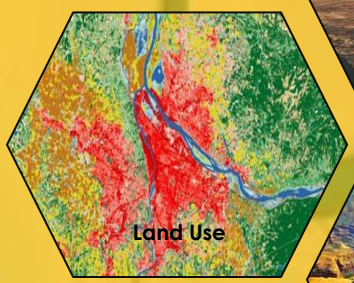
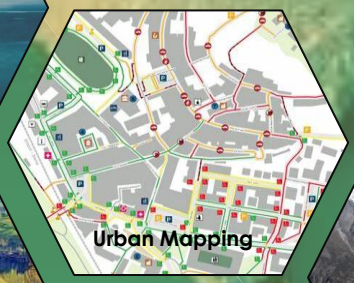
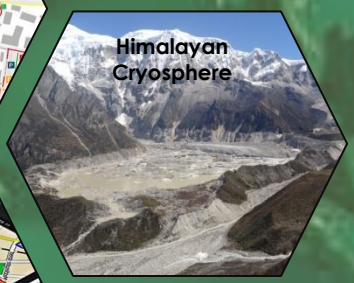
# Department of Geography

## *School of Natural Resource Management*











**Brochure**
**2022-2023**

**Central University of Jharkhand**
**Cheri-Manatu, Ranchi- 835 222, Jharkhand**

# Message from Vice Chancellor

## *Prof. Kshiti Bhusan Das*

**Hon'ble Vice Chancellor**

*As Vice Chancellor of this institution, I believe that geography is essential area of study that can have a profound impact on the world around us. Geography, in particular, is a critical tool for understanding the complex interplay between human activity and the natural environment. By mapping and analyzing patterns of land use, resource consumption, and environmental impact, we can identify opportunities for conservation, sustainable development, and effective climate action. The study of Geography allows us to better understand the challenges and opportunities facing different regions, and to develop effective strategies to address them. By taking a multidisciplinary approach that draws on insights from economics, environmental studies, and other fields, we can develop more comprehensive and sustainable solutions that benefit both people and the planet. This department is an essential part of our institution, and we take pride in the excellence and dedication of our students, faculty, and staff.*

*Geography is the field that play a crucial role in understanding and addressing the challenges of our world today. These challenges range from climate change to urbanization, from cultural diversity to geopolitical tensions. Our Department is committed to providing a comprehensive and rigorous education that equips our students with the knowledge, skills, and values they need to address these challenges.*

**Professor Kshiti Bhusan Das**
**Vice Chancellor**

## About the Department

The Department of Geography is a constituent part of the School of Natural Resources Management, Central University of Jharkhand. This department was established on 20th January 2020 with the opening of the two-year M.A./MSc. Programme with an intake capacity of 31 students. Later on, the department started an integrated B.Sc. & M.Sc. (5 Years) programme in geography based on NEP with an intake capacity of 31 students.

The thrust areas of the department are advanced and applied geomorphology, climatology, oceanography, coastal zone management, disaster management, landslide studies, statistical analysis, Himalayan cryosphere, and urban studies, along with photogrammetry, remote sensing, and the application of geographic information systems (GIS).

The department is equipped with Remote Sensing & GIS Lab, Water Resource Lab and Cartography & Surveying Lab. The aim of the department is to promote a balanced sense of theoretical and fundamental geography and its application in various fields.

## Objectives

The department of Geography aims for quality teaching and research. The faculty members and the students are committed to realizing the objectives and mission of the University through its various academic and extension activities. The objectives of the department may be delineated as:

- To provide quality teaching of geographical knowledge by adopting latest teaching methods, strategies, and techniques.
- To promote geography education to sensitize and make students aware of the needs, problems, issues, challenges, and prospects arising out of complex interplay between Man, Nature, and Technology.
- To take up quality research taking theoretical and empirical aspects into consideration to provide solutions to human problems, issues, challenges related to time, space, physical objects, identities and differences, development, nature and man, etc. at global, regional, and local levels.
- To enhance the sharing and dissemination of geographical knowledge and experiences through organising and promoting active participation in conferences, seminars, symposia, workshops etc. and through publishing research work at national and international levels in appropriate forms.

## VISION

- The Department of Geography envisions to be a global destination for practising geography. Working in collaboration with government, industry, and non-governmental developmental organisations, the department upholds a vision to apply the knowledge of geography and the technology of Geo-informatics to reduce spatial disparity, promote equality, and promote social justice..

## MISSION

- We aim to provide our students with excellent teaching, research, and training facilities in the field of geography that promote and challenge individual growth among students.
- The department emphasises the creation of new knowledge and innovative educational approaches that enhance the way of thinking, understanding, skills, and experiences of the students to help them become better informed and responsible citizens. In that regard, the department organises various community outreach programmes which involve leading awareness campaigns related to environmental issues.
- The department focuses on the latest technological advancements in areas of geography like geographic information systems and remote sensing.
- Thus, using a mix of traditional concepts and cutting-edge new technologies, the Department aims to impart a holistic understanding of geographical knowledge to our students. And promoting the idea of '*Vasudhaiva Kutumbakam*' among students.

# Geography can be a great choice for the study

- **Geography is a multidisciplinary field : Geography is a broad and flexible field of study, allowing you to tailor your studies to your interests and goals in an interdisciplinary field.**

- **Geography is relevant to today's world: Geography is all around us, and the challenges we face as a society today are often geographic in nature. From climate change and natural disasters to urbanization and globalization, geography provides the tools to understand these challenges and develop effective solutions.**

- **Geography provides valuable skills: The skills you learn through studying geography are transferable and in demand in a range of industries. These skills include data analysis, critical thinking, communication, and problem-solving, all of which are highly valued in the job market.**

- ***Geography is a fun and engaging field :* Geography is a fascinating subject that allows you to explore the world around you in new and interesting ways. Whether you're studying the physical processes that shape the earth, the cultures and societies that inhabit it, or the complex interactions between the two.**

- ***Geography offers a range of career opportunities:* Geography graduates are in high demand in a range of fields, including surveying, cartography, urban planning, resource management, international development, and more. The broad and flexible nature of geography means that there are a wide range of potential career paths available to graduates.**

**In outline, the Department of Geography offers a dynamic and exciting field of study that provides students with a range of valuable skills and career opportunities. If you're interested in understanding the world around you and making a positive difference in society, studying geography could be the perfect choice for you.**

# PROGRAMME OFFERED

| SL No. | Degree | Programme | Eligibility Criteria | Seat |
|---|---|---|---|---|
| 1 | Integrated B.Sc. & M.Sc. | Integrated B.Sc. & M.Sc. in Geography (From 2022) | Passed 10+ 2 or equivalent examination with at least two of the following subjects: Physics, Chemistry, Biology, Geology, Geography, Computer Science, Environmental Science and Mathematics with aggregate minimum 55% marks or equivalent grade for General Category and 50% for SC/ST/OBC (Non-Creamy Layer)/PWD. | 31 |
| 2 | M.A./M.Sc. | M.A./M.Sc. in Geography (From 2020) | B.A/ B.Sc. Degree in Geography or B.Sc in Geology/Earth Science/ Environmental Science/ Climatology/ Oceanography/ Geoinformatics/ Statistics/ Economics/Population/ Agriculture with a minimum 50% marks or equivalent grade in aggregate for General Category and 45% or equivalent grade in aggregate or SC/ST/OBC (non-creamy layer)/ PWD. | 31 |

