

## CV

- 1. Name & Designation:** Dr. Anshumali, Professor & Head (Employment Code: 833)
- 2. Date of Birth:** 27.09.1975
- 3. Corresponding Address:** Department of Environmental Science and Engineering  
Indian Institute of Technology (Indian School of Mines), Dhanbad-826004  
Tel: 0326-2235645, 9934556176; E-mail: malijnu@gmail.com, anshumali@iitism.ac.in
- 4. Academic Qualification:**



Examination	Year	Board/University	Subjects	Division
Matriculation	1990	BSEC, Patna	Arts, Sciences	I <sup>st</sup>
Intermediate	1992	BIEC, Patna	Phy, Che, Bio, Math, Hindi, Eng	I <sup>st</sup>
B.SC.	1996	B.H.U., Varanasi	Botany	I <sup>st</sup>
*M.Sc.	1998	B.H.U., Varanasi	Botany	I <sup>st</sup>
**M.Phil.	2003	J.N.U., New Delhi	Environmental Sciences	I <sup>st</sup>
***Ph.D.	2006	J.N.U., New Delhi	Environmental Sciences	Awarded

\*\*“Carbon budget of savanna and grassland ecosystem of the world” under supervision of Prof. J. S. Singh, Deptt. of Botany, Faculty of Science, B.H.U., Varanasi, 1997-1998.

\*\*\*“Geochemical fractionation of metals in the surficial sediments of Achankovil River Basin, Kerala under supervision of Prof. AL. Ramanathan, SES, J.N.U., New Delhi, 2003.

\*\*\*\*“The study of heavy metal and PAHs in the Pandoh Lake, Mandi Town, Himachal Pradesh, India” under supervision of Prof. AL. Ramanathan, SES, J.N.U., New Delhi, 2006.

**5. Area of Specializations:** Geochemistry and Biogeochemistry of Terrestrial/Aquatic Ecosystems, Ecology and Biodiversity, Environmental Quality, EIA/EMP, Restoration Ecology of Coal and Non-coal Mining Industries, Natural Resource Management (Rivers, Aquifers, Reservoirs, Forests, Soil and Sediment).

### 6. Awards/Scholarship:

- Qualified Joint CSIR-UGC National eligibility Test (NET) in subject Life-Sciences held on 25.06.2000.
- Qualified Joint CSIR-UGC Junior Research Fellowship (JRF) and Eligibility for Lectureship-National Eligibility Test (NET) in subject Life-Sciences held on 31.12.2001.
- Appeared in Shyama Prasad Mukherjee Fellowship test held on 14th July, Kolkata, 2002.

### 7. Employment History:

S.N	Employer	Position held	Date of Joining	Date of Promotion	Pay Scale	Basic Pay	Total Salary
1.	IIT(ISM), Dhanbad	Professor	12.04.2021	Continuing	Level 14A	179100	295039
2.	IIT(ISM), Dhanbad	Associate Professor	31.05.2016	11.04.2021	Level 13A2	161800	193518
3.	ISM, Dhanbad	Assistant Professor	06.09.2013	30.05.2016	PB-4 + 9000	37400+9000	123540
4.	ISM, Dhanbad	Assistant Professor	15.02.2010	05.09.2013	PB-3 + 8000	22610+8000	41324
5.	ISM, Dhanbad	Assistant Professor	15.02.2008	14.02.2010	PB-3 + 7000	20140+7000	30397
6	ISM, Dhanbad	Assistant Professor	15.02.2007	14.02.2008	PB-3 + 6000	20140+6000	27708

### 8. Subject Teaching:

<b>B.Tech:</b>	<b>M.Tech:</b>
<ul style="list-style-type: none"> <li>• Environmental Biology/Microbiology</li> <li>• Environmental Biotechnology</li> <li>• Ecology and Biodiversity</li> <li>• Water Chemistry/Pollution</li> <li>• Soil Chemistry/Pollution</li> <li>• Pollution Control and Environmental Management</li> <li>• Environmental Geotechnology</li> <li>• Biomedical and Hazardous Waste Management</li> <li>• Environmental Policy, Law, EIA and Audit</li> <li>• Environmental Sciences Modular</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental Microbiology</li> <li>• Environmental Biotechnology</li> <li>• Ecology and Biodiversity</li> <li>• Environmental Policy, Law, EIA and Audit</li> <li>• Environmental Biogeochemistry</li> <li>• Biodiversity Conservation</li> </ul>

