

RESUME OF PROF. BROTI BISWAS

Title	Prof.	First Name	Brototi	Last Name	Biswas	Photograph
Designation	Professor					
Address	Department of Geography and Resource Management, Mizoram University (A central University), Aizawl – 796004					
Contact	8171392579					
Email	brototibiswas@gmail.com brototibiswas@yahoo.co.in mzut257@mzu.edu.in					
Educational Qualifications						
Degree	Institution				Year	
Ph.D.	Swami Ramanand Teerth Marathwada University, Maharashtra				2012	
PG	Banaras Hindu University, Uttar Pradesh				2002	
UG	University of Calcutta, West Bengal				2000	
Details of Present Employment						
<p>Professor, Department of Geography and Resource Management, School of Earth Sciences & Natural Resources Management, Mizoram University, Since December 02, 2022.</p>						
Details of Past Employment						
<ol style="list-style-type: none"> 1. Professor, Department of Geography and Resource Management, School of Earth Sciences & Natural Resources Management, Mizoram University, Since December 2022 to till date. 2. Associate Professor, Department of Geography and Resource Management, School of Earth Sciences & Natural Resources Management, Mizoram University, Since December 02, 2019-December 01, 2022 3. Assistant Professor, Department of Geography, St John’s College, Agra, Since March 12, 2014 to December 01, 2019. 4. Assistant Professor, Department of Geography, Indira Gandhi Sr. College, Maharashtra, Since November 07, 2006 to March 10, 2014. 						

Areas of Interest / Specialization
Regional planning, Climatology, Oceanography, Social Geography, Natural Resource Management, Environmental studies and RS & GIS.
Research Guidance
Successfully guided 03 PhD students. Supervising 08 PhD scholars on various topics related to Geoinformatics and Physical Geography.
Publications Profile
<p>Book</p> <p>(i) Physical Geography, Associated Publishers, Agra, (2015), ISBN: 978-93-81778-27-2. (ii) Landslides: Risk Assessment & Strategy for Sustainable Risk Management in the Himalayan Region – An edited volume under publication. Publisher - Springer Nature. (iii) Flood Risk Management - Assessment and Strategy – An edited volume under publication. Publisher - Springer Nature</p>
Research Publications
<p>RESEARCH PAPERS</p> <ol style="list-style-type: none"> 1. Vanlalchhuanga, N., Lawmchullova, I., Biswas, B., & Reamlaruata, N. (2025). A study on temporal Land surface temperature (LST) and its relationship with Remote sensing ecological spectral indices of Agra and Aizawl Cities in India. Journal of Applied and Natural Science, 17(1), 421–434. https://doi.org/10.31018/jans.v17i1.6360 2. Naskar, S., Mandal, D., Biswas, B., & Mukherjee, C. (2025). Hydro chemical assessment of groundwater quality using pollution index, quality indexes, fuzzy-GIS, graphical and multivariate techniques from a mining region of Eastern India. Discover Water, 5(1). https://doi.org/10.1007/s43832-025-00240-y 3. Barman, J., Biswas, B., Das, J., Falah Ben Hasher, F., & Zhran, M. (2025). Least cost path analysis for alternative road network assessment of landslide-prone NH-2, Mizoram, NE India. Geocarto International, 40(1). https://doi.org/10.1080/10106049.2025.2490268 4. Lawmchullova, I.,Biswas B. (2025) Un-planned urban growth monitoring from 1991 to 2021 of Aizawl city, north-east India by multi-temporal changes and CA-ANN model. Environ Earth Sci 84, 242 (2025). https://doi.org/10.1007/s12665-025-12244-x 5. Barman, J., Biswas, B., Ali, S. S., & Zhran, M. (2024). The TOPSIS Method: Figuring the landslide susceptibility using Excel and GIS. MethodsX, 13, 103005. https://doi.org/10.1016/j.mex.2024.103005 6. Roy, K. C., Soren, D. D. L., & Biswas, B. (2024). Land-use/cover change and future prediction by integrating the ML techniques of random forest and CA-Markov chain model of the Ganges alluvial tract of Eastern India. Environment Development and Sustainability. https://doi.org/10.1007/s10668-024-05545-x 7. Soren, D., Roy, K. & Biswas, B. (2024) Land/use land /cover dynamics and future scenario of Mayurakshi river basin by random forest and CA–Markov model. Int. J. Environ. Sci. Technol. https://doi.org/10.1007/s13762-024-06006-8 8. Naskar, S., Rahaman, A. & Biswas, B. (2024) Forest Fire Susceptibility Mapping of West

