PROCEEDINGS OF NATIONAL SEMINAR ON BUILDING A RESILIENT FUTURE: INTEGRATING ENVIRONMENT, ECONOMY & TECHNOLOGY

MARCH 24-25, 2023

ORGANISED BY DEPARTMENT OF GEOGRAPHY

ST. BEDE'S COLLEGE

SHIMLA

NAAC RE-ACCREDITED A+ GRADE

National Seminar

on

"Building a Resilient Future: Integrating Environment, Economy and Technology"

March 24 - 25, 2023

Chief Guest

Sh. Harish Janartha

Hon'ble Member Legislative Assembly, Shimla Urban

Keynote Speakers

Dr. Sanjeev Sharma

Associate Professor
Dr. Ambedkar International Centre
Ministry of Social Justice and Empowerment GOI, New Delhi

Dr. Amrita Bajaj

Associate Professor
Shaheed Bhagat Singh College
University of Delhi

Prof. Mary Tahir

Department of Geography
Jamia Milia University
New Delhi

Organised by

Department of Geography

St. Bede's College Shimla

NAAC Re-Accredited A+ Grade

Organizing Committee

Convener:	Dr. Pankaj Aashish
Co-Convener:	Mr. Anoop Dilta
Secretary:	Dr. P. Marry Santhi
Co-Secretary:	Mr. Sanjeev Kumar

PROGRAMME SCHEDULE

National Seminar on Building a Resilient Future: Integrating Environment, Economy and Technology

Day/ Date	Time (IST)	Programme
Day 1 Friday	9:00 am – 10:00 am	Arrival of the Guests
24th March 2023	10:00 a.m.	Arrival of the Chief Guest
	10:00 am -10:05 am	Welcome
	10:05 am -10:10 am	Lighting of Lamp
	10:10 am – 10:15 am	Welcome address by The **Principal**
	10: 15 am -10:30 am	Welcome & Folk Dance
	10:30 am - 10:35 am	Felicitation of the Guests on the Dias
	10:35 am – 10:40 am	Concept of the Seminar - **Dr. Pankaj Aashish,** Convener
	10:40 am – 10: 45 am	Releasing of the **Abstract Book**
	10:45 am – 10:55 am	Presidential Address – by the **Chief Guest**
	10:55 am – 11:00 am	Vote of Thanks
	11:00 am – 11:30 am	**Tea break**
	11:30 am – 12:30 pm	Keynote address – **Dr. Sanjeev Sharma**, DAIC Ministry of social justice and empowerment GOI, New Delhi
	12:30 pm - 1:30 pm	Keynote address **Dr. Amrita Bajaj** Shaheed Bhagat Singh College University of Delhi.
	1:30 pm – 2:30 pm	**Lunch (Common Room)**
	2:30 pm – 4:00 pm	**Technical Parallel Sessions** **Venue 1: Seminar Room** **Venue 2: Geography Department (A1)**
	4:00 pm – 4:30 pm	**High Tea**

Day/ Date	Time (IST)	Programme
Day 2 Saturday	10:00 a.m.	Arrival of the Guests
25th March 2023	10:05 am -10:10 am	Welcome Address
	10:10 pm -11:00 am 11:00 am – 11”15 am	Keynote address – **Prof. Mary Tahir** Jamia Millia Islamia University New Delhi. Keynote address – Mr. Kamal Kant Saroch, IAS, Director TCP, GoHP.
	11:00 am – 11:15 am	**Tea break**
	11:15 am – 12:15 pm	**Technical Sessions** **Venue 1: Seminar Room**
	12.15 p.m.	Arrival of the **Chief Guest**
	12:20 pm -12:25 pm	Welcome Address
	12:30 pm -12:35 pm	Lighting of Lamp
	12:35 pm -12:50 pm	Welcome & Folk Dance
	12:50 pm - 1:00 pm	Felicitation of the Guests
	01:00 pm – 01:10 pm	Report of the Seminar - **Convener**
	01:10 pm – 01:25 pm	Presidential Address by the **Chief Guest**
	01:25 pm – 01:30 pm	Vote of Thanks & National Anthem
	01:30 pm – 02:30 pm	**Lunch (Common Room)**

Technical Sessions

March 24, 2023 Technical Session-1**: Sustainable Solutions for Environmental Challenges** **Time :-** 02:30 PM – 4:00PM **Venue:- Seminar Room**		
Chair: Dr. Sanjay Kumar **Co-Chair: Dr. Jagvir Chandel** **Rapporteur: Dr. Yashika Guleria**		
Session In-charge: **Dr. Vishal Chauhan** Student Coordinator: **Anshika, Nikita, Kamaksha** **Technical coordinator: Bhopinder Kumar**		
Sr. No.	**Name**	**Title of the Paper**
1	Sania Jamal Research Scholar, Department of Political Science, Jamia Millia Islamia, New	**Principles of Individual and Community efforts for Protection and Conservation of Environment in India**

	Delhi, India.	
2	Dr Ashok Nimesh Assistant Professor (Human Rights) Central University of Jharkhand Ranchi, Jharkhand, India	**Role of Public Interest Litigation (PIL) and Judiciary in Protection of Environment in India**
3	Saachi Sood Asst. Prof. Geography Govt. College Sanjauli	**Climate Change and Food Security: A Case Study of Shimla District**
4	Shivani Abrol, Asstt. Prof., Department of Geography, GC Chamba, & Nisha Kumari, Asstt. Prof., Department of Geography, GC Chamba	**A General Analysis of the Environmental Protection and Sustainable Development**
5	Kanika Lakhanpal Assistant professor, Department of Geography, RGGDC Chaura Maidan, Shimla	**Climate change: Adaptation and Mitigation strategies**
6	Mohit Kumar Assistant Professor, Department of Psychology, St. Bede's College, Shimla 171002	**Climate Change: A Threat to Mental Health**
7	Nivedita Pathak Associate professor, GC Rajgarh	**Environmental Hazards and Vulnerability**
8	Dr. Kulvinder Kaur Assistant Professor in Geography, Department of Geography IIHS, Kurukshetra University Kurukshetra	**Adapting Cultivation Practices with varying Climatic Conditions for a Sustainable Future**
9	Dr. S. BALASELVAKUMAR Assistant Professor in Geography Thanthai Periyar Government Arts and	**Geoinformatics for environmental issues In shimla district, Himachal Pradesh**

	Science College (A) Tiruchirappalli, Tamil Nadu	
10	Bhim Chand G.B. Pant National Institute of Himalayan Environment (NIHE, Himachal Regional Centre, Mohal-Kullu-175 126, Himachal Pradesh, India	**Impacts of Hydroelectric Projects on Environment and Minimizing the Impacts, in the Indian Himalaya**
11	Dogra Deeksha Sardar Patel University Mandi, Himachal Pradesh	**The waste generation trends, disposal mechanism and problems people encounter in Mandi city.**
12	स्वर्ण लता शर्मा सहायक आचार्य (संस्कृत) राजकीय उत्कृष्ट महाविद्यालय नगरोटा बगवाँ, जिला कांगडा (हि.प्र.)	पर्वतीय क्षेत्रों में पारिस्थितिकी पर्यटन तथा रोजगार सृजन
13	Dr. Sudhir kumar Assistant Professor Department of Geography RKMV, Shimla	**Development, Urbanization and Environmental Issues: A Case Study of Shimla District**
14	*Dr. Madan Lal and **Reenu Devi *Associate Professor, RKMV Shimla. **Assistant Professor, RGGDC Chaura Maidan, Shimla	**Population Aging: An Emerging Research Agenda for Sustainable Development**
15	Sanjeev Kumar* and Dr. Seema Choudhary**	**Rainfall and Landslide Associations along the Roads in Bharmaur Tehsil of Chamba District in Himachal Pradesh**

March 24, 2023

Technical Session-2 **: Urban Development**

Time :- 02:30 PM – 4:00PM **Venue:- Department of Geography A1**

Chair: Dr. Madan Lal Mankotia Co-Chair: Dr. Ram Lal

Rapporteur: Dr. Khyal Chand

Session In-charge: **Mr. Ashish Kumar**

Student Coordinator:**, Pooja Kumari, Sanjana**

Technical coordinator: Tashika chauhan

Sr. No.	Name	Title of the Paper
1	Bharti Bhagra Associate Professor in Geography Govt. College Sanjauli Shimla	**Urban Planning with Ecological Footprints: Commiseration Appraisal of Theory and Practice**
2	Vishal Chauhan Asst Professor, Department of Economics, St Bede's College, Shimla, Himachal Pradesh	**Analysis and Evaluation of Atma nirbhar Bharat Abhiyan**
3	*Nem Raj **Pooja Devi *Assistant Professor, Geography, Shaheed Captain Vikram Batra Govt. Degree College, Palampur, **Assistant Professor, Commerce, Pandit Sant Ram Govt. Degree College, Baijnath, Kangra	**Challenges in Implementation of National Education Policy-2020 in Higher Education of Himachal Pradesh- A Case Study of Kangra District**
4	Dr. Yashika Guleria Assistant Professor (Commerce), RGGDC Chaura Maidan Shimla Ms. Anju Thakur Assistant Professor (History), Govt. College Kandaghat, Solan Mr. Anil Kumar Assistant Professor (Sanskrit), RGGDC Chaura Maidan Shimla	**E-Learning in Higher Education: Prospects & Challenges**