## 9. Special Award/Honour:

- 2015-2019: The Non-Official Member of Regional Empowerment Committee (REC) under Forest (Conservation) Act 2003 at Regional Office, East Central Zone, Ranchi, constituted by Ministry of Environment Forests and Climate Change, Government of India, New Delhi (Extraordinary, Part II-Section 3-Sub-section (ii), The Gazette of India, New Delhi.
- 2018 – 2020: “Member of the State Level Appraisal Committee for Critical Public Utility Infrastructure Projects” in Jharkhand State vide letter no Forest Land-03/2018-2246 dated 29/05/2018 MoEF&CC Government of Jharkhand.
- 2019-2020: Invited Member of the “State Level Steering Committee” for Climate Change by the MOEF&CC, Government of Jharkhand.
- 2019: Member of NERCS (Network of Experts & Resources for Subsurface Investigations and Remediation of Contaminated Sites), Network List, Ministry of Environment, Forest & Climate Change.
- 2013-2016: Empanelment as Functional Area Expert (FAE) for CMPDIL, Ranchi, 2013-2016.
- 2011-2016: NABET-QCI accreditation as a Functional Area Expert (FAE) in the area of Water Pollution and Control, Ecology and Biodiversity, Soil Pollution and Control for “A” type industries for preparing EIA/EMP.
- 2014-2015: External Expert in the Board of Studies in Department of Biotechnology (2014-15), Vinoba Bhave University, Hazaribag, Jharkhand.
- 2014-2015: External Expert in the Board of Studies for framing Syllabi of M.Sc. (Environmental Science, 2014-15), Vinoba Bhave University, Hazaribag, Jharkhand.
- 2018: Nominated as External Examiner to evaluate the PhD Thesis on the subject Botany, V.B.S. Purvanchal University, Jaunpur, Uttar Pradesh.
- 2018: External Expert Selection Committee for the PhD Science Programme of the AcSIR at CSIR-CIMFR Dhanbad.
- 2019: Appointed as Indian External Examiner of the oral defense committee for the conduct of Viva-voce Examination, Department of Polymer and Processing Engineering, IIT Roorkee (Saharanpur Campus).
- 2020: Appointed as Expert by the ICFRE Dehradun for the preparation of "Standardized ToR to assess the impact of the underground mining on the forest and other natural resources".
- Invited as Special Expert to attend the PAC Environmental Sciences of the International Cooperation Division, DST, Govt. Of India on 24.07.2021 to evaluate the India-Portugal and India-Serbia Call for Joint proposal 2020.
- 2022: Appointed as External Examiner for a Ph.D. Thesis evaluation for the award of Ph.D. Thesis at Central University of Gujarat, Gujarat, India.
- 2023: Appointed as External Examiner for a Ph.D. Thesis evaluation for the award of Global Ph.D. at Nalanda University, Rajgir, India.
- 2023: Appointed as External Examiner for a Ph.D. Thesis evaluation for the award of PhD at Sikkim University, Sikkim, India.
- 2023: Appointed as External Examiner for a Ph.D. Thesis evaluation for the award of Ph.D. Thesis at University of Allahabad, Allahabad, India.
- 2021-2024: Appointed as a Member of State Level Expert Appraisal Committee (SEAC), Bihar vide Gazette of India Notification S.O. 3271(E), dated 12th August, 2021.
- Appointed as Member of the Board of Studies of Department of Environmental Science, School of Earth, Biological and Environmental Science, Central University of South Bihar, Gaya, Bihar vide Letter No. CUSB/Acad/42-8/2013/1692 dated 22.09.2022.
- Invited to attend meeting of “State Level Steering Committee” on “Jharkhand State Action Plan on Climate Change” organized by the CAMPA, Govt. of Jharkhand, 17.11.2021.
- Appointed as Expert Committee Member by the State Expert Appraisal Committee (SEAC), Bihar for periodic inspection of sand mining lease areas vide Notification No. 66 dated 21/02/2022.
- Appointed as Expert Committee Member of REED+ Strategy constituted by the Ministry of Environment Forest and Climate Change; Government of Jharkhand vide notification 1398 dated 01/06/2023.
- Empanelment as Expert Member of the AICTE Expert Visit committee for conducting physical visit to AICTE approved Institutions/ Universities, 25 July 2023.

## 10. Member/Life Member:

- L-1725: Geological Society of India P.B. No. 1922, Gavipuram P.O. Bangalore – 560 019, India.
- LM-803: Indian Geological Congress, Post Box No. 114, 402/1, 35A, Civil Lines, Roorkee-247 667 India.
- Indian Society of Soil Science, NGSC Complex, Dev Prakash Marg, Pusa, New Delhi 110012, India.

## 11. Administrative Responsibilities (Warden/Institute Management):

- Appointed as Warden of the Jasper Hostel: 01.04.2012 to 30.03.2013 one year.
- Appointed as DAC Secretary, Department of Environmental Science and Engineering: 17.07.2012 to 13.12.2013 one year six months.
- Appointed as Center Superintend of Entrance Examination conducted for the MSc/MSc Tech/MPhil and JRF-EE-2014 at Indore Center: 07.05.2014 to 13.07.2014 One year.
- Appointed as Member (Assistant Professors Constituency) of General Council and Executive Board (GC & EB), Indian School of Mines, Dhanbad: 10.12.2014 to 09.12.2015 one year.
- Appointed as Member of the Library Advisory Committee (LAC): 22.05.2015 to 22.05.2017 Two years.
- Appointed as Faculty In-charge (Innovation and Entrepreneurship) Dept. of ESE: 19.02.2020 to 18.02.2021 One year.
- Appointed as Member Secretary of Committee for reconstituting the Center for Water Resource Management (CWRM) 04.06.2020 continuing.
- Coordinator: signing of Memorandum of Understanding between IIT (ISM) Dhanbad and FICCI New Delhi 2020.
- Coordinator: signing of Memorandum of Understanding between IIT (ISM) Dhanbad and ICFRE Dehradun 2020.
- Coordinator: signing of Memorandum of Agreement between Member Institute [IIT (ISM) Dhanbad] and Lead Institute [IIT Kanpur] to deliver the Mandate of cGanga (Centre for Ganga River Basin Management and Studies) supported by the Ministry of Jalshakti, GOI, 2020.
- Appointed as Head, Center for Water Resource Management (CWRM), IIT(ISM) Dhanbad, 2020.
- Appointed as Head, Department of Environmental Science and Engineering (ESE), IIT(ISM) Dhanbad, May 2021-May 2024.
- Appointed as Coordinator, EIACP (PC-RP) IIT(ISM) Dhanbad on Environmental Problems of Mining, May 2021-May 2024.