- Sikkim District, India using MCDA techniques. *Environ Dev Sustain.* <https://doi.org/10.1007/s10668-024-05158-4>
9. Barman, J., Marak, B.S., Rao, K.S., Biswas B (2024). GIS-based frequency ratio model for flood susceptibility zonation in the state of Meghalaya, Northeast India. *Proc.Indian Natl. Sci. Acad.* <https://doi.org/10.1007/s43538-024-00290-1>
 10. Barman, J., Biswas, B. & Rao, K.S (2024). A hybrid integration of analytical hierarchy process (AHP) and the multiobjective optimization on the basis of ratio analysis (MOORA) for landslide susceptibility zonation of Aizawl, India. *Nat Hazards.* <https://doi.org/10.1007/s11069-024-06538-9>
 11. Roy KC., Barman J., Biswas B (2024) Multi-criteria decision-making for groundwater potentiality zonation in a groundwater scarce region in central India using methods of compensatory aggregating functions. *Groundwater for Sust. Development.* 25. <https://doi.org/10.1016/j.gsd.2024.101101>.
 12. Barman J, Ali SS., Biswas B., Das J (2023) Application of index of entropy and Geospatial techniques for landslide prediction in Lunglei district, Mizoram, India. *Natural Hazards Research.* 3(3), 508-521. <https://doi.org/10.1016/j.nhres.2023.06.006>.
 13. Dondapati A., Rahaman A., Saikh S., Biswas B., Jadhav R (2023) Predicting the Best Hospital Sites in Visakhapatnam through Machine Learning Analysis. *IJEP.* 43(12), 1074-1085.
 14. Barman J., Soren, D.D.L., Roy S., Koduru R.S., Biswas B (2023). Preference Selection Index and Geospatial Technique for Groundwater Potentiality Zonation in Aizawl district, Mizoram, India. *Transactions.* 45(2), 237-252.
 15. Barman J., Biswas, B. & Soren, D.D.L (2023). Groundwater trend analysis and regional groundwater drought assessment of a semi-arid region of Rajasthan, India. *Environ Dev Sustain.* <https://doi.org/10.1007/s10668-023-04022-1>
 16. Biswas, B., Karmegam, D. (2023) Long-term spatio-temporal analysis and trends of precipitation over semi-arid region of Rajasthan. *Meteorol Atmos Phys* 135, 53. <https://doi.org/10.1007/s00703-023-00991-0>
 17. Soren D.D.L., Barman J., Roy K.C., Naskar S and Biswas B (2023). Evaluation of groundwater quality of South Bengal, India. *J. Earth Syst. Sci.* <https://doi.org/10.1007/s12040-023-02152-8>
 18. Biswas, B., Rahaman, A. & Barman, J. Comparative Assessment of FR and AHP Models for Landslide Susceptibility Mapping for Sikkim, India and Preparation of Suitable Mitigation Techniques. *J Geol Soc India* 99, 791–801 (2023). <https://doi.org/10.1007/s12594-023-2386-x>.
 19. Biswas B., Das, K., Saikia D & Chouhan, P. (2023). COVID-19 Hotspot Mapping and Prediction in Aizawl District of Mizoram: a Hotspot and SEIR Model-Based Analysis. *Sankhya A: The Indian Journal of Statistics.* <https://doi.org/10.1007/s13171-023-00312-y>
 20. Biswas B., Ghosh A & Sailo BL (2023). Spring water suitable and vulnerable watershed demarcation using AHP-TOPSIS and AHP-VIKOR models: study on Aizawl district of North-Eastern hilly state of Mizoram, India. *Environmental Earth Sciences.* 82:80. <https://doi.org/10.1007/s12665-023-10766-w>
 21. Rao, K.S., Barman J, B.k., Neog, S. et al. (2023) Morphometry-based prioritization of watersheds for soil and water conservation measures: a case study on Vanvate Lui basin,