5	Jagriti Assistant. Prof, Dept of Psychology, St. Bede's College, Shimla-171002 (H.P.).	**Consequential Impact of COVID-19 on the State of Himachal Pradesh in Different Sectors and the Resultant Lessons to Counter Such Pandemic to Avert Impact on the Growth of the State**
6	Dr. Shukla Rani Assistant Professor, GDC Nalagarh	**Role of higher education in sustainable development in Indian perspectives**
7	Dr. Nidhi Sharma Department of Hindi, Govt. College, Nagrota Bagwan H.P. India.-176047	**Smart Cities: Goals and Challenges**
8	Naina Sambher* and Prof. D.D. Sharma** * Research Scholar, Department of Geography, Himachal Pradesh University ** Vice- Chancellor, Sardar Patel University, Mandi, Himachal Pradesh	**Spatial Concentration and Distribution of Basic Infrastructure and Smart Facilities: A Case Study of Dharmashala Smart City, Himachal Pradesh**
9	*Tarsaim Kumar and **Mayank Rana *Assistant Professor Public Administration, S.C.V.B G.C Palampur, Distt. Kangra **Assistant Professor Tourism, S.C.V.B G.C Palampur, Distt. Kangra	**Rural Tourism in Hill Areas: A Step towards Sustainable Livelihood**
10	Deepika Dhiman,* Babita Negi,*Balwant Singh* *Ph.D. Research Scholar, Department of Laws, Himachal Pradesh University, Summerhill, Shimla	**ECOTOURISM AND THE LAW IN INDIA: AN OVERVIEW**

15	Sanjeev Kumar* and Dr. Seema Choudhary**	**Rainfall and Landslide Associations along the Roads in Bharmaur Tehsil of Chamba District in Himachal Pradesh**

Day 1, 24th March 2023

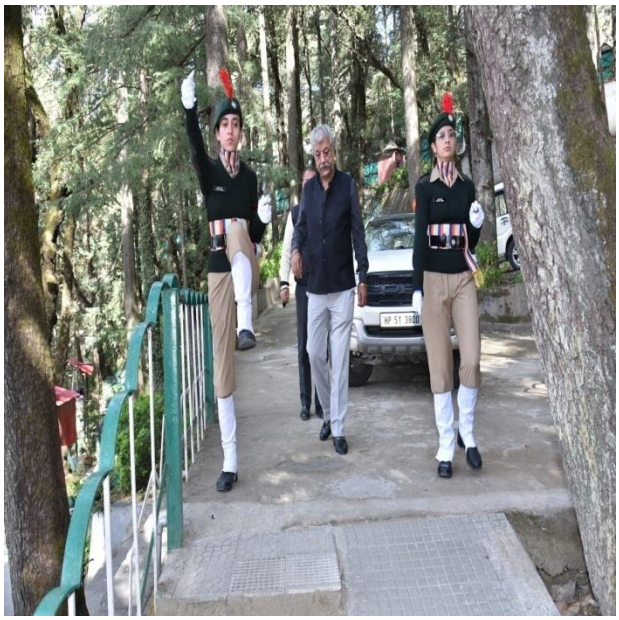
The National Seminar "Building a Resilient Future: Integrating Environment, Economy and Technology" began with the arrival of Keynote Speakers, Research Scholars, Professors and professionals from diverse fields.

Registration

The registration process began at around 8:30 a.m. in the morning outside of the college auditorium. On the first day, around 40 participants registered for the presentations scheduled for that day.

Arrival of the Chief Guest: Shri Harish Janartha honorable MLA Shimla, Urban

The National Seminar was graced by the Chief Guest Sh. Harish Janartha honorable MLA Shimla, Urban.



Inaugural Ceremony

The national seminar started with an opening ceremony, which set the stage for the occasion. The honorable chief guest lit the lamp, symbolizing the beginning of a new journey towards knowledge and enlightenment.

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Globe representing a highly interconnected world.

Innaugral Dance Performance

The Chief Guest, Shri Harish Janartha, inspired the audience with his influential speech. He emphasized the government's commitment to environmental conservation and highlighted the importance of ecosystem preservation for a better future. The chief guest assured that the present government is ready to collaborate with academia to ensure a sustainable future for all.

Tea Break

Following a productive keynote address, the seminar participants had a well-deserved break for refreshments. The break provided a welcome change of pace, allowing participants to relax and re-energize before continuing the seminar. As they enjoyed their tea and snacks, they were able to connect with each other and develop new relationships with professionals in their respective fields.

Keynote Speakers

1. Dr. Sanjeev Sharma, an Associate Professor Jawaharhal Nehru University, Delhi delivered his talk on the "Mountain Environmental sustainability, Issues, concerns and Consensus".

   The following were the important points highlighted by Dr. Sanjeev Sharma.

   - Dr. Sharma explained how our fragile mountain ecosystem is being degraded through unscientific infrastructural projects.
   - He highlighted how with the change in ecosystem, the socio-economic structure of the ethnic communities is changing.
   - He also emphasized the impact of environmental change on lifestyles of ethnic groups.
   - He explained environment, technology & economy with reference to mountain environmental sustainability.
   - During his speech, he highlighted the issue of population growth and natural resource depletion in mountainous regions, which leads to ecological imbalances. He emphasized the need to address these challenges and find sustainable solutions to ensure the preservation of natural resources and maintain a healthy ecosystem.
   - Dr. Sanjeev Sharma emphasized the critical role of mountain communities in maintaining the ecological balance of mountain ecosystems. He stressed the need for these communities to take responsibility for preserving natural resources and fulfilling their role as stewards of the mountains.

2. Dr. Amrita Bajaj, Associate Professor, Department of Geography, Shaheed Bhagat Singh College, Delhi, was the 2nd Keynote speaker. She delivered her lecture on "sustainable smart cities"

   Following were the important points highlighted by Dr. Amrita Bajaj.

   She emphasized that cities worldwide are facing immense pressure due to rapid population growth. She further pointed out that by 2050, developing regions are projected to add 3.2 billion new urban residents, highlighting the urgent need for sustainable smart cities, not just smart cities. Cities are grappling with a variety of environmental, social, and economic challenges, and the idea of smart cities, as previously emphasized by the prime minister in 2015, offers a possible solution to these issues.

Lunch Break

After the tiring first session, delegates and participants deserved a delicious lunch. The lunch started around 1 P.M. in the Common Room of the college.

Glimpses of Technical Session Day 1

Day 2, 25th March 2023

The National Seminar on "Building a Resilient Future: Integrating Environment, Economy, and Technology" began with the arrival of professors, research scholars, and professionals from diverse fields.

Registration Day 2

keynote Speakers

Professor Mary Tahir

Professor Tahir talked about the need to understand the phenomena of climate change and the importance of nature conservation and Geoconservation. She also spoke on the following issues.

- Major natural and manmade causes of climate change.
- Climate change and natural hazards and vulnerability analysis.
- Climate change and environmental degradation scenario.
- Climate change and environmental adaptation.
- Livelihood options with changing environment.
- Rapid environmental assessment and degradation.
- Projected impacts of climate change on agricultural yield.

Mr. Kamal Kant Saroch

- He elucidated about urban planning, ecological footprints and global warming.
- He also explained about global distribution of ecological footprints with special reference to India.
- Mr. Saroch suggested how urban planning generally and urban mobility particularly can play a significant role for a sustainable future.

Tea Break

After a fruitful keynote address, the participants of the National Seminar took a well-deserved break for refreshments. Delegates and participants enjoyed tea and snacks, allowing them to connect with each other and develop new relationships with professionals in their field.

Glimpses of Technical Sessions Day 2


Devices
Bluetooth & other devices
Printers & scanners
Mouse
Typing
Pen & Windows Ink
AutoPlay
USB
Add Bluetooth or other device
Bluetooth
On
Audio


Dr. Vishal Chauhan
Network
Recycle Bin
Control Panel
AnyDesk

Valedictory

Arrival of the Chief Guest

The Valedictory ceremony was graced by the Chief Guest Sh. Anuj Tomar, Deputy Commandant General, Home Guards and Civil Defence, Himachal Pradesh.

The Valedictory Ceremony of the National Seminar on Building A Resilient Future: Integrating Environmental, Economy, and Technology was held at 2:00 P.M. in the College Auditorium.

The ceremony began by a beautiful dance performance. The audience was enthralled by the performance, and it set the tone for the occasion.

- Sh. Anuj Tomar valued the efforts of the Geography Department to organize a national seminar.
- He spoke about the significant issues related to theme viz. protection, conservation and preservation of environment, economy and technology.
- He also mentioned the judicious use of available resources and the balance between resources and the environment for generations to come.

Lunch Break

After the keynote lectures ended, the delegates took a lunch break in the Common Room. The participants walked into the dining room and enjoyed their food while sharing their views, thoughts, opinions, and new innovative ideas with each other. The luncheon provided an opportunity for participants to connect and strengthen existing connections.

SELECTED ABSTRACTS

Principles of Individual and Community efforts for Protection and Conservation of Environment in India

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The environment has remained the dominant factor for sustenance of human lives since inception of living beings on the planet earth. It was only in the last few decades that this fine balance of man and environment has underwent threat due to developmental needs and greed. Human beings have exploited natural surroundings to an extent where it is almost impossible for nature to revive and recover the loss. This resulted in catrostrophic threats to human survival with surmounting natural disasters and epidemics. The alarming situation has paved the way towards protection and conservation of what we have left with the environmental resources. Multiple theories were brought up to establish the argument against exploitation of nature and protection of the same. They have somehow justified not only the need of community efforts but rather counted every individual contribution as a significant measure in alleviation of the environment. They have gazed widespread support crosscutting identities in multiple nationalities that came with ardent support for the just cause. Fight for the environmental cause got prominence with the support of regional and international agencies like the United Nations. International law in the form of multilateral treaties and declarations came into effect with many stringent provisions to be followed by individual people and countries. Overall, we have foolproof principles and theories to support the just cause. Principles like 'Proximity' and 'Subsidiary' gave emphasis on individual efforts while those of 'Preventive' and 'Public-Trust' on the community responsibility and action. There are principles like 'Polluters Pay' and 'Absolute Liability' which establishes the liability on culprits of environmental degradation and require them to be compensated. Moreover, principles like 'Precautionary' ones argue beyond the scientific enquiries to restrain any or all activities that alter natural surroundings of the environment. Likewise, there are different theories and concepts that address a multitude of environmental issues. The paper is an effort to explore the viability of those principles and theories vis-à-vis environmental cause.