## 12. Foreign Nations Visited:

- France 2009
- USA 2012
- Republic of Macedonia 2012
- Spain 2016
- Australia 2023

## 13. Invited Lecture/Talk:

- Invited Expert Lecture Study Abroad Programme on Mining, Environment and Sustainable Development for University of South Florida - ST. Petersburg, USA, From 5 - 18 August, 2014.
- Invited Expert Lecture Mining Environment and Sustainable Development for Officials of Ministry of Mines, Govt. of Afghanistan. From 16. 08.2014 to 01.09, 2014.
- Invited Expert Lecture Training Programme on Environmental Impact Assessment of Mining Projects, for Officials of Ministry of Mines, Govt. of Afghanistan. From 6<sup>th</sup> to 22<sup>th</sup> December, 2014.
- Invited Guest Speaker DST-MOEA-JNU Training Programme on “Natural Resources and Water Management” for Africans in the Jawaharlal Nehru University, New Delhi, 2-22 December 2014.
- Invited Expert Lecture Nine Week programme for Management Trainees (Environmental Engineering) of Coal India at IICM Ranchi from 27<sup>th</sup> April to 27<sup>th</sup> June 2015.
- Invited Panelist National Conference on PAST AND PRESENT GEOCHEMICAL PROCESSES – IMPACTS ON CLIMATE CHANGE AND ANNUAL GENERAL BODY MEETING – 2015 INDIAN SOCIETY OF APPLIED GEOCHEMISTS, HYDERABAD School of Environmental Sciences and Jawaharlal Nehru University New Delhi, India 110067 22–23 December 2015.
- Invited Expert Lecture Renewable Energy Materials & Technology in Academia & Industries” (REMTAI-2016) in the Department of Applied Physics, Indian School of Mines Dhanbad on March 2-4, 2016.
- Invited Expert Lecture Three days Training Programme on EIA/EMP Preparation of Ecology & Biodiversity (EB) & Soil Conservation (SC) at IIIFC, Kolkata organized by Department of Environmental Science & Engineering, Indian School of Mines) Dhanbad during 2-4 December, 2015.

- Invited Expert Lecture 5-Day Training Program on “Water Quality and Treatment Plant Operation” in the Department of Environmental Science & Engineering, Indian Institute of Technology (Indian School of Mines) Dhanbad, during December 19- 23, 2016.
- Invited Expert Lecture Training Program on ‘Environmental Clearance Procedures and Impact Assessment for Mining Projects’ during June 07-11, 2017 at IIT(ISM) Industry Institute Interaction Facility, Kolkata, India.
- Invited Panelist Workshop on “Climate Change: Opportunities and Challenges in Jharkhand” – held on 26th September, 2018 at Ranchi, MoEF&CC Government of Jharkhand and NABARD.
- Invited Expert Lecture DST-SERB School for Brain Storming Session on Short-Term Course entitled "*Smart Energy Materials & Devices*" April 29-May 3, 2019, Executive Development Centre, IIT-ISM Dhanbad.
- Invited Keynote Lecture “Impact of Recent Cyclone on Biodiversity”, on the Eve of World Environment Day, June 5 2020, Department of Environmental Sciences, Sharda University, Greater Noida, UP.
- Invited Speaker in Online National Conference on “Environment and Energy Materials: NCEEM-2020” June 27-28, 2020, organized by the Department of Environmental Sciences, Sharda University, Greater Noida, UP
- Invited Expert Lecture in online training programme “Industrial Safety Risk Management: Multi Hazard Scenario with special focus on COVID-19 Part I” 17-19 August 2020, organized by the National Institute of Disaster management (NIDM, GoI) and Federation of Indian Chamber of Commerce and Industries (FICCI), New Delhi.
- Invited Expert Lecture in online training programme “Industrial Safety Risk Management: Multi Hazard Scenario with special focus on COVID-19 Part II” 17-19 August 2020, organized by the National Institute of Disaster Management (NIDM, GoI) and Federation of Indian Chamber of Commerce and Industries (FICCI), New Delhi.
- Invited Expert Lecture in online workshop on ‘Mines Water Management’ on 24<sup>th</sup> September 2020 organized by the National Water Mission (NWM), Department of Water Resources River Development and Ganga Rejuvenation, Ministry of Jal Shakti, Government of India, New Delhi.
- Invited Expert Lecture in online Refresher Course on Environmental Studies, Water, Earth and Environment (IDC) on the theme “Towards Sustainable Environment” for University and College teachers scheduled to be held from October 27 – November 10, 2020, Centre for Professional Development in Higher Education University of Delhi.
- Invited Panellist in 5th India Water Impact Summit (IWIS) from December 10-15th 2020, cGanga-IIT(Kanpur) and Ministry of Jal Shakti, Government of India.
- Invited Guest Speaker, International Earth Day (Restore Our Earth) Organized by Department of Environmental Science, Central University of South Bihar, Gaya, Bihar, 22 April 2021.
- Invited Guest Speaker, World Environment Day: 05<sup>th</sup> June 2021, organized by the Environment Management Division, Directorate of Extension, Indian Council of Forestry Research and Education, Dehradun.
- Invited Expert Lecture in the “National Training Program on Audit of Environmental Pollution (Air, Water and Land)” organized by International Centre for Environment Audit and Sustainable Department (iCED), Jaipur, 25<sup>th</sup> August, 2021.
- Invited Panelist Session “A2: Roles and Responsibilities for River Resource Assessment and Monitoring” on Thursday, 10 December 2021 during 1400 to 1545 hrs (IST) in 6th India Water Impact Summit [IWIS-2021] December 9-14, 2021 organized by National Mission for Clean Ganga, Ministry of Jal Shakti, Govt. of India and cGanga IIT Kanpur.
- Invited Panelist to attend meeting of “State Level Steering Committee” on “Jharkhand State Action Plan on Climate Change” organized by the CAMPA, Govt. of Jharkhand, 17.11.2021.
- Invited Panelist Session “A4: Empowering Local and Small Stakeholders for Sustainable River Resource Management” on Monday, 13 December 2021 during 1400 to 1545 hrs (IST) in 6th India Water Impact Summit [IWIS-2021] December 9-14, 2021 organized by National Mission for Clean Ganga, Ministry of Jal Shakti, Govt. of India and cGanga IIT Kanpur.
- Invited as Expert in “Meeting of the Departmental Assessment Committee (DAC) to be held on 10.12.2021 for consideration of promotion of three scientists from the grade of scientist 'D' to the grade of scientist 'E', MoEF&CC, New Delhi.
- Invited as Keynote Speaker and Panelist in “State Level Workshop Glasgow Convention: Sustainable Pathways for Future Ready Jharkhand” organized by the CAMPA, MoEF&CC, Government of Jharkhand, and CEED Ranchi on 09.05.2022.
- Invited as Expert in “Meeting of Expert Selection Committee (ESC)” for selection to 01 post of Scientists B in the discipline of Environment Engineering (post no. 11-12/B/MoEF&CC) held on 26.05.2022 from 10:00am onwards in virtual mode.