# Learning and Teaching Methods

## Class Lectures

## General Seminar

## Discussion

## Field Tour

## Dissertation

## Geospatial Practical

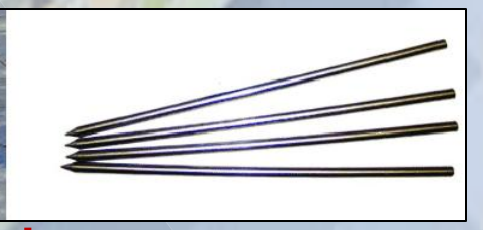
# Lab Facilities

## Remote Sensing & GIS LAB:

**A GIS lab, short for Geographic Information System Lab, is a dedicated workspace equipped with the necessary tools and technologies for working with spatial data and conducting GIS analyses. It serves as a hub for geospatial research, data management, analysis, and mapping tasks. GIS labs are commonly found in academic institutions, research organizations, government agencies, and private companies. GIS labs are equipped with various GIS software applications, such as QGIS, GRASS GIS, Google Earth Engine and GPS, etc.**

## Water Resource Management Lab

**A Water Resource Management Lab is a specialized facility dedicated to studying and managing water resources. It focuses on collecting, analyzing, and interpreting data related to water availability, quality, and usage. The lab integrates various technologies, tools, and expertise to address challenges in water resource management. Here are some key aspects and activities typically associated with a Water Resource Management Lab. We have Electrical Resistivity Instrument for Ground water measurement.**



## Cartography & Surveying Lab

**A Surveying Lab is a dedicated facility that provides the necessary tools, equipment, and resources for conducting land surveying activities. It serves as a practical learning space for surveying students, as well as a research and development center for surveying techniques and technologies. We have Theodolite, and Total stations for ground survey and practices.**

# Programme Outcome

The specific programme outcomes of a geography degree can vary depending on the institution and the programme's focus, but the outcomes that students can expect to achieve are:

- ***Understanding of Geographic Concepts:*** **Geography programs aim to provide students with a comprehensive understanding of geographic concepts, such as spatial relationships, place, environment, and human-environment interactions.**

- ***Knowledge of Physical and Human Geography:*** **Students will gain a deep understanding of both physical and human geography, including topics such as climate, landforms, biogeography, urban geography, cultural geography, and geopolitics.**

- ***Analytical and Critical Thinking Skills:*** **Geography programs aim to develop students' analytical and critical thinking skills, including the ability to collect, analyze, and interpret geographic data, and to evaluate the implications of geographic information for different contexts.**

- ***Proficiency in Remote Sensing & Geographic Information Systems (GIS):*** **Many geography programs require students to develop proficiency in GIS software, which is used to visualize, analyze, and manage spatial data.**

- ***Effective Skills Enhancement Activities:*** **Geography programs often require students to develop strong communication skills, including the ability to write and present effectively, and to work collaboratively with others.**

- ***Ethical and Professional Conduct:*** **Geography programs aim to develop students' awareness of ethical and professional issues in the discipline, including issues related to data privacy, cultural sensitivity, and environmental sustainability.**

# Student Achievement

- **Four candidates from the department have cleared the NET examination.**
- **Two students got job from campus placement in EKI Energy Services Ltd.**
- **Many students have got chance to do higher studies (PhD, PGD) in different institution i.e., BHU- Varanasi; TISS- Mumbai, etc.**

## Career opening after completion of the Programme

**Completing a degree in geography can lead to a variety of career options.**

1. ***Cartographer and Surveyor:*** **Cartographers create maps using various techniques, including satellite imagery, aerial photographs, and ground surveys.**
2. ***Geographic Information Systems (GIS) Analyst:*** **GIS analysts use specialized software to create maps and analyze geographic data. Students can get the career in different public and private organizations as GIS analyst.**
3. ***Urban and Regional Planner:*** **Urban and regional planners use their knowledge of geography and demographics to design and develop land use plans and make recommendations for community development.**

5. ***Geographer:*** **Geographers study the physical and cultural features of the earth, including the distribution of natural resources, climate patterns, and cultural diversity.**

6. ***Travel and Tourism Industry:*** **Geography graduates can also find career opportunities in the travel and tourism industry, such as tour guide or travel agent.**
7. ***Researcher:*** **Geography graduates can also pursue research positions (Ph.D)in various fields, including environmental science, urban planning, and international development.**
8. ***Environmental Consultant:*** **Environmental consultants work with businesses, governments, and individuals to help them understand and comply with environmental regulations.**

| Strength of the Department | Weakness of the Department |
|---|---|
| ➢ The department of geography has four well qualified and dedicated faculties.<br>➢ Faculties are directly interacting with students and helping to enhance their skills.<br>➢ The department has a computer based lab and latest instruments of surveying like electronic-Theodolite, Total Station and Global Positioning Systems (GPS). | ➢ More effort is needed to increase the number of central government/international funded projects to strengthen the department.<br>➢ Departmental library and some important software for the analysis of data is required. |

## Events Organized By the Department

1. **Organized Two Day program ( Special Lecture, Quiz, debate and painting competition) on National Technology Day on May 11 and 12, 2023, in collaboration with ISG Ranchi-Chapter and Vigyan Bharti Jharkhand .**
2. **Organized Three Days short term training programme (STTP) on "Application of Geoinformatics and Electrical Resistivity Techniques in Groundwater Investigations" in collaboration with Indian Society of Geomatics (ISG) Ranchi Chapter from 12 April to 14 April 2023.**
3. **Organized One Day special lecture on "Applications of Geoinformatics and Emerging Technologies in Disaster Warning, Mitigation, and Adaptation" in honour of World Forestry Day- 21th March 2023.**
4. **Organized One Day programme (Painting and Poster Making competition and Open Quiz Competition) on 21st of September, 2022 to illuminate and reveal more of the book "Modi@20 Dreams Meet Delivery".**
5. **Organized a One-Day International webinar on the topic "Higher Education opportunities in Geospatial Sciences: Trends and future perspective" on 18 August 2022 in association with Indian Society of Geomatics (ISG), Ranchi Chapter.**

## Future Prospect of the Department

- ***Department will engage the Academic and Research activities with collaborating of National eminent research and academic organizations such as ISRO, MoES, IITs, NITs, Universities, and DST etc.***
- ***Will introduce smart class and lecture halls.***
- ***Promote and expand research activities of faculty and students in higher impact factor of International Journals such as web of science, Scopus index journals and UGC-CARE list.***
- ***Encourage interdisciplinary and inter-institutional research activities.***
- ***Encourage dissemination of research activity through publication and attendance of professional meetings, Seminars and Conferences.***
- ***The department is also planning to host the International and National Conferences, workshops, training programs to develop a knowledge oriented vibrance in the University.***
- ***Down the line, the department is also looking for to start the Ph.D. program as well.***