Keyword: Environmental Degradation, Environmental Conservation, Environmental Protection, International Law.

Role of Public Interest Litigation (PIL) and Judiciary in Protection of Environment in India

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Public Interest Litigation or PIL in short, is a form of litigation employed in courts for redressal of issues connected with a greater cause of public welfare. It is entertained by courts only after going into merits of the issues concern and case by case. In India, PIL was started in year 1997 under Justice P.N. Bhagwati of the Supreme Court of India. It is a form of litigation which does not require any procedural mechanism but rather can be initiated on the basis of a complaint or a letter, subject to approval of the court to treat it as a PIL. It has happened in many cases where courts have considered those letters, reports and documents as PIL and have issued guidelines in form of judgement. Interestingly, whatever has been stated in those verdicts likewise the other case laws, they become laws. This type of legislation does have an element of activism for which it is often connoted as Judicial Activism and many times criticized for abrogating the role of legislature as the act is termed Judicial Legislation. But in the longer run and for the principle of public welfare it is admissible and hardly countered by the people in general. Of the many areas of concern, 'Environment' holds a prominence in having one of the largest PILs litigated by the people both judicial and otherwise. Through PIL, many environmental conflicts were successfully redressed by the courts like, illegal mining at Delhi Ridge, Doon Valley and Aravalli Ranges in Sariska, Ganges Pollution, Delhi Vehicular Pollution, Taj-Mahal Case etc. where courts have intervened only on the bases of PIL. After removal of the principle of *locus standi*, anyone who has concern for a public cause can initiate a PIL and seek directions from the court. This has resulted in many success stories of PIL. The paper is an effort to evaluate the contributions of various PILs initiated in context of environmental protection and conservation.

Keywords: PIL, Locus Standi, Judicial Activism, Judicial Legislation, Case Law, Environmental Laws.

Urban Planning with Ecological Footprints: Commiseration Appraisal of Theory and Practice

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The concept of the ecological footprint has become a popular and increasingly used approach in environmental policy and planning for Himayalayan cities in particular. The concept is useful not least as a metaphor that effectively communicates the built area of cities. However, the use of Ecological footprint analysis as a measuring tool is problematic, particularly when it is used as a tool for comparisons between jurisdictions. The paper sets out the benefits of the concept, indicates its history and use and offers a sympathetic critique of both the theory and practice of ecological footprints. We believe this is necessary so that policy makers thinking of adapting this approach are aware of its strengths and limitations and avoid using the concept in a manner that may be misleading.

Keywords: Ecological Footprint/ Planning / Sustainability/ Cities.

Climate Change and Food Security: A Case Study of Shimla District

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Climate change is one of the most important aspects of sustainable development. It has become a cause for great concern as it is leading to loss of ecosystem and biodiversity, both of which are the very foundation stone of human existence. This loss of Habitat and biodiversity is bound to affect the food production and livelihood of the thousands of people involved in the primary sector. The food prices are also likely to be adversely affected by this natural man induced phenomenon. The changing climate and its adverse effect on the local crop patterns and production are likely to impact global food production. This paper tries to study the effect of changing climate on the overall crop production and pattern in Shimla District. Changing agricultural practices to counter the impact of this phenomenon also comes under the ambit of this paper.

Keywords: Climate Change, Sustainable Development, Biodiversity, Crop production and pattern.

Development, Urbanization and Environmental Issues: A Case Study of Shimla District

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Development is a need of a society. This development leads to urbanization. Urbanization has long been associated with human development and progress. An urbanized nation, state and district provide variety of facilities to the people living in the urban areas. Along with different facilities numbers of environmental issues are also becoming prominent due to development activities. Urbanization has a major negative impact on the environment. In the present work Shimla District has been taken as a study area to examine the adverse impact of urbanization. This study showed that rapid urbanization has created social, economic, environmental and cultural problems. Urbanization has different environmental impacts such as water supply problems, solid waste management, disposing waste system, water logging problem, traffic congestion and sound pollution.

Keywords: Development, Urbanization, Environmental Issues, Socio-cultural Problems.

Gender Disparity in Literacy: A Geographical Analysis of Bharmour Block, Himachal Pradesh

Sanjeev Kumar* and Rohit Kumar**

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** Research Scholar, Department of Political Science, Himachal Pradesh University, Shimla.

India is a country with high gender disparity in literacy. As per Census 2011, overall literacy rate of Himachal Pradesh is 83.78% whereas the male and female literacy rate is 90.83% and 76.60% respectively. Chamba being least literate (73.08%) district occupies a unique place in the history of Himachal Pradesh in terms of its origin, growth and development. Bharmour block is one of the backward blocks of district Chamba with highly dissected and rugged mountainous topography. The study is entirely based on the secondary sources of data pertaining to 1991, 2001 and 2011 census which have been collected from District Census Handbooks, Directorate of Census Operations, Shimla. The present study is an attempt to find out the gender disparity in literacy at village level. The study is based on Sopher's method to calculate disparity in literacy. The study found a significant decline in male-female disparity in literacy during 1991-2011.

Keywords: gender disparity, Sopher's method, rugged topography, Bharmour block.

Analysis and Evaluation of Atmanirbhar Bharat Abhiyan

Vishal Chauhan

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The Indian manufacturing sectors share in gross value added stood at 15.1 percent in FY 2020 over 18.4 percent in FY 2011, indicating an underlying inertia, despite the country's high and rising private consumption demand. Moreover, this downturn in the domestic manufacturing sector has resulted in greater reliance on imports to meet the rising demand. India can replace 25 percent of the total imports through domestic production. The govt of India has launched the Atma nirbhar Bharat Abhiyan in May2020 with a package of 20 lakh crore. This package govt will facilitate structural reforms such as the redefinition of MSME, Commercialisation of the mineral sector, agriculture, and labour reforms, and privatization of public sector undertakings. Under self-reliant India, the government implemented the following schemes (i) Introduced production-linked incentive scheme, (ii) Strengthened Healthcare Infrastructure, (iii) Strengthened other Infrastructure (roads, railways, power), (iv) Increased focus on women entrepreneurship, (v) Skill India, (vi) Self-reliance in the defence sectors. The paper revealed that the govt allocation to all the given schemes has shown upward trends and the country has managed to reduce the imports, especially during Covid 19. India's domestic supplies of PPE kits and Indigenous-developed vaccines (Covaxin and Covishield) were high, and India had exported 65.5 million indigenous-developed COVID-19 vaccines to more than 90 countries in the world.

Key Words: Self-reliant, Reforms, Exports, Infrastructure, Indigenous.

Challenges in Implementation of National Education Policy-2020 in Higher Education of Himachal Pradesh- A Case Study of Kangra District

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Education is the weapon with the help of which humans have won the battle of civilization. Aristotle rightly said that "Education is the process of training man to fulfill his aim by exercising all the faculties to the fullest extent as a member of society". It is a process of learning, attaining skills, knowledge and moral value. After 34 years India has revised its entire education system and New Education Policy has been introduced on 29 July 2020. This policy envisioned to transform Indian higher education institutions to the world class institutions by

2040. The main objective of the study was to examine the challenges in implementing the National Education Policy (NEP)-2020 in higher education in Himachal Pradesh. Kangra district has been selected for the present study due to the largest number of higher educational institutions. In all, 22 colleges of Kangra district have been surveyed for present study on the basis of purposive sampling. Both primary and secondary sources of data have been used in the present study. A simple percentage method has been computed to show the findings of the study. The study shows that shows that we need to increase infrastructural development and gross enrollment ratio to impart higher education to potential strata as envisaged in NEP-2020. The number of teachers serving in the colleges is also less than required. The study suggests that there is an urgent need to fill the vacant posts in the colleges in Kangra district if we want to implement the national education policy in the district.
Key words: Education, Society, New Education Policy, *Purposive Sampling,* Percentage Method, Infrastructural Development

Rural Tourism in Hill Areas: A Step towards Sustainable Livelihood

*Tarsaim Kumar and **Mayank Rana

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Rural tourism has a high potential to stimulate local economic growth and social change because of its complementarily with other economic activities, its contribution to GDP and job creation, and its capacity to promote the dispersal of demand in time (fight seasonality) and along a wider territory. The present paper tries to analyze the role of rural tourism towards sustainable livelihood in hilly areas. Recently, rural tourism has become a leading form of tourism which has provided various kinds of positive tourism impacts such as economic, cultural and social impacts to society. The objective of this paper is to analyze the role of rural tourism towards sustainable livelihood. Rural tourism is still an emerging concept in India. It helps in preserving traditional beliefs, cultural heritage, environment, local resources etc. It has also created employment opportunities, diversification of household income and reduces migration of rural people which is one of the major concerns in today's world. Therefore, for the sustainable development of mountain region rural tourism can serve as a major tool. This paper recognizes the tourism destination in hilly rural areas and role of rural tourism in sustainable livelihood through secondary source of data. The finding of this study exhibits that rural tourism has affected the sustainable livelihood in hilly areas.
Keywords: Rural, Sustainable, Mountain Tourism, rural livelihood.