- Mizoram, NorthEast India. Arab J Geosci 16, 279. 16 (4), 1-13. <https://doi.org/10.1007/s12517-023-11353-w>
22. Soren DDL., Roy J., Biswas B., Jadhav R., Singh A., and Prasad D (2022). Associated impact of the COVID-19 induced lockdown on air quality of Kolkata Metropolitan Area (India). Forum geografic. 12 (1), 34-43. <http://dx.doi.org/10.5775/fg.2022.003.i>
 23. Barman J., Narjinary S., Biswas S., Biswas B., Jadhav, R. (2022) Elephant Habitat Suitability Analysis of Alipurduar District, West Bengal Using Geospatial Technology. Nature Environment and Pollution Technology, 21(4), 1705–1712. <https://doi.org/10.46488/NEPT.2022.v21i04.024>
 24. Barman J., Biswas B. (2022). Application of e-TOPSIS for Ground Water Potentiality Zonation using Morphometric Parameters and Geospatial Technology of Vanvate Lui Basin, Mizoram, NE India. Jour. Geol. Soc. India. 98:1385-1394. <https://doi.org/10.1007/s12594-022-2186-8>.
 25. Lalrambeisia A and Biswas B (2022). Rural livelihoods and sustainable water resource management: A case study of Aizawl, Mizoram. IJEP. 42(8), 957-963.
 26. Rahaman A., Biswas B., & Suresh MV (2022). Landslide susceptibility assessment based on Information value method in Tehri dam area. IJEP. 42(7), 849-856
 27. Biswas B., Das, K., & Chouhan, P. (2022). Assessment of COVID-19 pandemic healthcare infrastructure of Mizoram, India. International Journal of Health Sciences, 6(S6), 3535–3554. <https://doi.org/10.53730/ijhs.v6nS6.10188>
 28. Prasad D., Singh A., Biswas B., Sanyal S (2022). Spatio temporal study of Pond water quality using Principal component analysis. IJEP 42(5), 606-612.
 29. Prasad D., Kumar J., Biswas B et al (2022). Evaluation of water quality through water quality Index (WQI), Gomti river, Jaunpur City, India. Poll Res. 41 (1): 279-285. <http://doi.org/10.53350/PR.2022.v41i01.041>
 30. Biswas B., Singh A., Rai P K., Kumar J., Walker S. (2022). GIS based study of reclamation of degraded semi-arid soil: A case study from Rajasthan, India. IJEP 42(3), 302-315
 31. Kumar, J., Biswas, B. & Verghese, S. (2021). Assessment of Groundwater Quality for Drinking and Irrigation Purpose using Geospatial and Statistical techniques in a Semi-arid Region of Rajasthan, India. J Geol Soc India 97, 416–427. <https://doi.org/10.1007/s12594-021-1699-x> { **SPRINGER** }
 32. Biswas, B., K.S, V. & Ranjan, R. (2021). Landslide susceptibility mapping using integrated approach of multi-criteria and geospatial techniques at Nilgiris district of India. Arab J Geosci 14, 980. <https://doi.org/10.1007/s12517-021-07341-7>.
 33. Biswas B., Rahaman A., Singh A. (2021) Seismic Hazard Zonation Mapping of Gangtok Block, Sikkim, India. In: Rai P.K., Singh P., Mishra V.N. (eds) Recent Technologies for Disaster Management and Risk Reduction. Earth and Environmental Sciences Library. Springer, Cham. https://doi.org/10.1007/978-3-030-76116-5_3
 34. Chanda A., Biswas B. (2021) Glacial Lake Outflow Hazard and Risk Probability in Sikkim. In: Rai P.K., Singh P., Mishra V.N. (eds) Recent Technologies for Disaster Management and Risk Reduction. Earth and Environmental Sciences Library. Springer, Cham. https://doi.org/10.1007/978-3-030-76116-5_1
 35. Biswas B., Rahaman A. (2021) The Impact of Covid-19 Pandemic on Education Sector: A Case Study from Mizoram, India. Ensemble, <https://doi.org/10.37948/ensemble-2021-sp1-a018>