Ref No. CUJ/DoG/M.A., M.Sc/2021/Expert Comm/001/88 Date: 26th November 2021

## NOTIFICATION

Consequent upon the approval of the Competent Authority, it is herby informed to all the concerned that following **Expert Committee is constituted to modify the Course Structure and Syllabus** for masters program in the department of Geography. The details of Committee members are below :

| | |
|---|---|
| | **External Members** |
| 1 | Prof. H.N. Mishra, Emeritus Professor, Dept. of Geography, University of Allahabad |
| 2 | Prof. S.N. Tripathy, Retired Prof., Dept. of Geography, Utkal University, BBS, Odisha |
| 3 | Prof. S.K. Sharma, Former Head, Dept. of Geography & Director Population Research Centre, Dr. H.S. Gaur University, Sagar (M.P.) |
| 4 | Prof. Amit Dorde, Professor, Dept. of Geography, Pune University, Pune Maharashtra |
| 5 | Prof. Ranjana Bajpai, Dept. of Applied Geography, Revenshaw University Cuttack |
| | **Internal Members** |
| 6 | Prof. Ratan Kumar Dey, Director-IQAC |
| 7 | Prof. Manoj Kumar, Dean (Academic Affairs) |
| 8 | Prof. Arvind Chandra Pandey, Dean SNRM |
| 9 | Dr. Chandra Shekher Dwivedi, Coordinator, Geography |

This is issued with the approval of the Hon'ble Vice Chancellor

Dean (Academics Affairs) 26/11/2021

Copy forwarded to the following for information and necessary action:

1. All Concerned persons
2. SNRM/Dept. of Geography
3. PS to VC
4. PS to Registrar
5. PS to Fo
6. Guard File
7. Concerned file

Dean (Academics Affairs) 26/11/2021

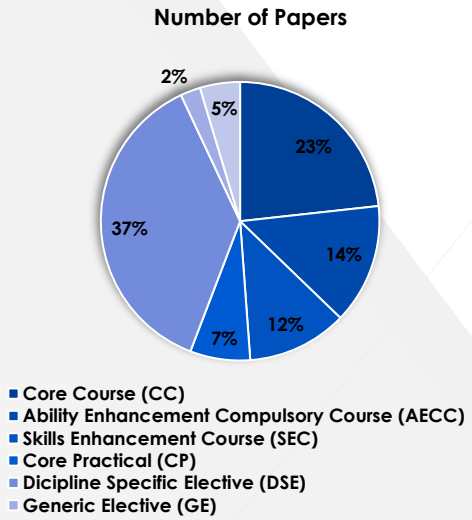
# Course Structure for M.A. (Geography)

| Sl. No. | Nature of Paper | Paper Code | Courses offered | Credits | | | |
|---|---|---|---|---|---|---|---|
| **SEMESTER I** | | | | **L** | **T** | **P** | **Total** |
| 1 | CC | MGE-611010 | Concepts and Paradigms in Geography | 3 | 0 | 0 | 3 |
| 2 | CC | MGE-611020 | Climatology | 3 | 0 | 0 | 3 |
| 3 | AECC | MGE-611030 | Fundamental of Geoinformatics | 3 | 0 | 0 | 3 |
| 4 | SEC | MGE-611040 | Analytical Techniques | 3 | 0 | 0 | 3 |
| 5 | CC | MGE-611050 | Geography of India | 3 | 0 | 0 | 3 |
| 6 | CP | MGE-612060 | Climatology (Practical) | 0 | 0 | 2 | 2 |
| 7 | AECC | MGE-612070 | Analytical Techniques (Practical) | 0 | 0 | 2 | 2 |
| 8 | GE | MGE-616080 | Generic Elective/MOOCs | 3 | 0 | 0 | 3 |
| **Total** | | | | **18** | **0** | **4** | **22** |
| **SEMESTER II** | | | | | | | |
| 1 | CC | MGE-621010 | Geomorphology | 3 | 0 | 0 | 3 |
| 2 | CC | MGE-621020 | Economic Geography | 3 | 0 | 0 | 3 |
| 3 | CC | MGE-621030 | Political Geography | 3 | 0 | 0 | 3 |
| 4 | SEC | MGE-621040 | Geospatial Mapping | 3 | 0 | 0 | 3 |
| 5 | AECC | MGE-621050 | Environmental Geography | 3 | 0 | 0 | 0 |
| 6 | CP | MGE-622060 | Geomorphology (Practical) | 0 | 0 | 2 | 2 |
| 7 | SEC | MGE-622070 | Geospatial Mapping (Practical) | 0 | 0 | 2 | 2 |
| Elective (Any one) | | | | | | | |
| 8 | DSE | MGE-626080 | Rural Development | 3 | 0 | 0 | 3 |
| 9 | DSE | MGE-626090 | Resource Management | 3 | 0 | 0 | 3 |
| 10 | DSE | MGE-626100 | Population Geography | 3 | 0 | 0 | 3 |
| 11 | MOOCs | MGE-626110 | MOOCs | 3 | 0 | 0 | 3 |
| **Total** | | | | **18** | **0** | **4** | **22** |
| **SEMESTER III** | | | | | | | |
| 1 | CC | MGE-711010 | Oceanography and Coastal zone Management | 3 | 0 | 0 | 3 |
| 2 | CC | MGE-711020 | Urban Environment Management | 3 | 0 | 0 | 3 |
| 3 | AECC | MGE-711030 | Regional Development and Planning | 3 | 0 | 0 | 3 |
| 4 | SEC | MGE-711040 | Advances in Remote Sensing | 3 | 0 | 0 | 3 |
| 5 | CP | MGE-712050 | Oceanography and Coastal zone Management (Practical) | 0 | 0 | 2 | 2 |
| 6 | SEC | MGE-712060 | Advances in Remote Sensing (Practical) | 0 | 0 | 2 | 2 |
| 7 | AECC | MGE-712070 | Regional Development and Planning (Practical) | 0 | 0 | 2 | 2 |
| 8 | AECC | MGE-714080 | Field Tour & Report Writing | 0 | 0 | 2 | 2 |
| Elective (Any one) | | | | | | | |
| 9 | DSE | MGE-716090 | Social Geography | 3 | 0 | 0 | 3 |
| 10 | DSE | MGE-716100 | Water Resource Management | 3 | 0 | 0 | 3 |
| 11 | DSE | MGE-716110 | Agricultural Geography | 3 | 0 | 0 | 3 |
| 12 | DSE | MGE-716120 | Climate Change: Indian Context | 3 | 0 | 0 | 3 |
| 13 | DSE | MGE-716130 | Biogeography | 3 | 0 | 0 | 3 |
| 14 | DSE | MGE-716140 | MOOCs | 3 | 0 | 0 | 3 |
| **Total** | | | | **15** | **0** | **8** | **23** |