Periglacial landforms of Zanskar range of Trans-Himalayas: Spiti

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'Periglacial' Landform is a feature resulting from the action of intense frost, often combined with the presence of permafrost. These landforms are found in those regions of the world which remain in permanently frozen condition. These landforms are devoid of permanent ice cover on the ground surface. The term 'periglacial' literally means around the ice or peripheral to the margins of the glaciers. Permafrost and Active layer are the only two most striking landforms and features of periglacial regions. These also correspond to distinct climates, the active rock glaciers occurring under cold, humid conditions; the active block streams in cold, dry climates; and gelifluction-dominated landforms occurring in warmer areas. These have distinctive ranges of mean annual precipitation and temperature, which can be used in interpreting climatic changes based on distribution of fossil landforms**.** Permafrost is a permanently frozen ground. The depth of permafrost varies from place to place. The deepest depth of 50-100 Mts. has been discovered in Ladakh region. Periglacio-Fluvial Landforms are also found in Trans-Himalayan region of Ladakh like hummocks, Plasa, Pingo, Thermokarst, Patterned Ground, Stone glaciers/Streams, Altiplanation Terraces, Nivation Hollows, Periglacial Valleys etc.

Key words: Permafrost, Active Layer, Periglacial Landforms, Pingo, Plasa, Thermokarst.

The Temple Architecture of Chamba and Bharmour Regions of Himachal Pradesh: Problems and Prospects

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Temple architecture is one of the major types of art. Art is an aesthetic expression of human experience. It represents a distillation of both experiential and aspirational aspects of man- kind. It is also a fusion of environmental and metaphysical realms (Karan and Mather, 1976: 487). The present study is an effort to analyse the temple architecture of Chamba and Bharmour regions of Himachal Pradesh. It also throws light on the different kinds of temple architecture and their impact on the local people's economy during the Minjar Fair and Manimahesh Yatra. The present study is based on both primary as well as secondary sources of data. The data has been collected using a simple random method of sampling to full fill the objective of the study. The present study has mostly used the qualitative type of data which has been collected through field survey by using the interview schedule method. The famous temple architecture of these regions consists mainly of Shikhra style and Pent-Roof style. In present time, the importance of

traditional temple architecture decreases day by day in our cultural world. The present study revealed that about 93 percent of the respondents believe that the traditional temple architecture style faces many threats in today's time. The most prominent being the effect of modern temple architecture as people are adopting new styles of temple architecture. The study necessitates a cooperative approach between the government and local bodies in order to promote and conserve this traditional temple architecture. Our traditional culture adds incredible value to our heritage.

Keywords: Temple architecture, Shikhra Style, Pent-Roof style.

A General Analysis of the Environmental Protection and Sustainable Development

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Environmental protection is needed for sustainable development and has been a challenge to the human community. The paper analyses the concept of sustainable development that has determined society to recognize and become aware of the importance of environmental factors as well as of the functions and services that the environment offers. Climate change due to unorganized development has led to an adverse impact on the environment and human health. Indian legal system has introduced some laws and enacted tribunals like National Green Tribunal to deter the unwanted growth and protect the environment from degradation. Due to lack of implementation of these laws they argued about their effectiveness and seriousness in relation to the environmental laws in the country. The Indian judiciary has also played a pivotal role in environment sustainability by giving a landmark judgment and orders by invoking its powers under the article 32. Sustainable development has as its goal the improvement of the negative effects of environmental pollution having in regard the need to satisfy present generation needs while ensuring the liveliness of the environmental factors for future generations. In this paper an attempt has been made about the functions and the importance of forests, and how it can be helpful in environmental protection and sustainable development.

Keywords: Sustainable development, Environment protection, National Green Tribunal Act, Pollution, Environment.

Agricultural & Horticultural development of the selected villages in Tirthan Valley of Kullu district, Himachal Pradesh

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The agricultural sector is a central pillar of the Indian economy, employing more than half of the nation's workforce. Both agriculture and horticulture serve as the backbones of the Himachal Pradesh economy. Himachal Pradesh environment is favorable to agriculture and horticulture, allowing for the successful cultivation of a wide range of agricultural and horticultural crops such as food crops, fruit crops, flowers, vegetables, and medicinal plants. This has aided the region's growth by providing jobs and revenue to the rural populace. Tirthan valley of Kullu district has been chosen as the study area. The objectives of this study are to identify agriculture and horticulture production, its development and the challenges and changes related to agriculture and horticulture in the study area. The research findings support the notion that practically the whole rural population in the study area depends on agriculture and horticulture and continues to practice it according to traditional methods. People still face several physical and other difficulties and are less knowledgeable about the vast majority of government programs and facilities.

Keywords- Agriculture, Horticulture, Production, challenges & Changes.

Traditional livelihood options in district Kinnaur of Himachal Pradesh: A Geographical Analysis

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Livelihood is a basic human need and right. It is not the condition of just being alive which includes enough food, but it includes the shelter, access to healthcare facilities, education and community support. According to Chamber and Conway "A livelihood in its simplest sense is a means of gaining a living and comprises the capabilities, assets (including both material and social resources) and activities required for means of living" (Chambers and Conway, 1991). The present study tries to analyse the traditional livelihood options of the people of district Kinnaur.

The entire district of present study is tribal region. The present study is based on primary and secondary sources of data. The secondary data sources are collected from district census handbook of census of India. The primary data has been collected through interview scheduled. The present study has used the stratified random sampling technique for sampling the households. The present study shows that the majority of the population was engaged in agricultural, horticulture and household industries such as sewing, spinning, weaving, tailoring, cobblery, carpentry and black smithy etc. However, with the passage of time the introduction of industries and different employment facilities to the tribal area such as hydroelectricity power stations, tourism, banking and other self-employment. The population of the study are has shifted towards secondary and tertiary activities. The majority of the population has shifted towards the manufacturing-based industries and service sector.

Keywords: Livelihood, primary activities, shelter, community support, horticulture

E-Learning in Higher Education: Prospects & Challenges

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The twenty-first century has brought with it fundamental shifts in the nature, values & structure of higher education. The National Education Policy 2020 also revolves around making education more inclusive. The current system demands higher education institutions to incorporate ICT in their teaching and learning process for greater access, increased cooperation, enhanced collaboration, cost-effectiveness and techno-pedagogical improvements. However, ICT have not been permeated to a great extent in many higher education institutions due to certain socio-economic and technological constraints. The paper highlights the relevance of introducing electronic media in the existing pedagogical scenario. It also elaborates various policies announced for higher education system and compares them with the current adopted system. Various innovative and predicted implication of NEP 2020 on the Indian higher education system along with its merits have also been drawn. In the end, substantial challenges in the way of successful implementation of NEP have been discussed.

Key words: NEP 2020, techno-pedagogical, ICT, inclusive education, electronic media.

Population Aging: An Emerging Research Agenda for Sustainable Development

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In many parts of the globe, population aging has recently been acknowledged as an emerging challenge. Earlier studies addressed its effects on the sustainability of social security systems and national economic development. This paper aims to: (i) describe the population aging trend in Northwest India and its regional demography; (ii) provide a structural review of population aging challenges at the national, communal, and individual levels; and (iii) elaborate future research topics on population aging with a particular emphasis on developing countries. Population aging will be a major trend in both developed and developing countries. Several signs point to a rapidly aging populace in the near future. Finally, the need for linking population aging with the sustainable development concept and the possible rural decline caused by rapid urbanization are suggested as future research topics. Further studies to establish a body of knowledge on population aging in developing countries are required to place population aging on the agenda of future sustainable development discussions.

Keywords: population aging; sustainable development; rural decline; community function

Climate change: Adaptation and Mitigation strategies

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Climate change adaptation means altering our behavior, systems, and in some cases ways of life to protect our families, our economies, and the environment in which we live from the impacts of climate change. Climate change encompassing mostly hydro-meteorological hazards is a fact affecting the globe in diverse ways. It is showing up in a number of different ways, like a rise in the frequency and severity of floods, droughts, and extremely high temperatures. Droughts, other extreme weather occurrences, and meteorological catastrophes have been brought on by climate change in many nations in recent years. Adaptation strategies are essential for reducing the negative impacts of climate change on communities, ecosystem and economies. By investing in these strategies, communities can become more resilient, and economies can adapt to the changes that are already occurring and those that are still to come. The findings showed that climate change had a significant negative impact on livelihoods and food security. The identified climate change adaptation strategies included food aid, use of traditional grains and other drought resistant crops, early planting, multiple planting, barter trade and livelihood diversification. The mitigation strategies used included afforestation and reforestation programs,

and preservation of wetlands. The findings of this study indicated the need for similar assessment in other parts of the country as impacts of climate change and responses thereof should vary from place to place.

Key words: - Climate change, ecosystem, afforestation, reforestation, preservation

Web based Village Information System of Rohru CD Block of Shimla District of Himachal Pradesh

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India is a developing country and most its population live in rural areas. For any developing country like India, it is important to have planned development in urban as well as in rural area. In the rural background people is living in a very poor condition and there is big divide in the rural and urban development. Government is taking many development-planning schemes for the development, but due to non-availability, improper management, and inaccessibility of data it become very difficult to get good development plan for any area. Modern information and communication technology like Geographical Information System, GPS, Photogrammetry and remote sensing has provide a good platform for storage, management, processing of data and act as a decision-making tool. It has tremendous potential to enrich rural development, management of rural data and planning for these areas. It has also potential for information exchange between various agencies. The objective of this paper is to create a village information system, which bring a databank of data from various place in a single platform of physical social and economic aspect. This information will have spatial as well as non-spatial information about Rohru development block, which will help for rural development planning of Rohru development block. It will also enrich the data sharing between various agencies for any development program. The link of web-based web information system is visrcdb.co.in

Keywords: Geographic information system, Development planning, Rural Development, Databank, Decision making tool, Village Information System.