36. Singh A., Rai P k., Deka G., Biswas B., Prasad D., Rai VK (2021), Management of natural resources through integrated watershed management in Nana Kosi watershed, district Almora, India, *Eco. Env. & Cons*, 27(February Suppl. Issue), 259-266.
37. Biswas B., Azyu A (2021), Water resources and management system of the Himalayan Region: Case study of Mizoram India, NEPT, <https://doi.org/10.46488/NEPT.2021.v20i01.020>
38. Kumar J., Biswas B., Walker S (2020), Multi-temporal LULC Classification using Hybrid Approach and Monitoring Built-up Growth with Shannon's Entropy for a Semiarid Region of Rajasthan, India, *Journal of the Geological society of India*. 95(6), 547-641. <https://doi.org/10.1007/s12594-020-1489-x>.
39. Walker S; Kumar J., Biswas B (2019). Assessment of different indices (vegetation, salinity) and salt effected area trend analysis using Shannon Entropy approach – a case study in a semi - arid region of India using RS / GIS, *Plant Archives*, 19 (2): 3457-3466. ISSN:0972-5210
40. Biswas B., Ratnaprabha J., Nilima T (2019), Rainfall Distribution and Trend Analysis for Upper Godavari Basin, India, from 100 Years Record (1911–2010), **Journal of the Indian Society of Remote Sensing**, DOI 10.1007/s12524-019-01011-8. ISSN No- 0255660X .
41. Braj K., Biswas B (2019), Changing Cropping pattern in Agra District in recent years, *Shodh Sarita*, 6 (24), 220-222.
42. Pavan S., Biswas B (2019), Cost Efficiency Analysis In Wheat Production System: A Case Study of Hathras District of Uttar Pradesh, *Shodh Sarita*, 6 (24), 11-15.
43. Biswas B., Jain S., Rawat S, (2018), Spatio-temporal analysis of groundwater levels and projection of future trend of Agra city, Uttar Pradesh, India, *Arabian J. of Geoscience*, 11:1-18.. ISSN No-8667511.
44. Biswas B., Kumar J., Walker S, (2018), Hydrological characterization through Morphometric analysis of Churu Watershed, Rajasthan using Geospatial Techniques, *IJAIR*, 5 (3): 31-38. ISSN No- 23947780. UGC Num- 63571.
45. Walker S., Biswas B., Kumar J., (2018), Sustainable management of environmental resources of a semi-arid region of India using RS/GIS, *International Journal of Advance & Innovative Research*, 5 (4): 28-38. ISSN No- 23947780. UGC Num- 63571.
46. Biswas B and Kumar P (2017), District level information system through Web GIS-A tool for e-governance and local self- government in India, *Indian J. of Env Protection*, 37(4): 328-337. ISSN No- 02537141. UGC Care- 116
47. Brototi Biswas, Sakshi Walker and Mayank Varun (2017), Web GIS Based Medicinal Plants Identification and Mapping - A Case Study of Agra, India, *Plant Archives*, 17(1): 8-20. ISSN No-0972-5210. UGC Care - 365
48. Shinde A.T., and Biswas B (2016), Sociocultural and economic characteristics of Andh tribe in Maharashtra, *Indian Streams Research Journal*, 6 (2):1-8. ISSN No-2230-7850
49. Rawat S., and Biswas B (2016), Monitoring recent variation of surface displacement of forest cover using NDVI calculation - Case study of Kheragarh tehsil of Agra district, *IOSR-JHSS*, 21 (6):4-20. ISSN No- 2279-0837. UGC Number 49323
50. Gardner B., Biswas B., Majeed P A (2016), Land use Land cover of Agra tehsil: A comparative study from 2002 to 2015, *Archives of Applied Science Research*, 8(12): 13-17. ISSN No- 2277- 7105.
51. Jadhav R S., and Biswas B (2015), Demographic characteristics of Shirur circle of