| SEMESTER IV | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | CC | MGE-721010 | Research Methodology | 3 | 0 | 0 | 0 |
| 2 | CC | MGE-724020 | Dissertation | 16 | 0 | 0 | 16 |
| Elective (Any one) | | | | | | | |
| 3 | DSE | MGE-726030 | Himalayan Cryosphere | 3 | 0 | 0 | 3 |
| 4 | DSE | MGE-726040 | Land Evaluation and Rural Transformation | 3 | 0 | 0 | 3 |
| 5 | DSE | MGE-726050 | Disaster Management | 3 | 0 | 0 | 3 |
| 6 | DSE | MGE-726060 | Geography of Transport and Trade | 3 | 0 | 0 | 3 |
| 7 | DSE | MGE-726070 | Himalayan Cryosphere (Practical) | 0 | 0 | 2 | 2 |
| 8 | DSE | MGE-726080 | Land Evaluation and Rural Transformation (Practical) | 0 | 0 | 2 | 2 |
| 9 | DSE | MGE-726090 | Disaster Management (Practical) | 0 | 0 | 2 | 2 |
| 10 | DSE | MGE-726100 | Geography of Transport and Trade (Practical) | 0 | 0 | 2 | 2 |
| **Total** | | | | **22** | **0** | **2** | **24** |

| S.N | Nature of Course / Semester | Core Course (CC) | Ability Enhancement Compulsory Course (AECC) | Skills Enhancement Course (SEC) | Core Practical (CP) | Discipline Specific Elective (DSE) | Generic Elective (GE) | MOOCs | Total Paper | Overall Credit | Total Allotted Credit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | **First** | **3** | **2** | **1** | **1** | ***** | **1** | **0** | **8** | **22** | **22** |
| **2** | **Second** | **3** | **1** | **2** | **1** | **3** | ***** | **1** | **11** | **31** | **22** |
| **3** | **Third** | **2** | **3** | **2** | **1** | **5** | ***** | **1** | **14** | **38** | **23** |
| **4** | **Fourth** | **2** | ***** | ***** | ***** | **8** | ***** | ***** | **10** | **39** | **24** |
| | | **10** | **6** | **5** | **3** | **16** | **1** | **2** | **43** | **130** | **91** |

| S.N. | Semester | Total Credit |
|---|---|---|
| **1** | **First** | **22** |
| **2** | **Second** | **22** |
| **3** | **Third** | **23** |
| **4** | **Fourth** | **24** |
| **Grand Total** | | **91** |



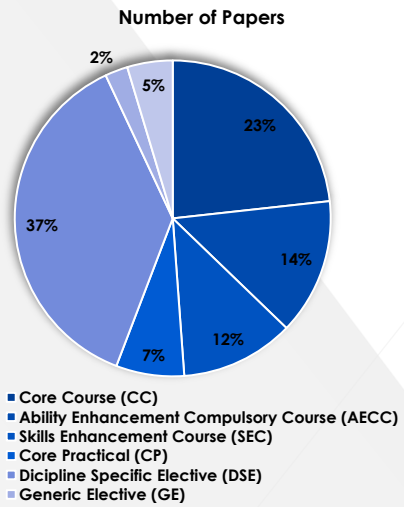
# Course Structure for M.Sc. (Geography)

| Sl. No. | Nature of Paper | Paper Code | Courses offered | Credits | | | |
|---|---|---|---|---|---|---|---|
| **SEMESTER I** | | | | **L** | **T** | **P** | **Total** |
| 1 | CC | MGE-611010 | Concepts and Paradigms in Geography | 3 | 0 | 0 | 3 |
| 2 | CC | MGE-611020 | Climatology | 3 | 0 | 0 | 3 |
| 3 | AECC | MGE-611030 | Fundamental of Geoinformatics | 3 | 0 | 0 | 3 |
| 4 | SEC | MGE-611040 | Analytical Techniques | 3 | 0 | 0 | 3 |
| 5 | CC | MGE-611050 | Geography of India | 3 | 0 | 0 | 3 |
| 6 | CP | MGE-612060 | Climatology (Practical) | 0 | 0 | 2 | 2 |
| 7 | AECC | MGE-612070 | Analytical Techniques (Practical) | 0 | 0 | 2 | 2 |
| 8 | GE | MGE-616080 | Generic Elective/MOOCs | 3 | 0 | 0 | 3 |
| **Total** | | | | **18** | **0** | **4** | **22** |
| **SEMESTER II** | | | | | | | |
| 1 | CC | MGE-621010 | Geomorphology | 3 | 0 | 0 | 3 |
| 2 | CC | MGE-621020 | Economic Geography | 3 | 0 | 0 | 3 |
| 3 | CC | MGE-621030 | Political Geography | 3 | 0 | 0 | 3 |
| 4 | SEC | MGE-621040 | Geospatial Mapping | 3 | 0 | 0 | 3 |
| 5 | AECC | MGE-621050 | Environmental Geography | 3 | 0 | 0 | 0 |
| 6 | CP | MGE-622060 | Geomorphology (Practical) | 0 | 0 | 2 | 2 |
| 7 | SEC | MGE-622070 | Geospatial Mapping (Practical) | 0 | 0 | 2 | 2 |
| Elective (Any one) | | | | | | | |
| 8 | DSE | MGE-626080 | Rural Development | 3 | 0 | 0 | 3 |
| 9 | DSE | MGE-626090 | Resource Management | 3 | 0 | 0 | 3 |
| 10 | DSE | MGE-626100 | Population Geography | 3 | 0 | 0 | 3 |
| 11 | MOOCs | MGE-626110 | MOOCs | 3 | 0 | 0 | 3 |
| **Total** | | | | **18** | **0** | **4** | **22** |
| **SEMESTER III** | | | | | | | |
| 1 | CC | MGE-711010 | Oceanography and Coastal zone Management | 3 | 0 | 0 | 3 |
| 2 | CC | MGE-711020 | Urban Environment Management | 3 | 0 | 0 | 3 |
| 3 | AECC | MGE-711030 | Regional Development and Planning | 3 | 0 | 0 | 3 |
| 4 | SEC | MGE-711040 | Advances in Remote Sensing | 3 | 0 | 0 | 3 |
| 5 | CP | MGE-712050 | Oceanography and Coastal zone Management (Practical) | 0 | 0 | 2 | 2 |
| 6 | SEC | MGE-712060 | Advances in Remote Sensing (Practical) | 0 | 0 | 2 | 2 |
| 7 | AECC | MGE-712070 | Regional Development and Planning (Practical) | 0 | 0 | 2 | 2 |
| 8 | AECC | MGE-714080 | Field Tour & Report Writing | 0 | 0 | 2 | 2 |
| Elective (Any one) | | | | | | | |
| 9 | DSE | MGE-716090 | Climate Change: Indian Context | 3 | 0 | 0 | 3 |
| 10 | DSE | MGE-716100 | Water Resource Management | 3 | 0 | 0 | 3 |
| 11 | DSE | MGE-716110 | Environmental Impact Assessment | 3 | 0 | 0 | 3 |
| 12 | MOOCs | MGE-716120 | MOOCs | 3 | 0 | 0 | 3 |
| **Total** | | | | **15** | **0** | **8** | **23** |