तोशाम का गिरते भूजल स्तर का एक भौि ोगलक अध्ययन

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गिरता भू-जल स्तर न के वल एक प्रदेश या ि ाॅव बल्कि पूरे देश के साथ साथ गवश्व समक्ष भी भयावह चुनौती है आज गजस तरह से मानवीय जरूरत ो की पूगति के गलए गनरोंतर व अनवरत भू-जल का द हन गकया जा रहा है, उससे साल दर साल भू-जल स्तर गिरता जा रहा है. गपछले एक दशक के भीतर भू-जल स्तर मेंआई गिरावट के आोंकडे के जररये समझने का प्रयास करेंि े त अब से दस वर्ि पहले तक जहाों 30 मीटर की खुदाई पर पानी गमल जाता था, वहाों अब पानी के गलए 60 से 70 मीटर तक की खुदाई करनी पडती है. साफ है गक बीते दस-बारह साल ो मेंदुगनया का भू-जल स्तर बडी तेजी से घटा है और अब भी बदस्तूर घट रहा है, ज गक बडी गचोंता का गवर्य है. अिर के वल भारत की बात करें त भारतीय कें द्रीय जल आय ि द्वारा 2016 मेंजारी गकए ि ए आोंकड ो के अनुसार देश के अगिकोंश बडे जलाशय ो का जलस्तर वर्ि 2014 के मुकाबले घटता हुआ पाया ि या था. वतिमान अध्ययन प्राथगमक व गद्वतीय द न तरह के आाँकड ो पर आिाररत है.

मूल शब्द - जल , कृ गर् , सोंकट , आपदा, भूजल

Climate Change: A Threat to Mental Health

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Climate change adversely affects the mental health of the population. This paper aims to focus on the impact and threat of climate change on mental health conditions. Literature available online until end of June 2022 was reviewed for the present study. Majority of research in this field reveals that long-term shifts in temperatures and weather patterns has a negative impact and poses a major threat to mental health, in particular depression, anxiety and post-traumatic stress are the most common threats to the people. Also, the increase in temperature is significantly associated with increased aggression and violent behavior. Further, some researchers argue that climate change may affect mental health directly by exposing people to trauma, as well as indirectly, by affecting their physical health which is associated with psychological distress. Other research findings claim that extreme climate changes such as global warming and prolonged droughts cause population to migrate, which can lead to acculturation stress, adjustment disorder, depression and high incidence of farmer suicides. Moreover, demographic factors, geographical conditions, lack of resources and vital information, also add up to the adverse effects of climate change on mental health. Since climate change poses a major threat to

human mental health, it is paramount to counter its challenges through sustainable development. Less reliance on fossil fuels, reducing encroachment on green cover and more emphasis upon the use of renewable resources (such as, geothermal, wind and solar energy) should be stressed upon. Countering the challenge of climate change requires developed and under-developed nations to implement policies for reducing the emission of greenhouse gases and carbon footprint per person. Lastly, advocating positive mental health is another way to extenuate the psychological distress due to climate change.

Keywords: Climate change, mental health, psychological distress, threat

लोकगीतों में ग्रामीण जीवन

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लोक साहित्य में किसी भी समाज व राष्ट्र की आत्मा होती है। इसमें प्राचीन काल से परम्परा, जीवन मूल्य, संस्कृति, मेले,उत्सव, त्यौहार ,नृत्य आदि के दर्शन किये जाते हैं। हमारे जीवन की असली सांस्कृतिक विरासत मौखिक एवं आडम्बर रहित साहित्य से उद्भासित होती है, जिसे हम लोक साहित्य कहते हैं। लोक साहित्य में लोकगीतों का अहम् स्थान होता है जो हमारी सभ्यता और संस्कृति को एक पीढ़ी से दूसरी पीढ़ी तक आगे बढ़ाते हैं । लोकगीतों में लोकजीवन का समग्र परिदृश्य अभिव्यक्ति पाता है। इसका एक सशक्त पक्ष है - ग्रामीण जीवन का दर्शन। लोकगीतों को सुन कर गाँव में बच्चों का बचपन बीता, युवाओं के मन में प्रेम का संचार हुआ, पथिक ने थकान व विरही ने मन की कसक मिटाई,विधवा स्त्री के जीवन का एकाकीपन दूर किया, इस प्रकार लोकगीत जीवन के हर पक्ष में अन्तर्निहित है। लोकगीत मानव जीवन के विविध संस्कारों से लेकर कृषि, श्रम,सौन्दर्य,हास,शोक,राग - विराग,प्रेम -विरह, करुणा आदि असंख्य विषयों तथा भाव क्षेत्रों को अपने में समाए हुए हैं। लोकगीत लोक मानस के सबसे निकट होते हैं। यही कारण है कि वह हर कदम, हर परिस्थिति में लोकगीत रचता है और गुनगुनाता है। इसी के चलते ग्रामीण जीवन में लोकगीतों के विविध रूप प्राप्त होते हैं जिनमें जन्म के गीत, विवाह के गीत, मृत्यु के गीत,त्यौहार-व्रत के गीत, देवी - देवताओं के गीत, सावन के गीत, मांगलिक कार्य, अनुष्ठान -जागरण के गीत प्रमुख हैं। ये लोकगीत शताब्दियों से अपने - अपने क्षेत्र में एक पीढ़ी से दूसरी पीढ़ी में हस्तांतरित होते हैं। समाज में रहते हुए व्यक्ति भय, संत्रास, विस्मय, और हर्ष -विषाद के बीच जीता है और प्रकृति को अपना सहचरी बना लेता है। इसी से पशु - पक्षी, पेड़ - पौधे,नदी -पर्वत ,बसंत ,वर्षा सब उसकी संवेदना के अंग बन जाते हैं और गीत के माध्यंम से अभिव्यक्त होते हैं। लोकगीतों में जीवन के सभी पहलुओं का समावेश है इनमें जहाँ गाँव के पारिवारिक शिष्टाचार है,वहीं संस्कार भी। साथ ही इन गीतों में पितृसत्तात्मक व्यवस्था, जाति और वर्ण व्यवस्था भी देखने को मिलती है। लोकगीतों में पारिवारिक संबंधों को महत्व दिया गया है। इसमें माँ -बेटे, भाई - बहन, पिता -पुत्री के मध्य मधुर सम्बन्ध दर्शाए गए हैं वहीं पति -पत्नी के आपसी प्रेम,विरह ,नोक - झोंक और झगड़े के विविध रूप मिलते हैं। लोकगीत हमारी जीवन शैली का जीवंत रूप प्रस्तुत करता है। गाँव का जीवन सीधा व सरल होता है। ये लोग खेती बाड़ी करते हैं और इनका जीवन कृषि पर आधारित होता है। आज भी

खेतों में काम करते हुए किसान सामूहिक गीत गातें हैं, त्योहारों में खुशियों को प्रकट करते हुए गीत गाकर नृत्य करते हैं, जन्म,मुंडन ,विवाह आदि संस्कारों की रस्में पारम्परिक गीत गाकर पूरी की जाती है। इन लोकगीतों में लोक के रहन – सहन, रीति-रिवाज, परम्पराएं, खान -पान, तीज त्यौहार,व्रत ,सुख दुःख का प्रतिबिंब दिखाई देता है। इसका चित्रण हमें इस प्रदेश की सीमाओं के अंदर रहकर लिखने वाले अनेक लेखकों के साहित्य, यहाँ के लोकसाहित्य तथा लोक में बिखरे संकेतों में मिलता है।

Environmental Hazards and Vulnerability

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Traditionally, the study of environmental hazards was embedded in various branches of physical geography i.e., meteorology, hydrology, geology, engineering; human geography; health and safety. However, for the last two decades, a multi-disciplinary and integrated approach has been adopted in studying environmental hazards and disaster management. This was partly due to the change of global landscape. In this article, the current knowledge of hazards and disaster management is critically reviewed. Topics included here are a) Natural and man-induced hazards, b) Risk modelling and assessment on extreme and catastrophic events, c) Vulnerability modelling and assessment, and d) Disaster management cycle - Prevention, Preparation, Response and Recovery (PPRR). Finally, reviews of the current problems and the future prospects of disaster management are given.
Keywords: Environmental hazards, disaster, risk, vulnerability and mitigation.

Adapting Cultivation Practices with varying Climatic Conditions for a Sustainable Future

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The impact of climate change on agriculture has become increasingly apparent in recent years. It has resulted in unpredictable weather patterns, extreme weather events, and altered precipitation regimes, which have significant impacts on crop growth and development. To cope with these

challenges, farmers need to adapt their cultivation practices to the changing climate conditions. The conducted research explores the challenges faced by farmers in adapting to changing climate conditions. It discusses the importance of understanding the local climate and soil conditions, selecting appropriate crops and varieties. It suggests that development and implementation of sustainable agricultural practices can help mitigate climate change.

Practices such as reduced tillage, integrated pest management, and precision agriculture can help reduce greenhouse gas emissions, improve soil health, and increase the efficiency of resource use. These strategies can also be extended to crop diversification, crop rotation, soil conservation practices, irrigation management, and the use of crop varieties that are better adapted to changing climate conditions. It further emphasizes adopting sustainable agricultural practices that conserve water and soil resources. Another key aspect of adaptation involves building resilience in agricultural systems to cope with a range of climate impacts. This may include investing in infrastructure and technologies to improve water management, soil health, and crop protection. It may also involve developing new markets and value chains to help farmers adapt to changing demand for different crops.