- Invited Guest Speaker to celebrate World Environment Day 2022 ENSPIRA Webinar - 1 organized by TATA Steel, Jamshedpur on 30<sup>th</sup> May 2022.
- Invited Guest Speaker to celebrate World Environment Day, 2022 organized by Institute of Forest Productivity, Ranchi on 05.06.2022
- Invited Guest Speaker to celebrate World Environment Day, 2022 organized by Hindustan Copper Limited, Kolkata on 06.06.2022.
- Invited Guest Speaker and Panelist to celebrate World Soil Day, 2022 organized by Institute of Forest Productivity, Ranchi on 05.12.2022.
- Invited Panelist in Seventh Edition of the India Water Impact Summit [IWIS] held during December 15-17, 2022 at Dr Ambedkar International Centre (DAIC), 15, Janpath Rd, Windsor Place, New Delhi.
- Invited Keynote Lecture during Winter School (Level 1), Capacity Building Program: DST-National Geospatial Program at Indian Institute of Technology (ISM), Dhanbad from 10 February to 02 March, 2023.
- Invited Keynote Lecture during webinar on the occasion of National Science Day, 21<sup>st</sup> February 2023 organized by IGNOU: Regional Centre Jammu.
- Invited Keynote Speaker to celebrate World Environment Day, 2023 organized by Veer Bahadur Singh Purvanchal University, Jaunpur, Uttar Pradesh, 05.06.2023.

#### **14. Workshop Attended:**

- Third National Workshop on Biostatistics and Biometry, Deptt. Of Zoology, B.H.U., Varanasi, 1998.
- National Workshop on Water Quality (including drinking water), School of Environmental Sciences, JNU, New Delhi, Feb 2002.
- Short term training programme on Mathematical Modeling of ground water flow and mass transport, theory and hand on training” SES, J.N.U., New Delhi, 12-9 December 2004.
- Short term training programme on Mathematical Modeling of ground water flow and mass transport, theory and hand on training” SES, J.N.U., New Delhi, 19 September -5 October 2005.
- Training course on Hydrology of Lakes for Sustainable Human Benefits, PU, Chandigarh, 2007.
- Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008 & Amendments till March, 2010. 2-22 October, National Safety Council, Goa, 2010.
- Recent Advancement of Stable Isotopes Applications in Hydrology/Hydrogeology: Environment and earth Process by LWIA PICCARO, JNU, New Delhi, 13-14 June, 2016.
- Energy Resources: Future Prospects of Fuel and Chemicals, Department of Chemical Engineering, IIT(ISM) Dhanbad November 07-08, 2016.

#### **15. National Conference Participation:**

- Tropical Ecology Congress. Current Trends in Tropical Biodiversity Research and Conservation. Garhwal, Uttarakhand, India. 2-5 December, 2007.
- National Seminar on “Conservation and Restoration of Lakes (CAROL, 2008), Nagpur, India.
- National Seminar on “Recent Advances in Information Technology” (RAIT-2009), 6-7 Feb, 2009 ISMU, Dhanbad.
- National Industrial Exhibition-cum-Seminar (NIES – 2008), 26-28 December, Bokaro.
- National Conference on Scientific Strategies and Preservation of Wetlands in India, JNU, New Delhi 2010.
- National Conference on Landscape Restoration Processes Challenges and Opportunities, 22- 23 February, 2011, FRI, Dehradun.
- National Conference on Green Earth, October 18-19, 2012, Organized by Indian Geological Congress and Wadia Institute of Himalayan Geology, Dehradun.

#### **16. International Conference Participation:**

- Second International Conference on Groundwater for Sustainable Development: Problems, Perspectives and Challenges, JNU, New Delhi, 2006.
- 1st International Conference on Managing the Social and Environmental Consequences of Coal Mining in India, New Delhi, 2007.



- International Symposium on Environmental Pollution, Ecology and Human Health, July 25- 27, 2009, S. V. University, Tirupati, India.
- International Symposium on Mineralogy, Environment and Health, UMLV, Paris, 17-18 September, 2009.
- 26th International Conference on Solid Waste Technology and Management during March 27 – 30, 2011 at Philadelphia, PA, U.S.A.
- Golden Jubilee International Conference on Technological Challenges and Management Issues for Sustainability of Mining Industries (TMSMI 2011), 4th to 6th August, 2011 at N. I. T. Rourkela.
- 14th International Conference of International Academy of Physical Sciences (CONIAPSXIV), Sardar Vallabhbhai National Institute of Technology, Surat, December 22-24, 2011.
- The Fifth International Scientific Conference BALWOIS 2012, Ohrid, Republic of Macedonia, 28th May to 2nd June 2012.
- 18th Convention of Indian Geological Congress & International Symposium on “Minerals and Mining in India-The way forward, inclusive of cooperative mineral –based industries in SAARC countries”, 27th -29th April 2013, M. P. Council of Science and Technology, Vigyan Bhawan, Bhopal, Madhya Pradesh.
- 5<sup>th</sup> International Conference on “Biodiversity” held on March 10-12, 2016 in Madrid, Spain.
- 6<sup>th</sup> EcoSummit 2023 on Building a sustainable and desirable future: Adapting to a changing land and sea-scape 13-17 June 2023, Gold Coast, Australia.