| SEMESTER IV | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | CC | MGE-721010 | Research Methodology | 3 | 0 | 0 | 0 |
| 2 | CC | MGE-724020 | Dissertation | 16 | 0 | 0 | 16 |
| Elective (Any one) | | | | | | | |
| 3 | DSE | MGE-726030 | Himalayan Cryosphere | 3 | 0 | 0 | 3 |
| 4 | DSE | MGE-726040 | Land Evaluation and Rural Transformation | 3 | 0 | 0 | 3 |
| 5 | DSE | MGE-726050 | Disaster Management | 3 | 0 | 0 | 3 |
| 6 | DSE | MGE-726060 | Himalayan Cryosphere (Practical) | 0 | 0 | 2 | 2 |
| 7 | DSE | MGE-726070 | Land Evaluation and Rural Transformation (Practical) | 0 | 0 | 2 | 2 |
| 8 | DSE | MGE-726080 | Disaster Management (Practical) | 0 | 0 | 2 | 2 |
| **Total** | | | | **22** | **0** | **2** | **24** |

| S.N | Nature of Course / Semester | Core Course (CC) | Ability Enhancement Compulsory Course (AECC) | Skills Enhancement Course (SEC) | Core Practical (CP) | Discipline Specific Elective (DSE) | Generic Elective (GE) | MOOCs | Total Paper | Overall Credit | Total Allotted Credit |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | First | 3 | 2 | 1 | 1 | | 1 | 0 | 8 | 22 | 22 |
| 2 | Second | 3 | 1 | 2 | 1 | 3 | | 1 | 11 | 31 | 22 |
| 3 | Third | 2 | 3 | 2 | 1 | 3 | | 1 | 12 | 32 | 23 |
| 4 | Fourth | 2 | | | | 6 | | | 8 | 34 | 24 |
| | | 10 | 6 | 5 | 3 | 16 | 1 | 2 | 39 | 119 | 91 |

| S.N. | Semester | Total Credit |
|---|---|---|
| 1 | First | 22 |
| 2 | Second | 22 |
| 3 | Third | 23 |
| 4 | Fourth | 24 |
| | Grand Total | 91 |



# Dean of School

## *Prof. A.C. Pandey*

**Ph.D in Himalayan Geology, PGD RS & GIS (IIRS-ISRO)**
**Dean, School of Natural Resource Management (SNRM)**
**Central University of Jharkhand**
**Details: http://cuj.cuj.ac.in/Arvind.php**

**Prof. A. C. Pandey** is Professor since 2013, in the Department of Geoinformatics, Central University of Jharkhand (CUJ), Ranchi. He previously served as Associate Professor (Remote Sensing) in Birla Institute of Technology, Mesra, Ranchi, for a decade and as Scientist in Department of Science & Technology, GoH, Chandigarh, for seven years. He acquired Ph.D. degree in Geology from Department of Geology, University of Delhi in 2001.

He has been working in diverse areas of Geoinformatics Applications in Earth Sciences viz., Water Resources, Glaciology, Natural hazards, Urban Environment, Forest & Wildlife etc. He has 09 Ph.D. and 60 M.Tech /M.Sc. thesis completed under his guidance. He has more than 100 publications in refereed international/national journals/Book Chapters and 02 edited books to his credit.

He is recipient of NASA-SERVIR Fellowship in 2013 to work on Himalayan glaciers in Zanskar Valley, J&K. He was associated with many national projects as PI and Co-PI from ISRO, CGWB, DST and MoEF on aspects of Himalayan Glacier Study, Kosi Flood, Arsenic contamination, NUIS, Groundwater Targeting etc. His present research work focuses on water resources, forest fire, Himalayan Cryosphere, Coastal studies, Flood Disaster in Gangetic Plains & Kashmir Valley, Drought vulnerability in Bihar and Jharkhand State and Gangetic Plain etc.

He is currently involved as PI and Co-PI in various R & D projects funded by Space Application Centre (SAC), ISRO related with Airborne Hyper spectral Sensing (AVIRIS-NG) for vegetation monitoring and NASA-ISRO, NISAR for flood monitoring and Base metal Mineralization and GISAT for Forest bio-physical and bio-chemical parameter assessment.

# Coordinator


**Dr. Chandra Shekhar Dwivedi**
**Assistant Professor**
**M.Sc., M.Phil., Ph.D. in Geography, PGD RS & GIS (IIRS-ISRO)**
**Coordinator, Department of Geography**
**Central University of Jharkhand Ranchi**
**Details: http://cuj.cuj.ac.in/chandrashekhar.php**


| | |
|---|---|
| **Awards/ recognition** | • **First Rank in M.Sc. at University level (2006-07)**<br>• **NET-JRF, Uttrakhand- SET**<br>• **Award of UGC Research Fellowships in Science for Meritorious Students (RFSMS)**<br>• **Award of UGC Senior Research Fellowships in Science for Meritorious Students (RFSMS)**<br>• **Best Paper award by Researcher Association of South Korea (RASK) for the year 2015 -2016 at JNU, New Delhi**<br>• **Best Academician Award 2019**<br>• **Young Scientist Award 2019** |
| **Area of Interest** | • **Coastal Dynamics; Groundwater ; Land Transformation, Natural hazards Assessment (Forest Fire, landslides), Permafrost, Climate Change studies in Himalayas.** |
| **Administrative responsibilities (with active period)** | • **Coordinator Student Welfare (From 2021 to 2022)**<br>• **Coordinator Alumni Association (2021-to till date)**<br>• **Executive member in Alumni cell (From 2019- to till date)** |
| **Project (Completed/ Ongoing)** | • **Received a research Grant of Rs. 25.24 Lakhs from SAC, ISRO for the project titled "*Detailed Lithological, Structural and Geomorphological mapping and modelling for mineral prognostication in parts of Singhbhum Shear zone, Jharkhand, India using Airborne L&S band SAR images*" (Project code GEO 07) Duration: 3 Years Status: Completed [Role-Co-PI]**<br>• **Received a research Grant of Rs.39.20 Lakhs from IIRS, ISRO for the project titled *"Permafrost destabilization induced mass wasting vulnerable zones modelling in higher Himalayan regions (Bhagirathi-Alaknanda Valley) through Snow cover-climate-terrain interactive mechanism employing Deep Learning techniques*" Duration: 3 Years Status: Ongoing from 2022, [Role-Co-PI]**<br>• **Received a research Grant of Rs.1.15 Cr. from DST for the project titled "Field based 3D Laser Scanner Structural (Exterior and Interior) mapping and monitoring of Buddhists Monasteries for Conservation planning incorporating Natural hazards in parts of Lahaul-Spiti-Ladakh cold desert region of India"Year Status: ongoing from April 2023, [Role-Co-PI]** |
| **Research Publication and Experiences** | • **Research publications: 30 (Scopus, SCI Indexed, UGC-Care)**<br>• **Book:1**<br>• **PhD Guidance: ( 01- Submitted & 03-on going)**<br>• **M.Tech./ M.Sc./M.A./UG Dissertation Guidance: Total 40**<br>• **Total Teaching Experience: 7.5 Years** |

# Faculty Member

**Dr. Sandipta Das**
**Assistant Professor**
**Qualification: Ph.D. in Geography**
**Details: http://cuj.cuj.ac.in/sandipta_geo.php**

**Education Qualification:**

1. **PhD in Geography (Urban Environmental Impact) Mangalore University**
2. **PGD in RS & GIS – Jadavpur University**
3. **MSc. In Geography Mysore University**