This research paper further establishes the need for effective communication and collaboration between farmers, scientists, policymakers, and other stakeholders to develop and implement effective adaptation strategies. Particularly, the conducted research is an attempt to highlight the potential benefits of climate-smart agriculture, which aims to enhance the resilience of farming systems to climate variability and change while also contributing to food security and sustainable development.

Tracing the Roots of Sustainability and Sustainable Development in the Ancient Indian Culture

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'Sustainability' and 'Sustainable Development' are the terms which are of prime importance at global as well as at local level in the present era. Sustainability means utilization of resources inspite of exploitation so that the resources are also available for the future generations. Although it may seem to many that the entire concept of sustainable development came up in 1980s with the publication of Brundtland Report, but it is as old as the rise of civilization in Indian context. Let it be our scriptures namely Vedas (which are oldest), Upanishads, Epics, Puranas, Buddhist and Jain literature; secular literature such as poetry, dramas and plays written in different ages or tracing through the sands of different settlements and empires. Indian culture

has always followed a sustainable way of living. The following paper entitled 'Tracing the Roots of Sustainability and Sustainable Development in the Ancient Indian Culture' tries to throw light in tracing a sequential history of sustainability and sustainable development in the ancient Indian culture. The paper lays down evidence from the period of Indus Valley Civilization, Vedic period, post-Vedic period, Age of Mahajanapadas, and several empires like Maurayans, Guptas, post-Guptas till the present practices we have in our culture. Thus, it is trying to study the geographical concept of sustainability and sustainable development in historical terms.

Keywords: Sustainability, Indian Culture, Veda, Civilization, Gupta.

Consequential Impact of COVID-19 on the State of Himachal Pradesh in Different Sectors and the Resultant Lessons to Counter Such Pandemic to Avert Impact on the Growth of the State

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Health is a complete state of physical, mental, and social well-being. Physical Health includes optimal bodily function. COVID-19 not only impacted physical health, but the consequences were not limited to health, it showed an impact on all the sectors of the country's economy as well as the state's economy. The study aimed to witness the impact of COVID on different sectors of Himachal Pradesh. Secondary data was used. The major findings revealed that in Himachal Pradesh during the year 20-21 the state economy contracted by (-) 5.2 percent due to the COVID-19 pandemic. In Himachal, all three sectors, namely Primary, Secondary, and Tertiary sectors incurred a loss. The Primary Sector comprises agriculture, horticulture, livestock, forestry and logging, fishing mining, and quarrying sub-sector. Secondary sectors comprise Manufacturing (organized and unorganized) and Construction and Tertiary Sectors comprise Trade, Hotel, Transport, Banking, communication, and services. All three sectors had a negative impact on its growth. The primary Sector had a growth of (-12.0%), the Secondary Sector had a growth of (-6.6%) and finally, the tertiary sector growth was (-2.1%). It concludes with the teaching COVID-19 has given us and how these teaching can be implemented in the future to build a "self-sufficient India" or Aatma Nirbhar Bhaarat – which is self-sustaining and resilient.

Keywords: COVID-19, Primary Sectors, Secondary Sectors, and Tertiary Sectors

GEOINFORMATICS FOR ENVIRONMENTAL ISSUES IN SHIMLA DISTRICT, HIMACHAL PRADESH

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The purpose of this research paper is to look into the use of geoinformatics in addressing environmental issues in the Shimla district. Geoinformatics is the analysis and visualisation of environmental data in a spatial context using geographic information systems (GIS), remote sensing, and other geospatial technologies. We intend to use geospatial analysis in this study to identify and assess environmental issues in the Shimla district, such as landslides, deforestation, soil erosion, climate change, waste management, air pollution, and traffic congestion. The secondary data on environmental parameters gathered from various sources, including satellite imagery and ground-based monitoring stations were mapped, using GIS. Then, using spatial analyses, hotspots and patterns of environmental degradation were identified in the district.

Role of higher education in sustainable development in Indian perspectives

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Higher education institutions need to be involved in finding and resolving problems that have an impact on the welfare of countries and the global community. Public knowledge and the participation of the economy's private sector are required for mobilization for this purpose. Both public and private educational institutions will need to reevaluate their missions and objectives and set standards that correspond to the demands of a sustainable society. If the objectives of sustainable development are to be achieved, attitudes toward our current lifestyles and their effects on the environment must shift among all parties involved in higher education in particular and in education at all levels generally. The importance of seminars, conferences, classes, and other similar events cannot be overstated. Human rights, democracy, peace, and sustainable growth are all supported by education. One of the main objectives of the higher education system

on a national and international level should be the development of sustainable people who will then create sustainable communities.

Keywords: education, human right, society, institution, sustainable development

Smart Cities: Goals and Challenges

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Cities are the engines of economic growth in all countries including India. A total of 32% of India's population currently lives in urban areas, contributing nearly 64% of India's GDP (2011 census). With increasing urbanization, urban areas are expected to house 40% of India's population and contribute 75% of India's GDP by 2030. This requires comprehensive physical, institutional, social and economic infrastructure development. All of these are important to improve the quality of life, attract talent and investment to the city, which will start a good cycle of growth and development. The development of smart cities is a step in this direction. The basic infrastructure elements of smart cities will include adequate water supply, secure electricity supply, sanitation including solid waste management, efficient urban and public transport, affordable housing, especially for poor, strong IT connectivity and digitization, good governance, especially e-government and civic engagement, sustainable environment, safety and security of citizens (especially women, children and the elderly), health and education . But all of the above are just concepts that look great in newspapers and books. In fact, 39 of the 50 most polluted cities in the world are in India (Business Standard - 2022). Currently, achieving clean air in cities does not seem achievable even by 2030. This paper is a critical assessment of the goals set and the likelihood of their achievement by 2030. Cities will prepare their smart city proposals (SCP) containing the vision, resource mobilization plan and expected results in terms of infrastructure upgrades and smart applications. The city will prepare the SCP using the principles of the strategic planning process, and proposals will incorporate area development plans and pan-urban initiatives.

Keywords: Digitization, Governance, Retrofitting, Pollution.

Is Sustainable and Smart City an Urban Utopia? Evidences from Shimla, Himachal Pradesh

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The economy of every nation largely depends on the development of its urban centres. Unsustainable urbanization has created unprecedented challenges for city governments and city residents particularly in developing counties like India. Urban centres account for 67% of the global energy demand and are responsible for up to 70% of the harmful greenhouse gases emissions. The urban population growth creates challenges to city infrastructure, services like water, energy, transport, and other, and on the management of the infrastructures and services. Rapid urbanization puts cities in central position to solve urgent global issues such as climate change while maintaining the service level for the extended population with limited resources.

Sustainable and smart Cities have emerged as one response to the challenges and opportunities created by rapid urbanization in the 21stcentury. The idea of sustainable and smart cities seems a utopia in Indian context. According to a recent report released by the Swiss Technology firm, IQAir, India houses 65 of the top 100 most polluted cities in the world, giving rise to questions over efforts being made by several governments not being implemented on the ground. Therefore, an attempt has been made here to understand and conceptualize terms like sustainable and smart cities in India generally and Shimla particularly. The study is based on both primary and secondary data sources. The study suggested that green mobility can be an alternative model in the study area for urban sustainability. Green mobility has been examined in terms of walkability, vertical transportation, cycling, ropeways, electric vehicles and public transportations.

Key words: Urbanisation**,** Sustainable City, Green mobility and Shimla

Impacts of Hydroelectric Projects on Environment and Minimizing the Impacts, in the Indian Himalaya

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The present study is focused on the impacts and mitigation measures of ongoing hydropower projects (3 MW-1500 MW) in the upper Satluj basin (895-2845m) of the Indian Himalaya. It is observed that development activities have occasionally disturbed the ecology of the Himalaya. The impacts were assessed around the selected projects in terms of soil, water and air quality status and socio-economic conditions of natives. Soil quality in terms of available nitrogen (N), phosphorus (P) and potassium (K) was low (211±10-224±14 kg ha^{-1}), medium (13.9±1.7-18±2 kg ha^{-1}) and high (283±30-296±31 kg ha^{-1}) respectively. NPK were higher at Khab (2915 m; a pristine site) as compared to other affected areas. Upslope and down slope regions have been facing more environmental degradations due to excessive construction activities. The impacts on land are observed mainly during construction stage of HEPs. It is due to the use of forest land for quarrying and muck disposal activities. Water quality is affected due to debris dumping along the riverbeds where turbidity (94.8-389.8 NTU) is high. Air quality as particulate pollution (PM_{10}) in a majority of samplings crossed (102.2-107.3 µg m^{-3}) the permissible limit (100 µg m^{-3}). While the trace gases (i.e., nitrogen dioxide, sulphur dioxide and ammonia) were under limit. Peoples' perception showed that a large number of natives (~66%) are in favour of small projects and are not in favour of adhoc solutions. In view of making hydro energy sustainable in the mountains, feasible mitigation measures are suggested.