## **17. Outreach Programme Organized (Training Programme/National/International Conference/Seminar/Webinar):**

- 1st International Conferences on Managing the Social and Environmental Consequences of Coal Mining in India, November 19-21, 2007, IIC, New Delhi.
- National Conference on Sustainable Development of Groundwater Resources in Industrial Regions, (SDGRIR 2012) 22-23 March 2012, Dept. of ESE, ISM, Dhanbad.
- Three days Training Programme on EIA/EMP Preparation of Ecology & Biodiversity (EB) & Soil Conservation (SC) 2-4 December, 2015, IIIFC, Kolkata.
- National Conference on “Biogeochemical Cycles and Climate Change (BCCC 2018)” organized for two days (10-11 August 2018) at IIT(ISM), Dhanbad.
- National Conference on “Recent Trends in Environmental Pollution and Disaster Risk reduction (RTEPDRR 2020) organized for two days (6-7 February 2020) at FICCI, New Delhi.
- National E-Celebration and Webinar entitled “Groundwater Availability and Management-Its True Value” organized by the Center for Water Resource Management (CWRM) at IIT(ISM), Dhanbad on the eve of the World Water Day 22 March 2021.
- International Webinar on “Introduction to subsurface flow and transport modelling with FEFLOW” organized by the Water Resource Management (CWRM) at IIT(ISM) in association with DHI India Water & Environment Pvt. Ltd. on 26 April 2021.
- Webinar on “Ecosystem Restoration” organized on the occasion of the World Environment Day (WED) on 5<sup>th</sup> June, 2021.
- Lecture/Training on “Chemistry-Climate Modeling” organized on 16<sup>th</sup> August, 2021, Dept of ESE.
- Lecture on “Metals and Metalloids recover from Industrial Wastewater and Solid Wastes and Success Stories” organized on 04.11.2021, Dept of ESE.
- One Day “Exposure visit-cum-Training Programme for College students” organized by IIT(ISM) ENVIS Centre on 02.01.2022.
- Lecture on “Valuation of Ecosystem Services of Wetlands, Kidneys of a landscape”, 02.02. 2022, World Wetland Day (Invited Speaker: Prof. TV Ramachandran, IISc Bangalore).
- Three Days Training Programme on “Air, Water Pollution and Solid Waste Management Practices” for college students organized by the IIT(ISM) ENVIS Centre from 11-13 March, 2022 as a part of ‘Ek Bharat Shreshtha Bharat’, an initiative by Indian Government for creating and providing an environment which promotes learning between States by sharing best practices and experiences.
- Lecture on “World Water Day” 22.03.2022 (Invited Speakers: Dr. Alok Sikka, Delhi; Dr. Deepanker Saha, Delhi).
- Three-days Online Course on "Python for Handling Large Geo-spatial Data" organized by IIT(ISM) ENVIS Centre (RP), 01.06.2022

- Organized celebration of World Environment Day 2022: "Only One Earth" with the focus on "Living Sustainably in Harmony with Nature" Celebrated by IIT(ISM) ENVIS Centre, 05.06.2022
- Organized Three Days Hands-on Training Programme on "Groundwater Flow and Contaminant Transport Modeling in GMS Software", 07th - 09th June, 2022.
- Organized invited guest lecture series on 10.08.2022 (Invited Speaker: Mgr. Martin Bartuska Ph.D., Charles University of Prague and Biology Centre ASCR Ceske Budejovice, Czech Republic).
- Organized invited guest lecture series on 27.08.2022 (Invited Speakers: Prof. Colin Hills, Professor of Environment and Materials Engineering; Director of the Centre for Contaminated Land Remediation at University of Greenwich and Coordinator, Indo-UK Centre of Environment Research and Innovation, Dr. (Ms.) Nimisha Tripathi, Sr. Lecturer at University of Greenwich and Convener, Indo-UK Centre of Environment Research and Innovation and Dr. Rajshekhar Singh, Indian Co-coordinator, Indo-UK Centre of Environment Research and Innovation and Chief Scientist/CSIR-CIMFR.).
- Organized Awareness Programme on "Reintroduction of Cheetah in India" on 13.09.2023.
- Organized Cheetah Awareness and Sensitization Campaign at Govt. Plus Two High School (HE School), Dhanbad and Abhaya Sundari Girls High School, Dhanbad on 14.09.2023.
- Organized celebration of "World Ozone Day 2022" and Awareness Programme on "Reintroduction of Cheetah in India" at IIT(ISM) Dhanbad on 16.09.2023.
- Organized invited guest lecture series on 23.12.2022 (Invited Speaker: Mr. Alejandro Caballero, Director de ingenieria, BIOAZUL, Spain).
- Organized invited guest lecture series on 29.10.2022 (Invited Speaker: Mr. Srikanth Grandhi, PE, Arcadis U.S. Inc.).
- Organized Celebration of National Constitution Day by ENVIS Centre at Dept. of ESE, IIT(ISM) Dhanbad on 26.11.2023
- Organized invited guest lecture series on 18.01.2023 (Invited Speaker: Mr. Max Odentha, KreTa, Germany).
- Organized Awareness Programme on Mission LiFE on the occasion of 74th Republic Day, 26.01.2023.
- Organized Awareness campaign on Mission LiFE during the IIT(ISM) Industry-Institute Interaction 2023 on 04.02.2023.
- Organized invited guest lecture series under Mission LiFE on 10.02.2023 (Invited Speaker: Dr. T. V. Ramachandra, Coordinator of Energy and Wetlands Research Group (EWRG) and Convener of EIACP (PC-RP), CES, IISc Bengaluru).
- Organized an awareness programme under Mission LiFE at Dhanbad Pranjivan Academy +2 High School on 24.02.2023.
- Organized an awareness programme under Mission LiFE at Abhay Sundari Girls High School, Dhanbad on 01.03.2023.
- Organized an awareness programme under Mission LiFE at East End Convent School, Dhanbad on 02.03.2023.
- Organized an awareness programme under Mission LiFE at East End Convent School, Dhanbad on 02.03.2023.
- Organized invited guest lecture series under Mission LiFE on 03.03.2023 (Invited Speaker: Dr. Rajender Gupta, Professor (Phased Post Retirement), Faculty of Engineering - Chemical and Materials Engineering Department, University of Alberta, Canada).
- Organized an awareness programme under Mission LiFE at Dhanbad Vikash Vidyalaya on 03.03.2023.
- Organized an awareness programme under Mission LiFE at Dr. Shyama Prasad Mukherjee Inter College Sindri on 06.03.2023.
- Organized an awareness programme under Mission LiFE among students at various schools in villages of Janpad, Sonbhadra district of UP on 20.03.2023.
- Organized an awareness programme under Mission LiFE at Banwasi Seva Ashram, UP on 21.03.2023.
- Organized an awareness programme under Mission LiFE at Adasrh Genius School, Ganiyari, Waidhan, Singrauli district of M.P. on 21.03.2023.
- Organized an awareness programme under Mission LiFE at Rajakiya Uthkramit Madhya Vidyalaya, Burhi khar, Manjhiaon, Garhwa district of Jharkhand on the occasion of World Water Day, 22.03.2023.
- Organized an awareness programme under Mission LiFE at Garhwa Polytechnic College, Hasker Garhwa on 23.03.2023.
- Organized an awareness programme under Mission LiFE in primary and secondary schools (Rajkiya Utkramit Madhya Vidyalay Amhar Khas, Bishunpura, Garhwa, Jharkhand and Rajkiya Madhya Vidyalay Karnpura, Ramana, Garhwa, Jharkhand) at villages of Garhwa district of Jharkhand on 25.03.2023.
- Organized Banki Jan Chetana Andolan: An Awareness Programme in-line with Mission LiFE's Save Water theme organized by IIT(ISM) EIACP (PC-RP) during 18<sup>th</sup> – 26<sup>th</sup> March, 2023.