- Shirur tehsil of Pune, Maharashtra, *World J. of Pharma. Research*, 4(11):367-378. ISSN No-2277-7105. UGC Number - 47332
52. Majeed P A., and **Biswas B** (2015), Assessing urban sprawl & quality of urban life through GIS techniques, *World J. of Pharma & Pharmaceutical Science (WJPPS)*, 4 (5): 910-917. ISSN No-2278-4357.
53. **Biswas B** and Birajdar S (2014), Bio gas: Its potentiality and utilization as a renewable energy- Case study of Jhari village (Maharashtra), *WJPPS*, 3(3): 1254-1262. ISSN No-22784357
54. **Biswas B** and Kaplay R.D (2012), Environmental Impact Assessment of agro products in Nanded district of Maharashtra, *Archives of Applied Science Research*, 4 (1): 323-329. ISSN No- 0975-508X.
55. Awadhil C.R, **Biswas B** (2012), The historical & conceptual review of sustainable development, *Global Dreams*, 2 (1): 20-26. ISSN No-22790632.
56. Shinde G N and **Biswas B** (2011), An environ economic backbone in the economic resurgence of barren and semi-arid regions: *Azadirachta indica*, *J. Nat. Prod. Plant Resource*, 1 (2): 8-13. ISSN No- 22313184
57. **Biswas B**, Kaplay R.D (2011), Prospect of floriculture industry in Nanded district of Maharashtra, *The Goa Geographers*, 8 (1): 56-62. ISSN No-0976-786X
58. **Biswas B**, Kaplay R. D (2011), *Azadirachta indica* (Neem): It's Economic utility and chances for commercial planned plantation in Nanded district, *International journal of pharmacy*, 1 (2): 100-104. ISSN No- 22491848.
59. **Biswas B**, (2011), Comparison of rain water harvesting techniques of modern and medieval Era (757 A.D-1327 A.D) in India: Tackling an omni-important Environmental concern, *J. Environmental Research and Development*, 6 (1): 186-189. ISSN No-E-ISSN : 2319-5983
60. **Biswas B**, Kaplay R. D (2011), Shift in oil Industry & the problems associated with it in Nanded district, *Transactions*, 33 (2): 283-288. ISSN No- 09709851. UGC Care -412
61. **Biswas B** (2010), Informal Economic Sectors in Indian cities-A case study of Auto Rickshaw drivers of Nanded district, *Int. J. of Env Science Dev & Planning*, 1 (2):,11-17. ISSN No- 22311289.
62. **Biswas B** (2010), Irrigational Scenario of Maharashtra, *Orient Journal of Law & Social Science*, 4 (6):193-196. ISSN No-09737480
63. **Biswas B** (2010), Glimpses of health & Environment in Nanded city (Maharashtra), *Interlink Research analysis*, 2 (2): 40-42. ISSN No-09760377
64. **Biswas B** (2010), Glimpses of science of Regional Planning techniques adopted in medieval Nanded District of Maharashtra (India), *Int. J of Multidisciplinary Researches*, 1 (4):61-70. ISSN No- 09750886
65. **Biswas B** (2010), Urban geography & Urban Pattern- the Indian way, *Research Link*, 10 (3): 75-76. ISSN No-09731628
66. **Biswas B** (2009), The problems associated with low nutritional level: A case study of Nanded district, Maharashtra, *Geographical Review of India*, 71 (2): 204-212. ISSN No-03756386. UGC No- 27633
67. **Biswas B** (2009), Roof top rain water harvesting: A case study of Nanded city, *Goa Geographers*, 6(1): 132-135. ISSN No- 0976-786X