**Courses Taught: Geospatial Mapping, Urban Environment, Management, Advances in Remote Sensing, Digital Image Processing, Himalayan Cryosphere, Economic Geography**

**Specialization: Geography, Urban Studies, Remote Sensing, GIS, Spatial Analysis Environmental Analysis, Regional Planning Urban Sustainable Development, and Land Resource Management.**

**Number of Papers in Journals: 12**

**ORCID: 0000-0001-7077-7518**

**IRINS: NIL**

**Google Scholar: https://scholar.google.com/citations?user=dWgGMcAAAAAJ&hl=en**

**Scopus ID: 57216930905**

# Faculty Member

**Dr. Arpita Panda**
**Assistant Professor**
**Qualification: Ph.D. in Geography**
**Details: http://cuj.cuj.ac.in/arpita_geo.php**

**Education Qualification:**

1. **PhD in Geography (Climatology and Agriculture), Delhi University**
2. **M.Phil in Geography, Delhi University**
3. **MA in Geography, Delhi University**

**Courses Taught: Geomorphology, Environmental Geography, Climatology, Disaster Management, Climate Change.**

**Specialization: Geomorphology, Environmental Geography, Climatology, Disaster Management, Climate Change, Agricultural Geography, Regional Planning.**

**Number of Papers in Journals: 08**

**ORCID: 0000-0003-4713-1182**

**IRINS: NIL**
**Google Scholar: https://scholar.google.com/citations?user=VsIis3wAAAAJ&hl=en**

**Scopus ID: 57210209227**

# Faculty Member

**Mr. Suraj Prasad**
**Assistant Professor**
**Qualification: Ph.D. (Pursuing) in Geography**
**Details: http://cuj.cuj.ac.in/suraj_geo.php**

**Education Qualification:**

1. **PhD in Geography- Pursuing (Cultural and Regional Studies), Delhi University**
2. **M.Phil in Geography, Delhi University**
3. **MA in Geography, Delhi University**

**Courses Taught: Climatology, Oceanography, Regional Development and Planning, Fundamentals of RS & GIS, Climatology and Hydrology.**

**Specialization: Geomorphology, Environmental Geography, Climatology, Regional and Urban Studies, Transportation geography, Cultural studies.**

**Number of Papers in Journals: 05**

**ORCID: 0000-0003-2561-4992**

**IRINS: NIL**

**Google Scholar: NIL**

**Scopus ID: NIL**

# Faculty Member

**Dr. Basheer KK**
**Assistant Professor**
**Qualification: Ph.D. in Geo-information**
**Details: http://cuj.cuj.ac.in/basheer_geo.php**

**Education Qualification:**

1. **PhD in Geoinformatics (Remote Sensing of Coastal Process)Central University of Jharkhand**
2. **MSc. in Applied geography and Geo-informatics at Central University of Karnataka**
3. **BSc. in Geography at University of Calicut**

**Courses Taught: Geomorphology, Oceanography, DIP, Advance in Remote Sensing, Disaster Management, Climate Change, Tourism Geography, Geographic Information Science.**

**Specialization: Operational Oceanography, Coastal and Marine Spatial Planning, Natural Resource Management, Digital Image Processing, Disaster Management and Mitigation, Forest health and Biomass, Climate Change, Himalayan Ecosystem, Carbon Sequestration, AI, and Machine Learning**

**Number of Papers in Journals: 09**

**ORCID: 0000-0001-9003-923X**

**IRINS: NIL**

**Google Scholar:**
**https://scholar.google.co.in/citations?user=LP5ySEUAAAAJ&hl=en&authuser=1**

**Scopus ID: 57204524021**

# Student Research Activities- Batch(2020-2022)

| *Candidate Name* | *Supervisor (DGI)/ Co-Supervisor (Geography)* | *Topic* |
|---|---|---|
| **Anurag Nayak (120340401002 )** | **Prof. AC. Pandey** | **Landslides And Flash Flood Vulnerability Analysis in Kinnaur Region, Satluj Valley. Himachal Pradesh. India** |
| **Prince Kumar (120340401008 )** | **Dr Amit Kumar** | **Quality Of Life In 53 million Cities in India** |
| **Shreya Mishra (120340401014 )** | **Dr Kanhaiya Lal** | **Malnutrition And Anemia Among Women in Reproductive Age Group in India** |
| **Gayatri Priyadarshini (120340401004 )** | **Dr. B. R. Parida** | **Medical Tourism in India: Problem and Prospect** |
| **Sagar Upadhaya (120340401017)** | **Dr. C.S. Dwivedi** | **Avalanche Susceptibility Zone Mapping in Part of Nubra Valley in Siachen Glacier Region, Ladakh, India** |
| **Sawoni Panja (120340401009 )** | **Prof. A.C. Pandey** | **Landslide Hazard Zonation in Joshi Math-Badrinath Region (Alaknanda Valley), Uttaranchal, India** |
| **Swati Kumari (120340401015 )** | **Dr. Amit Kumar** | **An Appraisal of Urban Ecology in Ranchi Metropolitan Area** |
| **Shubhra Pathak (120340401011 )** | **Dr. Kanhaiya Lal/Mr. Suraj Prasad** | **Multifaceted Impacts of Land Use-Land Cover Dynamics: A Case Study Of Ramgarh District, Jharkhand** |
| **Pankaj Kumar Yadav (120340401006 )** | **Dr. B. R. Parida/ Mr. Suraj Prasad** | **Analysis Of Self-Help Groups (SHGs)Towards Rural Development: A Case Study Of Churchu Block (Hazaribagh District), Jharkhand** |

| | | |
|---|---|---|
| **Suryaprava Das (120340401010 )** | **Dr C.S. Dwivedi/ Mr . Suraj Prasad** | **Geomorphological Control of Land Sliding In Uttarkashi Gangotri Road Section (Bhagirathi Valley, Uttarakhand, India)** |
| **Subratha Show (120340401012 )** | **Prof. AC. Pandey** | **Geo-Environmental And Socioeconomic Impact On Bauxite Mining Of Gumla Naterhat Region, Jharkhand** |
| **Dhruv Narayan (120340401003 )** | **Dr. Kanhaiya Lal** | **Urban Sprawl and Its Impact on The Environment in Ranchi City** |
| **Roshan Kumar Mishra (120340401018 )** | **Dr. B. R. Parida** | **Spatiotemporal Dynamics of Demographic Characteristics in Bihar State: A Comparative Analysis From 1991 To 2011** |
| **Alok Kumar (120340401016 )** | **Dr. C.S. Dwivedi** | **Snow And Rock Avalanche Susceptibility Analysis Using Geoinformatics in Rishi Ganga Catchment (Alankanda Valley), Uttaranchal, India** |
| **Swadesh Dolai (120340401019 )** | **Prof. AC. Pandey/ Mr. Suraj Prasad** | **Climate Change Impact Analysis on Major Monasteries in Ladakh LA Haul Spiti Area (India)** |
| **Abinash Kumar (120340401001 )** | **Dr Amit Kumar/ Mr. Suraj Prasad** | **Analysis Of Regional Disparity Of Education And Health Infrastructure In Bihar** |
| **Pradumna Pandey (120340401007 )** | **Dr. Kanhaiya Lal** | **An Appraisal of The Semi-Urban Area in The Ranchi District** |
| **Suhail k (120340401013 )** | **Dr. B. R. Parida** | **Deforestation In Assam and Its Impact on The Ecosystem and Human Life** |