- IIT(ISM) EIACP (PC-RP), Department of Environmental Science & Engineering, IIT(ISM) Dhanbad in association with Yugantar Bharti, Ranchi organized one day National Seminar on the occasion of World Earth Day on 22nd April 2023.
- Organized invited guest lecture series under Mission LiFE on 12.05.2023 (Invited Speaker: Prof. P.K. Singh, Assoc. Prof., IIT(ISM) Dhanbad).
- Organized Youth Parliament 2023 (Theme: 'Individual Behaviour and habits have an impact on environment and climate change'.) on LiFE: Stage-I online debate competition cum group discussion for Jharkhand State and coordinated the competition for Eastern Region on 15<sup>th</sup> May 2023.
- Organized Yoga Programme under Mission LiFE Campaign to promote Healthy Lifestyle organized by IIT(ISM) EIACP (PC-RP) during 25<sup>th</sup> – 27<sup>th</sup> May, 2023.
- Organized invited guest lecture series on 31.05.2023 (Invited Speaker: Dr. Rajendra Singh, Founder and President of Tarun Bharat Sangh, and popularly known as "Waterman of India").
- Organized Two Days Cycle Rally under Mission LiFE Campaign to promote sustainable Lifestyle, during 01<sup>st</sup> – 2<sup>nd</sup> June 2023.
- Organized Community Awareness programme under Mission LiFE on 01.06.2023 at IIT(ISM) Campus residential area.
- Organized celebration of World Bicycle Day on 03.06.2023.
- Organized invited guest lecture series under Mission LiFE (Invited Speaker: Sri Sanjeev Kumar, Addl. Principal Chief Conservator of Forest, CAMPA, Govt. of Jharkhand), inauguration of Special Edition of Monograph on Mission LiFE (ISSN: 0972-4656), plantation programme and other activities on the occasion of World Environment Day 2023 (Theme: Solutions to Plastic Pollution), on 05.06.2023.
- Organized Round Table Conference with Dhanbad Administration for Dhanbad District Scientific Water Conservation Plan, proposed by IIT(ISM) Dhanbad on 09<sup>th</sup> – 10<sup>th</sup> June, 2023.
- Organized Yoga Workshop on the occasion of International Yoga Day 2023, in-line with Mission LiFE on 21.06.2023.
- Organized workshop on Demonstration of "Matka Plantation using Recharge Technique" on 23.06.2023.

### 18. Sponsored Projects (R & D Projects):

S.No.	Project Title	Project Cost (Lakh)	Role	No. of Co-PIs	Funding Agency	Duration	Status
1.	Baseline study of Bagjata and Bhandurang Uranium Mine Deposit in Jadugoda, Jharkhand, India	34	Co-PI	4	BRNS	2007-10	Completed
2.	Regional environmental impact assessment study of Goa Region	200	Co-PI	ESE Members	MoEF	2011-14	Completed
3.	Phosphorus fractionation in surface and core sediments: An Implication in Restoration and Conservation of Govind Ballabah Pant Sagar, Singrauli, M.P.	32.48	PI	0	MoES	2014-18	Completed
4.	Geochemical investigation of heavy metals and REEs in water and surface sediments: An implication in restoration and conservation of Ken and Betwa Rivers.	24.64	PI	0	DST	2015-18	Completed
5.	Quantification of agricultural biomass in the river bed of Rihand Ecosystem: Understanding the impact of climate change on farming practices in peninsular India	3.71	PI	0	DST(FICCI)	2019	Completed
6.	Biogeochemical appraisal of the groundwater nitrate pollution due to agricultural activities in Son River Basin, India	3.71	PI	0	DST(FICCI)	2019-20	Completed
7.	Preparation of Catchment Treatment Plan	35.40	PI	3	VEDANTA	2020-21	Completed
8.	Identification of suitable sites and designing of environment friendly rainwater harvesting structures for catching the rain where it falls when it falls in the IIT(ISM) campus area	8.80	PI	8	IIT(ISM) Dhanbad	2020-21	On-going
9.	Delineation of the administrative boundary of the Banki River, Garhwa District, Jharkhand: an implication in	21	PI	5	IIT(ISM) Dhanbad	2021-24	On-going



	restoration and conservation of the Ganga River Basin						
	EIACP (PC-RP) IIT(ISM) Dhanbad on Environmental Problems of Mining	67.57	PI	0	MoEF&CC	2021-24	On-going
10.	Integrated non-invasive geophysical, archaeological and biogeochemical characterization of Itkhouri Heritage sites in the Mohane River Valley	126	Co-PI	3	DST	2022-25	On-going
11.	Impact of climate change on vulnerable aquifer systems in and around industrial and mining areas of Damodar River Basin (Eastern India) using GIS based Modified DRASTIC Model and Global Climate Model.	77	PI	6	CGWB	2023-26	Proposal under review