Research Papers (Conference presentation, Published as Chapters in Books and Proceedings)

1. Soren D.D.L., Barman J., and Biswas B. (2023). A Comprehensive Review on the Impact of Climate Change on Streamflow: Current Status and Perspectives. In: Rai P.K (ed) River Conservation and Water Resource Management. Springer, <https://doi.org/10.1007/978-981-99-2605-3>
2. Barman J., and Biswas B. (2023). Soil Erosion Susceptibility in Dima River Basin of Dooars Himalaya Using RUSLE and Geospatial Techniques. In: Rai P.K (ed) River Conservation and Water Resource Management. Springer, <https://doi.org/10.1007/978-981-99-2605-3>
3. Rahaman, A., Biswas, B., Barman, J., Suresh, V.M., Kishor, B., Das, J. (2023). Delineation of Groundwater Potential Zones Through AHP: A Case Study from Tamil Nadu, India. In: Das, J., Bhattacharya, S.K. (eds) Monitoring and Managing Multi-hazards. GIScience and Geo-environmental Modelling. Springer, Cham. https://doi.org/10.1007/978-3-031-15377-8_21
4. Barman, J., Soren, D.D.L., Biswas, B. (2023). Landslide Susceptibility Evaluation and Analysis: A Review on Articles Published During 2000 to 2020. In: Das, J., Bhattacharya, S.K. (eds) Monitoring and Managing Multi-hazards. GIScience and Geo-environmental Modelling. Springer, Cham. https://doi.org/10.1007/978-3-031-15377-8_14
5. Vanlalchhuanga, Biswas, B., Barman, J. (2023). A Literature Review of the Impact of COVID-19 Pandemic on Land Surface Temperature and Air Quality of India. In: Das, J., Bhattacharya, S.K. (eds) Monitoring and Managing Multi-hazards. GIScience and Geo-environmental Modelling. Springer, Cham. https://doi.org/10.1007/978-3-031-15377-8_8
6. Barman, J., Biswas, B., Das, J. (2023). Mizoram, the Capital of Landslide: A Review of Articles Published on Landslides in Mizoram, India. In: Das, J., Bhattacharya, S.K. (eds) Monitoring and Managing Multi-hazards. GIScience and Geo-environmental Modelling. Springer, Cham. https://doi.org/10.1007/978-3-031-15377-8_6
7. Barman, J., Biswas, B., Das, J. (2023). Active Tectonics and Associated Channel Shifting Pattern of Neora River Basin, Darjeeling Himalaya. In: Das, J., Bhattacharya, S.K. (eds) Monitoring and Managing Multi-hazards. GIScience and Geo-environmental Modelling. Springer, Cham. https://doi.org/10.1007/978-3-031-15377-8_2
8. Biswas B (2018), Need of restructuring of syllabus from the perspective of Earth science subjects, National seminar on Quality concerns in Indian Higher Education, 22nd – 23rd February, Agra College, Agra.
9. Biswas B (2015), Promoting rural tourism of Pune: A web based information system, 37th Indian Geography Congress, NAGI, 2nd – 4th December, University of Jammu.
10. Biswas B (2015), Enhancing merciless Euthanasia of Yamuna-Role of Agra, Proceeding of National Conference -Land, Water & Renewable energy for Sustainable development, Pp 45-53.
11. Biswas B (2013), “Rejuvenation of ancient water bodies in historical cities of Daulatabad and Kandhar, Marathwada, Maharashtra”, *Proceeding of the International Conference on Biodiversity*. Organized by ICRD, Sri Lanka.
12. Biswas B (2012), Review of Sustainable development in India, National seminar on Geographical Perspectives on Environment & sustainable development, 10th-11th August,

M.B College, Latur, Maharashtra.