Keywords: soil quality; water quality; air quality; hydro energy; Satluj basin; sustainability; Indian Himalaya

GEOINFORMATICS FOR CRIME AGAINST WOMEN WITH SPECIAL REFERENCE TO SHIMLA, HIMACHAL PRADESH

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This research paper focuses on the use of Geoinformatics in addressing crime against women, with a specific emphasis on Shimla. Geoinformatics, which involves the use of geographic information systems (GIS), remote sensing and other geospatial technologies, can be applied to analyse and visualize crime data in a spatial context. This study aims to use geospatial analysis to understand the patterns and trends of crime against women in Shimla. The data was collected on crime incidents from various sources, including NCRB and social media and mapped using GIS. Then conducted statistical analyses to identify hotspots and spatial patterns of crime against women. The findings of this study will provide valuable insights for policymakers and law enforcement agencies to formulate more effective strategies to prevent and combat crime against women in Shimla. Moreover, the study demonstrates the potential of Geoinformatics, as a powerful tool for crime analysis and prevention.
Key words: - Geoinformatics, crime, strategies

Health Status of Women In Himachal Pradesh:- A District Level Analysis

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It is crucial to provide women with access to a nourishing diet, a healthy lifestyle, and appropriate medical facilities because they are the pioneers of the next generation. Despite the fact that India is a sizable country with a population that is diverse in terms of social, culture, and economic background, access to healthcare for women in this country is frequently hampered by gender inequality. Women's poor health has an effect on their families' health in addition to themselves and infants born to sick mothers are more likely to be underweight. In places like Himachal Pradesh, where it is challenging to provide healthcare to remote areas, both in terms of accessibility and availability women deal with a range of little to major problems. The current study examines the health and nutritional status of women using data from the National Family

Health Survey for the years 2015–16 and 2019–21. A composite score has been developed to highlight inter-district differences in the status of health indicators, and a T-test has been utilised to compare analyses of these indicators across the districts during the study period. The indicators taken for the study are Anaemia, Obesity, Underweight, Hypertension and Blood Sugar. The areas that demand emphasis include increased health promotion, frequent screenings, and preventative care.
Key Words: Nutrition, Healthcare, Women's health, NFHS-4 and NFHS-5

Rainfall and Landslide Associations along the Roads in Bharmaur Tehsil of Chamba District in Himachal Pradesh

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Landslides and rainfall are closely and positively associated. More slope failures activate after the occurrences of the rainfall in the hilly terrains. The rainfall related landslides pose a substantial risk to the lives of the people and the infrastructure in the areas of high rainfall. There have been various studies to understand the rainfall and landslide relationship throughout the world. Almost every slope, gentle or steep, experience landslides of varying magnitude at one point of time or another. The present study analysed the relationship between landslides and rainfall in Bharmaur tehsil of Chamba District in Himachal Pradesh. Though the study area is already badly affected with sliding activities, the problem becomes grave during the monsoons. The road (NH154A) connecting the study area to the rest of the district remains closed for many days due to landslides at different locations during the monsoon rains. The study recorded the landslides occurrences along the roads in Bharmaur tehsil during the pre-monsoon and the post-monsoon surveys. The analysis of the data revealed that there was a substantial increase in the landslide numbers after the monsoons. Thus, the study proves that rainfall and landslides are positively related.
Key words: Landslide, slope failure, association, slope stability.

पर्वतीय क्षेत्रों में पारिस्थितिकी पर्यटन तथा रोजगार सृजन

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भारतवर्ष भौगोलिक , सामाजिक , आर्थिक और सांस्कृतिक विविधताओं से भरा हुआ देश है । यहाँ पर हिम आच्छादित तुंग शिखरों से लेकर दीर्घ क्षेत्र में विस्तृत पठार , मैदान, द्वीप समूहों के अलावा तटीय क्षेत्र पाये जाते हैं। सभी क्षेत्रों की अपनी समस्याएँ और विशेषताएँ हैं। पर्वतीय क्षेत्र भारतवर्ष के लगभग तीस प्रतिशत क्षेत्र पर फैले हुए हैं । सामान्य तौर पर इन सभी क्षेत्रों में जीवन निर्वाह योग्य साधनों का अभाव रहता है तथा लोग पशुपालन और कृषि करके अपनी आवश्यकताओं को पूरा करते हैं । लेकिन, पर्वतीय क्षेत्रों की एक अलौकिक विशेषता यह है कि वे प्रकृति के सुंदरतम रूप को अभिव्यक्त करते हैं तथा उनका अद्वितीय और नैसर्गिक सौन्दर्य पर्यटकों को देश विदेश और भारत के विभिन्न क्षेत्रों से अनायास ही अपनी और आकृष्ट कर लेता है । पर्वतीय क्षेत्रों में रोजगार सृजन में पारिस्थितिक पर्यटन अत्यंत कारगर हो सकता है बशर्ते उसे योजनबद्ध एवं चरणबध तरीके से विकसित किया जाए । इस काम को अमलीजामा पहनाने के लिए सुनियोजित रणनीति के तहत कार्य करना आवश्यक है । इस संदर्भ में सबसे पहले किसी पर्यटन क्षेत्र की पहचान , संभावित पर्यटन गतिविधि की पहचान , उस क्षेत्र तक पहुँचने के सुरक्षित मार्ग , उस गतिविधि के संचालन के लिए न्यूनतम बजट का प्रावधान , स्थानीय मानव संसाधन का प्रशिक्षण, गतिविधि का दक्ष व्यक्तियों के संरक्षण में संचालन, उस पर्यटन क्षेत्र के आसपास मूलभूत सुविधाओं को जुटाना जैसे आवश्यक कदम उठाने की आवश्यकता रहती है ।

पर्वतीय क्षेत्रों में साहसिक गतिविधियां जैसे ; ट्रेकिंग , पर्वतारोहण ,कैंप लगाना ,river crossing, Rock climbing ,शैक्षणिक टूर इत्यादि कम खर्च में आयोजित की जा सकती हैं । इससे स्थानीय युवाओं को घर के पास स्थायी रोजगार के साथ ही अच्छी ख़ासी कमाई भी हो सकती है । हिमाचल प्रदेश के मनाली , बीड , धर्मशाला , कुफ़री, नाल देहरा, हरिपुरधार ,रेणुका जी , शिकारी देवी जैसे स्थान अपनी प्राकृतिक सुंदरता के कारण प्रति वर्ष लाखों पर्यटकों को अपनी और आकर्षित करते हैं । इन स्थानों के आसपास पारिस्थितिकी पर्यटन को काफी बढ़ावा मिला है । इस पर्यटन का सबसे बड़ा लाभ यह है कि इससे पर्यावरण को किसी भी प्रकार का नुकसान

नहीं पहुंचता, बशर्ते पर्यटकों द्वारा कुछ मौलिक नियमों का पालन किया जाए। इसी प्रकार उत्तराखंड, जम्मू और कश्मीर ,लद्दाख,असम,मेघालय,अरुणाचल प्रदेश,सिक्किम जैसे राज्य अपनी अद्भुत प्राकृतिक सुंदरता के कारण पूरी दुनिया में विख्यात हैं । इन क्षेत्रों में यदि उपर्युक्त वर्णित गतिविधियों को बढ़ावा दिया जाए तो निश्चित तौर पर परिस्थितिकी पर्यटन के दम पर रोजगार सृजन बृहद स्तर पर किया जा सकता है । इसके लिए पहाड़ों की गोद में बसे छोटे छोटे नालों , घाटियों तथा विशेष स्थलों को चिन्हित कर उन्हें विकसित करने की आवश्यकता है । यह क्षेत्र रोजगार सृजन से परिपूर्ण संभावनाओं से भरा हुआ है , आवश्यकता है इस क्षेत्र के असीम सामर्थ्य को आँकने और योजनाबद्ध ढंग से उसे विकसित करने की । यदि पारिस्थितिकी पर्यटन पर सरकारों द्वारा गंभीरता पूर्ण विचार कर उस पर अमल किया जाए तो निश्चित तौर पर यह क्षेत्र भारतवर्ष की बढ़ती बेरोजगारी को कम करने की दिशा में अहम भूमिका निभा सकता है ।

मुख्य शब्द: नैसर्गिक सौन्दर्य, पर्वतीय क्षेत्र, सुनियोजित रणनीति, न्यूनतम बजट, पारिस्थितिकी पर्यटन।

Spatial Concentration and Distribution of Basic Infrastructure and Smart Facilities: A Case Study of Dharmashala Smart City, Himachal Pradesh

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Economic growth and development planned in a sustainable manner is based on the availability of basic infrastructure and smart facilities. With rapid increase in population pressure in the cities, availability of these facilities is playing a pivot role in both the societies namely rural and urban mainly due to complex relationship between man and his environment affecting the social and economic strata. In the present study spatial concentration of basic infrastructure comprising of educational infrastructure, health infrastructure and other facilities is computed using the Average Ward Wise Composite Score (A.W.C.S) and Municipal Composite Score (M.C.S) in Dharamshala Smart City and for analysing the spatial distribution of smart facilities GPS survey was conducted to find out the ward wise inequalities. It was concluded from the study that Kotwali Bazaar is the Central Business District of the city comprising of all the administrative work offices while Mcleodganj is well known tourist destination comprising of both basic infrastructure and smart facilities. Smart works include construction of root zone treatment plant, development of eco-tourism parks, roof top solar power plants and smart ducts. Thus, in order to

fill in the gap between basic infrastructure and smart facilities many works are being done that would further enhance quality of life of people.

Keywords: Infrastructural development, basic amenities, smart facilities, socio-economic development, quality of life.

Village Level Analysis of Social Development: A Case Study of Shillai Block of Sirmaur District, Himachal Pradesh

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Development, whether social or economic, improves the quality of life of people and leads to overall economic growth, development, and transformation. The standard of living of people is raised through the continuous process of social development that is not determined earlier and plays a dominant role in the removal of inequalities in social development of developing countries. The present study makes an attempt to find out the spatial variation in the development in context of social factors in Shillai block. The study is based on secondary sources of data collected from District Census Handbook with reference to two census years 2001 and 2011.Simple percentage method has been used to compute the level of development within the villages. Various indicators i.e., educational facilities, health facilities, power supply, drinking water facilities, literacy rate both male and female literacy rate and disparity in male-female literacy have been used for analysis in the present research. It has been concluded from the study that educational facilities at lower levels have been found within villages and there is urgent need to provide better health facilities to the population. Thus, there has been improvement in the availability of social facilities during the decade.