### 19. Consultancy Projects:

S. No.	Project Title	Project Cost (Lakh)	Role	No. of Co-PIs	Funding Agency	Duration	Status
1.	Regional Development Programme of Angul-Talcher Areas of Orissa, India	53.00	Co-PI	12	OSPCB	2007-10	Completed
2.	Biodiversity Study for Environmental Impact Assessment & Environment Management Plan of Rolep Hydro Electric Power Project	11.90	PI	1	Velankani Energy PVT. LTD	2014-15	Completed
3.	Technical Consultancy for waste water management and control of water pollution from plant and mines of BIOM, Bacheli Complex	14.25	PI	0	NMDC, Bacheli,	2015-16	Completed
4.	Testing of Ground Water Quality in nearby villages of the project and suggesting measures for improvement of water quality	25.00	PI	0	NMDC, Kirandul	2016-18	Completed
5.	Analysis of soil quality of agriculture field adjacent BIOM Kirandul Complex within the catchment area of Talperu, Minachel, Malangir, Sankini and Dankini rivers	6.61	PI	0	NMDC, Kirandul	2016-18	Completed
6.	Preparation of EIA/EMP of Shivani OCP, WCL	1.03	PI	0	CMPDIL, Nagpur	2013	Completed
7.	Preparation of EIA/EMP of Niljai Expn. (Deep) OC Wani Area, WCL	1.05	PI	0	CMPDIL, Nagpur	2013	Completed
8.	Preparation of EIA/EMP of Patherdih Coal Washery, BCCL	0.92	PI	0	CMPDIL, Dhanbad	2015	Completed
9.	Preparation of EIA/EMP of Kusmunda OCP Exp, SECL	1.05	PI	0	CMPDIL, Bilaspur	2015	Completed
10.	Preparation of EIA/EMP of Balaram OCP Exp, ECL	1.05	PI	0	CMPDIL, Bhubaneswar	2015	Completed
11.	Preparation of EIA/EMP of Ajoy and Damodar River bed for sand mining	2.17	PI	0	CMPDIL, Asansol	2015	Completed
12.	Preparation of EIA/EMP of three WCL projects	2.17	PI	0	CMPDIL, Nagpur	2015	Ongoing
13.	Preparation of EIA/EMP of four BCCL projects	3.26	PI	0	CMPDIL, Dhanbad	2016	Completed
14.	Preparation of EIA/EMP of Ten CCL projects	7.62	PI	0	CMPDIL, Ranchi	2016-20	Completed
15.	Hydrogeology and Water Sustainability Study around DB Power Plant	12.25	PI	0	DB Power Raigarh	2018-19	Completed
16.	Water Sustainability Study around RKM Power Plant	7.75	PI	0	RKM Power Raigarh	2018-19	Completed
17.	Impact of Coal Transportation on Kosa Silk Production	3.75	PI	0	RKM Power Raigarh	2018	Completed
18.	Comprehensive Assessment of Impact of Road on Local Biodiversity, Wildlife Corridors and its Mitigation Strategy along 277.3 km Chennai Salem	35.40	PI	0	NHAI, Chennai	2018-20	Completed

	Greenfield Corridor						
19.	Effect on Ecosystem Services available in the proposed mining area and assessment of carrying capacity of the extent ecology therein	25.96	Co-PI	2	SECL, Bilaspur	2021-22	Completed
20.	Cumulative Impact Assessment Study, Carrying Capacity Study and Ecosystem Services Study as per condition of Terms of References (ToR) for Expansion of Nigahi Opencast Coal Mining Project from 21 Mtpa to 25 Mtpa with increase in leasehold area from 3018.40 ha to 3582.723 ha	130.626	PI	15	NCL, Singrauli	2022-23	On-going

