewal Block, Chamoli, Uttarakhand.
Supervisor: Prof. B. W. Pandey
19. TENZIN NAMKHA
A Study of Seasonal Movement in BOT Community at Machail Valley, Kishtwar, J&K.
Supervisor: Dr. Kavita Arora
20. TSETAN (Dorje)
Economic Activities and Cultural Commodification: Studying the Tibetan Refugees in Dharamsala, Himachal Pradesh, India.
Supervisor: Prof. Anjan Sen
21. VERMA (Rahul)
Impact of Flood on Socio-Economic Conditions and Livelihoods in Ghagra River Basin.
Supervisor: Prof. S. C. Rai
22. YADAV (Dharmender Kumar)
Assessing the Impact of Social Media on Tourism System in Jaipur, Rajasthan.
Supervisor: Prof. Swati Rajput