# Student Research Activities- Batch(2021-2023)

| *Candidate Name* | *Supervisor* | *Co-Supervisor* | *Topic* |
|---|---|---|---|
| **Ananya Mallick (21340401001)** | **Dr. B R Parida** | **Dr. Arpita Panda** | **Assessment of Soil Quality change using satellite and ancillary data set in Mahanadi river basin** |
| **Devbart Kumar (21340401002)** | **Dr. C S Dwivedi** | **Dr. Basheer K K** | **Impact Analysis of sea level rise on selected coastal cities along the East Coast of India** |
| **Gargi Sildas (21340401003)** | **Dr. C S Dwivedi** | **Dr. Basheer K K** | **Mapping and Monitoring of the Bio-Geography of vulnerable coastal ecosystem: A case study along Odisha Coast** |
| **Joydeb Mahato (21340401004)** | **Prof. A C Pandey** | **Dr. Sandipta Das** | **Assessment of Urban sprawl through geospatial techniques of Jaipur city, Rajasthan** |
| **Kasturi Mazumdar (21340401005)** | **Dr. C S Dwivedi** | **Dr. Basheer K K** | **Landslides Hazard Zonation and Susceptibility mapping in Arunachal Pradesh Region using Geo-spatial models** |
| **Manish Kumar (21340401006)** | **Dr. B R Parida** | **Dr. Arpita Panda** | **S Spatio-temporal mapping of Coal mining in Barkagaon of Hazaribagh district and its impact on environment and socio-economic condition** |

# Student Research Activities- Batch(2021-2023)

| | | | |
|---|---|---|---|
| **Mohmmad Mubashshir (21340401007)** | **Dr. C S Dwivedi** | **Dr. Arpita Panda** | **Assessment of Potential Land Degradation in Mahanadi River Basin using Fuzzy AHP Techniques** |
| **Puspika Das (21340401008)** | **Prof. A C Pandey** | **Dr. Sandipta Das** | **Urban Development vis a vis Hazard Process: A comparative Study of Mcleodganj, Joshimath and Gangtok Township, Himalayan Region** |
| **Ranjay Raj (21340401009)** | **Dr. C S Dwivedi** | **Mr. Suraj Prasad** | **Land Use Land Cover Mapping and Population Dynamics: A comparative analysis of Patna and Gaya city** |
| **Ishita Gangopadhyay (21340401011)** | **Dr. C.S. Dwivedi** | **Mr. Suraj Prasad** | **Spatio-temporal mapping of mangrove forests in Andaman and Nicobar islands using remote sensing techniques** |
| **Dipika Majhi (21340401013)** | **Dr C.S. Dwivedi** | **Mr Suraj Prasad** | **Mapping of Ground water potential zone using Geospatial techniques along the Upper Cauvery river basin, Karnataka** |
| **Md. MahboobAlam** | **Prof. A C Pandey** | **Dr. Sandipta Das** | **Mapping of Historical settlement in the Saraswati River System using Geospatial topics** |

# Glimpses of Department of Geography

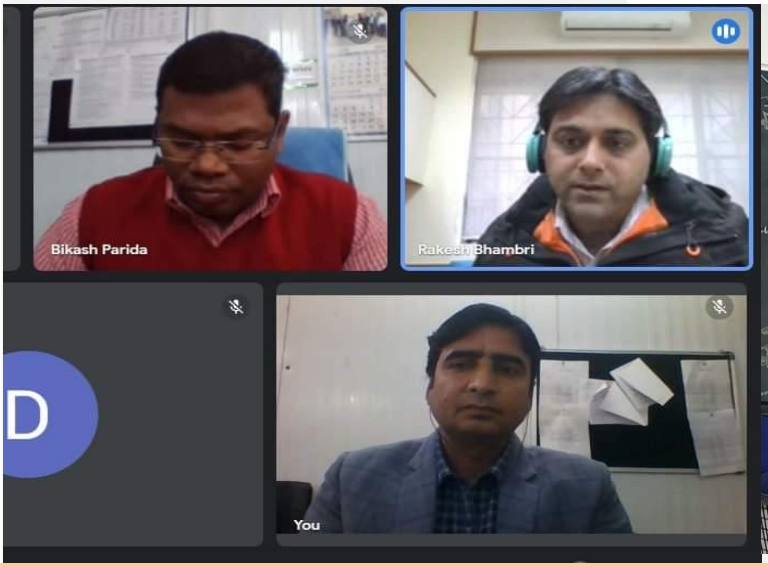
## First Batch of M.A./M.Sc. (2020-2022)


## Second Batch of M.A./M.Sc. (2021-2023)

# Department visited by Eminent Personalities /Scholars

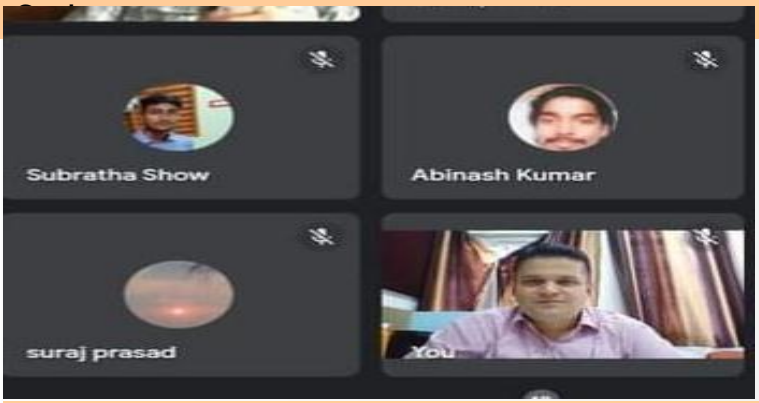

Hon'ble Vice Chancellor Professor Kshiti Bhusan Das


Dr. Pratap S Parihar (Former, Director, AMD)