Keywords: Economic growth, Development, Social development, regional disparity.

Evolution and Importance of Mushroom Cultivation in Himachal Pradesh

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Himachal Pradesh being a hilly state of India has become one of the fastest growing economies of the country. It is the only state where 89.9 percent of people live in rural areas, and agriculture/ horticulture provides direct employment to around 70 percent of the total population of the state. Himachal Pradesh has its own limitations in adoption of biotechnological innovations of recent origin due to its mountainous topography. The state is continuously making significant progress in the development of the horticulture sector. The horticulture includes the cultivation of (i) fruits such as apple, mango, citrus fruits etc., (ii) nuts and dry fruits, (iii)

vegetables and potatoes, (iv) new emerging crop enterprises like mushroom growing, floriculture, cultivation of hops, bee keeping. The topographical variations and altitudinal differences coupled with fertile, deep and well drained soils favor the cultivation of horticultural produce like flowers, mushroom, honey and hops. Growth of horticulture over the years has established the fact that it is the most suitable vocation for overcoming inherent problems like low land-man ratio, climate change, untimely rainfall etc. Horticulture has a bright future in the state, particularly for marginal and small farmers to improve their economic condition at the present level of land resources and available technology. Mushrooms are fleshy spores bearing structures of fungi. Mushrooms appear after rain in various shapes, sizes and colors. The economic importance of mushrooms lies primarily in their use as food for human consumption. With the depletion in per capita land holding in the state, mushroom cultivation is a lucrative option for the cultivators in the state. Mushroom cultivation utilizes vertical space and less water compared to other crops. It is a crop of waste to wealth, thereby promoting the concept of sustainable agriculture. Mushroom is a recent and innovative crop for India. Serious efforts towards commercial mushroom cultivation took place in 1977 when UNDP Mushroom Development Project was started in Solan, under which bulk compost was supplied to the growers. In 1983 National Research Centre for Mushroom was established under the aegis of Indian Council of Agricultural Research (ICAR). After 25 years, with remarkable achievements in mushroom research, the National Research Centre was upgraded as Directorate of Mushroom Research (DMR) on 26th Dec, 2008. This is the only institute dedicated to mushroom research and development in the country. This paper attempts to explain and understand the evolution and importance of mushroom cultivation in the economy of Himachal Pradesh.

Keywords: Mushrooms, Horticulture, Topography, Sustainable

Relevance of Folklores in Contemporary Times

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Folklore refers to a community's traditional beliefs, traditions, and culture handed down to the generations by virtue of folk songs or stories. Folk refers to members of distinct groups who share a similar characteristic, such as language, religion, culture, or traditions. Folklore represents culture since it is linked to the manner of life of those who create it: rites, institutions, crafts, and so on. It also reflects their values, traditions, attitudes, and way of thinking. Folklore has the virtue of inspiring basic and straightforward thinking. Because folk stories are about

man's relationship with nature, this education will instill in students an awareness of the environment, which is critical in today's world. Folklore gives us a better understanding of life and living. Folk stories, sayings, ballads, songs, and chants are used to communicate the testimonies. A community can communicate history, literature, law, and other information orally over generations without using a written system in this way. However, the term "folklore" may be defined in a variety of ways. Folklore is all folksy content (songs, traditions, and stories) to a layman. Folklore, in a broader sense, refers to a socio-cultural corpus distinctive to a particular ethnic group, and encompasses folk-behavior and folk tradition research. In its broadest meaning, this phrase might be considered synonymous with folk literature and folklore. Folklore truly represents the socio-cultural environment of the people throughout history. This paper aims to mention the importance of folklore in modern times.

Keywords: Folklore, collective identity, irrationality, cultural preservation, culture.

Reminiscences of a Forgotten Fighter of 1857 Revolt: The Boundless Begum Hazrat Mahal

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The hard-won Indian freedom was a consequence of sacrifices made by valorous men and women who kept their motherland beyond everything else. To free one’s land from the clutches of treacherous alien rulers, the first war of Independence in 1857 was collectively fought. For the first time in Indian history, people dared to raise their voice against the brutal British rulers. Many Historians and scholars have come up with extensive writings on the uprising of 1857 and glorified various freedom fighters for their valiance. But, due to numerous reasons many leaders were kept aloof from any limelight or glory, so, this paper is an attempt to throw light on a brave woman who was abandoned by her own husband Nawab Wajid Ali Shah of Awadh. Despite unfavourable situations by her side, destiny took her to a juncture of life where she was re-entitled as *begum* of Awadh and was popularized as an excellent administrator and sole woman leader of Awadhi people. She led the revolt in Awadh with all her abilities and proved to be a worthy figure. Though the uprising did not reach its required end, it became historical and encouraged leaders of future generations to fight for the freedom of beloved country.

Keywords- Patronage, Seopoy, Mutiy, Recalcitrate, Proclamation, Recreant, Reminiscence

ECOTOURISM AND THE LAW IN INDIA: AN OVERVIEW

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Ecotourism is a type of tourism that focuses on responsible travel to natural areas that conserves the environment and improves the well-being of local people. India, with its diverse natural landscapes and rich cultural heritage, has immense potential for ecotourism. In this article, various legislation and policies to regulate tourism in India are reviewed. The laws that are relevant to ecotourism in India include the Wildlife Protection Act, 1972, Indian Forest Act, 1927, Forest Conservation Act, 1980, and the National Green Tribunal Act, 2010. These laws provide for the conservation and management of forests, regulate activities such as mining and dam construction that can harm the environment, and provide for the establishment of tribunals to deal with environmental disputes. The Ministry of Environment, Forest and Climate Change (MoEFCC) is the nodal agency responsible for the promotion and regulation of ecotourism in India. The MoEFCC has formulated the National Ecotourism Policy, 2021 which aims to promote ecotourism sustainably and ensure that the benefits of ecotourism reach local communities. The article will proceed with indicating the lacuna and shortcomings that throw some light on the gap between rhetoric and reality. Remedial policy interventions for promoting authentic ecotourism in India are suggested in this article that will ensure sustainable management of precious natural and cultural resources through community cooperation and collective action at the local and regional levels.

Keywords: Ecotourism, Environment Protection, Sustainable Development.

GIS Based Network Analysis for Tourist Destinations: A Case Study for Shimla City, Himachal Pradesh

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In the modern world of technology, time is considered very precious as gold. The intelligible use of time leads to exploring a lot of opportunities. People who want to go recreation or sightseeing in different hill stations as tourists, may need to have some information about those places.

Sometimes due to lack of proper geographical knowledge they spend more time and money and enjoy less. Knowledge of shortest routes from place of accommodation to the historical tourist places will be both time saving and economic. This can be obtained through GIS technologies. Geographical Information System software is used to determine the shortest route between the prominent locations of the city. I n the present study the tourist places and roads of Shimla city have been selected for network analysis. Complicated network of roads require analysis to improve the movement of people, goods, services and the flow of resources. This study focuses on determining the optimal route between two or more distances based on specific time and travel expense. The study is carried out for Shimla city, where lots of historical and natural landscapes are attracting tourists both foreign and domestic. GIS based network analysis is carried out by taking advantage of GIS possibilities for tourism. The shortest and optimal path in terms of time and length are carried out by using network analysis of Arc GIS9.3 and ERDAS Imagine 9.2.

Periglacial landforms of Zanskar range of Trans-Himalayas: Spiti

By
Anoop Kumar Dilta

Abstract

'Periglacial' Landform is a feature resulting from the action of intense frost, often combined with the presence of permafrost. These landforms are found in those regions of the world which remain in permanently frozen condition. These landforms are devoid of permanent ice cover on the ground surface. The term 'periglacial' literally means around the ice or peripheral to the margins of the glaciers. Permafrost and Active layer are the only two most striking landforms and features of periglacial regions. These also correspond to distinct climates, the active rock glaciers occurring under cold, humid conditions; the active block streams in cold, dry climates; and gelifluction-dominated landforms occurring in warmer areas. These have distinctive ranges of mean annual precipitation and temperature, which can be used in interpreting climatic changes based on distribution of fossil landforms**.** Permafrost is a permanently frozen ground. The depth of permafrost varies from place to place. The deepest depth of 50-100 Mts. has been discovered in Ladakh region. Periglacio-Fluvial Landforms are also found in Trans-Himalayan region of Ladakh like hummocks, Plasa, Pingo, Thermokarst, Patterned Ground, Stone glaciers/Streams, Altiplanation Terraces, Nivation Hollows, Periglacial Valleys etc.

Key words: Permafrost, Active Layer, Periglacial Landforms, Pingo, Plasa, Thermokarst.

Outcome of the Seminar

The seminar enlightened everyone who was directly and indirectly involved in the event. Experts from various professions provided their views, suggestions, perspectives and solutions to problems. Subject experts from multiple disciplines came and enlightened the gathering. Researchers and students were motivated and guided by the various specialists in the field. These seminars are an amalgamation of knowledge. The seminar on "Building a Resilient Future: Integrating Environment, Economy and Technology" meant to give a stage for experts and scholars to exchange ideas, knowledge, and best practice to build a safer future of the world by integrating its environment, economy and technology. The event brought together participants from various backgrounds, as well as bureaucrats, academics and government representatives. The purpose of the seminar was to bring experts from different subjects into a common platform to discover solutions based on the topic of the seminar. The speakers shared their views on environmental issues, economic issues and technological issues. They suggested making the world and its environment safe through the scientific and judicious use of resources so it can be safe for the generations to come with balance economic growth with the best use of technology.

The seminar brought together experts and academics to exchange knowledge and innovative ideas.