13. Biswas B (2012), Application of GIS in Urban sprawl & quality of urban life: Case study of HUDCO township of Nanded, Maharashtra, National conference on Natural Resource Management & Decentralized Planning, 13th-15th December, 2012, Thiruvananthapuram, Kerala.
14. Biswas B (2011), EIA of Neem: Multi-Potentiality of Azadirachta indica (Neem) in agriculture, environment, medicine and dairy industry, International Conference on Climate change, Geo-hazards and Disaster Management, 17th-19th January, University of Rajasthan.
15. Biswas B (2011), Bio-Fertilizer: Applicability & potentiality in Mudkhed taluka of Nanded district, National conference on Global warming's impact on environment, 27th-28th February, B.R College, Parbhani, Maharashtra.
16. Biswas B, (2010), 'Roof top Rain water harvesting Potential: A case study of CIDCO township of Nanded, National conference on Conservation of Natural resources with special reference to changes in agriculture, 10th-11th February, ACS college, Digra, Maharashtra.
17. Biswas B (2008), Shift in oil seed production in Nanded District, National conference on Research Methodology in Geography, 3rd October, ASC College, Sangli, Maharashtra, India.

Conference Organization

1. Organized UP Higher Education Dept. Sponsored National Conference on **Land, water & renewable energy for Sustainable development** Department of Geography, St John's College, March, 2015.
2. Webinars on 'Planning Regions & Schemes of Regionalization in India' and 'Dynamics of Social Geography' on 6th May, 2020 and 8th June, 2020 respectively by Dept. of Geography & RM, Mizoram University.
3. 3 days' workshop on 'Natural Hazards and Disaster Mitigation of Mizoram', from 8th - 10th March, 2021. Sponsored by RGNIYD, Sriperumbudur. Dept. of Geography & RM, Mizoram University.

Organization of GIS Trainings

1. 18th IIRS Outreach Programme on Basics of "Remote Sensing, Geographical Information System and Global Navigation Satellite System" August 22 – November 18, 2016.
2. 20th IIRS Outreach Programme on "Microwave Radar Remote Sensing and its Applications" during 10 April - 28 April, 2017.
3. 23rd to 27th IIRS Outreach Programme on Basics of Remote Sensing, Geographical Information System and Global Navigation Satellite System during August 21 to December 01, 2017.
4. 46th IIRS Outreach Programme on "Advances in Remote Sensing and geospatial technologies for Disaster early warning, monitoring and mitigation" during 08 July – 12 July, 2019.

Research Projects

Principal Investigator

1. Completed a Minor Research Project entitled "Comparison of Regional Planning of past & present Nanded & Kandhar". Funded by BCUD, SRTM University, Nanded, Maharashtra. Period – 02 years. Amount – ₹ 55,000.
2. Completed a Minor Research Project entitled "Potentiality of Neem growth & the scope of its industrial development in Nanded district". Funded by UGC (WRO). Period – 02 years. Amount – ₹ 90,000
3. Completed Major Research Project entitled "Application of Geo-Informatics for Sustainable Development of Environmental Resources in a Semi-Arid Region of India". Funded by ICSSR. Period – 02 years. Amount – ₹ 8,00,000.
4. Undergoing 2 MRP; 01 from DST, 01 from ICSSR

Details of Professional Trainings

1. NNRMS Course on Remote Sensing and Geographical Information system in soils and Land use planning sponsored by ISRO during May 05 to June 26, 2015.
2. Orientation Program sponsored by UGC-HRD Centre, Punjabi University, Patiala during 18th April – 14th May, 2016.
3. Refresher Course sponsored by UGC-HRD Centre, NEHU, Shillong during 19th June-9th July, 2017.
4. Summer School on Geospatial Technologies sponsored by DST, held at Chitkara University, Solan, HP during 9th – 29th May, 2019.

Awards and Distinctions

Best Teacher award in 2013 by Maharashtra Dalit Sahitya Academy

Association With Professional Bodies

1. Life Member of National Association of Geographers India (**NAGI**).
2. Life Member of Indian Institute of Geographers (**IIG**).
3. Life Member of Geographer's Association, Goa (**GAG**)
4. Life Member of The Geographical Society of India
5. Life Member of Geographical Association of Mizoram

Other Activities

1. **Ranger Leader** of St Johns College Ranger unit from 2015-2019