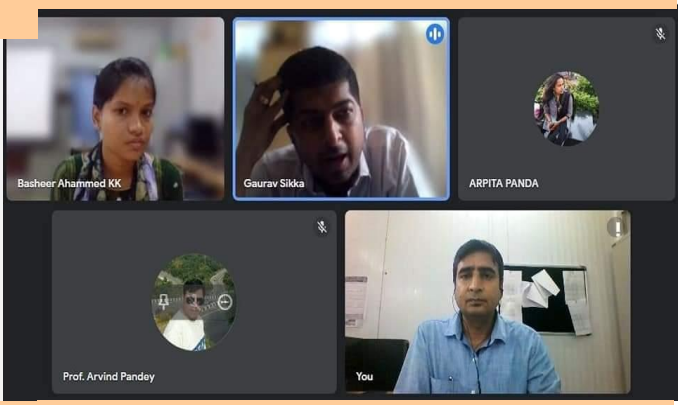



Dr. Rakesh Bhambari, Wadia Institute of Himalayan Geology

Dr. Deep Narayan Pandey, JNU, New Delhi




Dr Praveen Pathak, Jamia Millia Islamia University, New Delhi




Dr. Gaurav Sikka, IGU


Dr. D. Mitra, Group Head, IIRS-ISRO, Dehradun

Prof. P.C. Joshi, JNU



Padam Shri Umashankar Pandey

Dr. Pankaj Kumar, Delhi University

Prof. A.C. Pandey, Dean SNRM, along with First Batch Students of Geography

# Glimpses of Department of Geography

## Technology Day Celebration



## Training of Terrestrial LIDAR

## Resistivity Meter Survey for Groundwater Study

**Dr. D.C. Jhariya, NIT Raipur along with Participants & faculties**

दैनिक भास्कर रांची 13-04-2023

# सीयूजे में पद्मश्री उमाशंकर पांडेय ने कहा- 'जल ही जगदीश'

## ग्राउंड वाटर इन्वेस्टिगेशन विषय पर वर्कशॉप शुरू

एजुकेशन रिपोर्टर | रांची

पद्मश्री उमा शंकर पांडेय ने कहा-जल ही जगदीश है, इसलिए पानी का उपयोग बुद्धिमानी से करें। वे बुधवार को सेंट्रल यूनिवर्सिटी झारखंड (सीयूजे) में तीन दिवसीय वर्कशॉप के उद्घाटन अवसर पर बोल रहे थे। इसका विषय जियोइन्फॉर्मेटिक्स एंड इलेक्ट्रिकल रेसिस्टिविटी टेक्निक्स इन ग्राउंड वाटर इन्वेस्टिगेशन है। सीयूजे, इंडियन सोसाइटी ऑफ जियोमैटिक्स और जियोइन्फॉर्मेटिक्स विभाग द्वारा संयुक्त रूप से आयोजित इस कार्यक्रम में पद्मश्री ने पानी के सांस्कृतिक महत्व पर भी विस्तार से प्रकाश डाला। आयोजन

### प्रबंधन कर भूजल स्तर बढ़ाएं

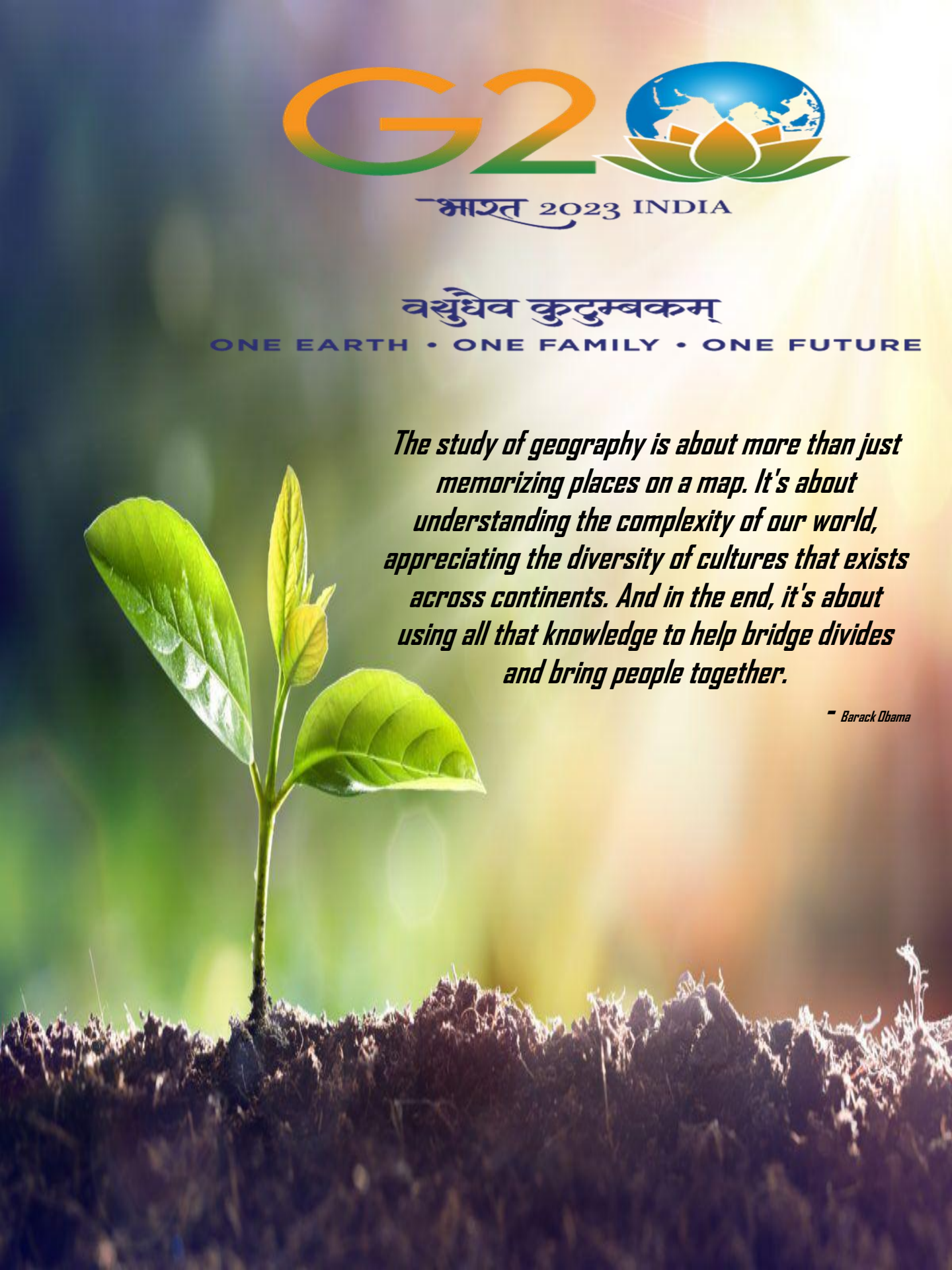
सीयूजे के वीसी प्रो. केवी दास ने कहा-पानी महत्वपूर्ण संसाधन है। संरक्षण और बेहतर प्रबंधन कर भूजल स्तर बढ़ाना होगा। सीजीडब्ल्यूबी कोलकाता के क्षेत्रीय निदेशक डॉ. अनादि गायेन, एसईआरबी-डीएसटी वैज्ञानिक डॉ. प्रह्लाद राम, प्रो. संदीप सिंह, टीबीएन सिंह, प्रो. एसी पांडेय, डॉ. सीएस द्विवेदी आदि ने विचार रखे। में डॉ. अमित कुमार, डॉ. बीआर परिदा, डॉ. किरण जालम, डॉ. कन्हैया लाल, डॉ. बशीर केके, डॉ. सूरज, डॉ. अर्पिता, डॉ. संदीप्ता का योगदान है।

G20

भारत 2023 INDIA

वसुधैव कुटुम्बकम्

ONE EARTH • ONE FAMILY • ONE FUTURE



*The study of geography is about more than just memorizing places on a map. It's about understanding the complexity of our world, appreciating the diversity of cultures that exists across continents. And in the end, it's about using all that knowledge to help bridge divides and bring people together.*

*- Barack Obama*