## 20. M. Tech Supervision:

S. No.	Candidate	Title of the Research Thesis	Guide/Co-guide	Status
1.	Ravikant Singh	Assessment of groundwater vulnerability using Modified DRASTIC Model	Guide	Ongoing 2023
2.	Pappu Kumar	Assessment of groundwater vulnerability using Modified DRASTIC Model	Guide	Ongoing 2023
3.	Varsha B	The study of ecosystem services of coal mining industries in NCL region	Guide	Completed 2023
4.	Payal P. Gothale	LULC preparation, change detection and future prediction of Chandrapur District, Maharashtra	Guide	Completed 2022
5.	Rahul K. Sharma	Morphometric analysis of Wardha river sub-basin in Chandrapur District, Maharashtra	Guide	Completed 2022
6.	Abhinav Ranjan	A review on the infiltration capacity of different soils and comparing different mathematical models for estimating infiltration rate based on the ground data	Guide	Completed 2021
7.	Mannu Nayak	Reduction of Lead Metal from Contaminated Soil by Bioremediation	Guide	Completed 2020
8.	Anirban Ray	Evaluation of water quality suitability for drinking using WQI in Kolkata and assessment of the health risk associated with it	Guide	Completed 2019
9.	Nitish Kumar	Soil loss estimation in Damodar River basin using GIS as a tool	Guide	Completed 2019
10.	Rishu Kant Singh	Assessment of groundwater quality due to Arsenic and potential health risk assessment in Bhagalpur District, Bihar	Guide	Completed 2019
11.	Ashutosh Anand	Evaluation of WQI and their HRA in Public School of Dhanbad Region	Guide	Completed 2018
12.	Abhishek Anand	Evaluation of GWI and HRA in Dumka Township Area, Jharkhand	Guide	Completed 2018
13.	Zeeshan Ali	Carbon Sequestration Study at Eco-restored Site of BCCL, Dhanbad	Guide	Completed 2018
14.	Manish Kumar	Health risk assessment of heavy metals in groundwater in Dantewada, Chhattisgarh	Guide	Completed 2017
15.	Nikki Chanda	Study on geochemistry of groundwater of Dantewada District, Chhattisgarh	Guide	Completed 2017
16.	Abhay Kumar	Study on groundwater quality index of Dantewada District, Chhattisgarh	Guide	Completed 2017
17.	D. K. Sahoo	Assessment of fluoride pollution in Koraput District, Odisha	Guide	Completed 2016
18.	Ahmad Nawaz	Black carbon emissions from the cracks of mine fire areas of Jharia Coal Field, Dhanbad, India	Guide	Completed 2016
19.	Rahul Agrawal	Use of three step sequential extraction procedure (BCR) for micronutrient fractionation in agricultural soil around Jharia Coal Field, Jharkhand	Guide	Completed 2015
20.	Gaurav Tanwar	Fractionation of micronutrients in the agriculture soil of Jharia, using Tessier Method	Guide	Completed 2015
21.	Jhuma Sarkar	Use of three step sequential extraction procedure (BCR) for micronutrient fractionation in forest soil around Jharia Coal Field, Jharkhand	Guide	Completed 2015
22.	Kriti Shukla	Study on Physico-chemical Characterization and phosphorus fractionation in agricultural soil of Sidhi district	Guide	Completed 2014
23.	Bijendra Kumar	Study on Physico-chemical Characterization and estimation of fluoride in agricultural soil of Sidhi district, M.P.	Guide	Completed 2014
24.	Ashish Kumar	The study on geochemistry of Govind Ballabh Pant Sagar, Singrauli, India	Guide	Completed 2013
25.	M.K. Ghritlahre	Industrial and domestic effluent treatment and its reutilization	Guide	Completed 2013
26.	S.K. Yadav	Study of plantation on Mine spoil In Northern Coalfield	Guide	Completed 2012
27.	Manisha Rani	Impact of sedimentation on Eutrophication of Govind Ballabh	Guide	Completed 2012

		Pant Sagar, Uttar Pradesh		
28.	Ashvani Kumar	Assessment of soil quality and soil respiration of Dugdha Coal Washery of Jharia Coalfield	Guide	Completed 2011
29.	Awinash Kumar	Assessment of soil quality and soil respiration of Patherdih Coal Washery of Jharia Coalfield	Guide	Completed 2011
30.	Singdha Pradhan	Effect of radiation on microbial activity and soil fertility in the Jharia Coal Field, Jharkhand	Guide	Completed 2010
31.	Rajesh Chandra	Radiation survey of open cast coal mines: An implication in mine fire mitigation in Jharia Coal field, Jharkhand	Guide	Completed 2010

## 21. Ph. D Supervised: Awarded/On-going:

S.No.	Reg. No.	Candidate	Title of the Research Thesis	Sole Guide/ Co-guide	Status
1.	2016DR0105	M Venkatesh	Geochemical Investigation of Heavy Metals and REEs in Water and Surface Sediments: An Implication in Restoration and Conservation of Ken and Betwa Rivers	Sole Guide	Awarded 2023
2.	2015DR1138	A.K. Mishra	Study on environmental impact assessment of Archeological Structures in the State of Haryana, India	Sole Guide	Awarded 2022
3.	2014DR0286	Bijendra Kumar	Phosphorus fractionation in surface sediment: an implication in restoration and conservation of Govind Ballabah Pant Sagar, Singrauli, M.P.	Sole Guide	Awarded 2020
4.	2015DR1033	BK Panda	Study on morphometry and water chemistry of the Ken River system, central India	Sole Guide	Awarded 2019
5.	2016DR1014	Ashish Kumar	Atmospheric studies using remote sensing techniques and in-situ measurements over the Himalayan region	Sole Guide	Awarded 2019
6.	2015DR1141	Manu Mehta	A global study on spatiotemporal variability of aerosol inferred from space borne measurement	Sole Guide	Awarded 2019
7.	2014DR0007	Kumari Priyanka	Soil Carbon fractions in agricultural and forest soils in Jharia Coalfield region, Jharkhand, India	Sole Guide	Awarded 2018
8.	2015DR1034	Arindam Barman	Study on diversity of Pumpkin ( <i>Cucurbita moschata</i> Duch. Ex Poir.) germplasms of Garo Hills, Meghalaya, India	Sole Guide	Awarded 2018
9.	2014DR0189	Kriti Shukla	Study on biogeochemistry of some micronutrients in agricultural soils around Sidhi district, M.P., India	Sole Guide	Awarded 2018
10.	2013DR0263	Arti Hasnsda	Isolation and characterization of Cu(ii) reducing Pseudomonas sp. And their plant growth promoting activity.	Co-guide	Awarded 2018
11.	2010DR0119	Lata Dora	Study of phytoplankton community as a bioindicator of water pollution in Damodar River	Co-guide	Awarded 2016
12.	2013DR0060	Asmaa Naz	Study on ground water quality and heavy metal toxicity in the Sidhi District, M.P., India	Sole Guide	Awarded 2016
13.	2012DR0155	C. Narayan	Study on plant diversity in tropical deciduous forest of Bokaro District, Jharkhand, India	Sole Guide	Awarded 2016
14.	2011DR0053	Shruti Mishra	Study on diversity of leguminous and non-leguminous species in Jharia Coalfield, Jharkhand	Sole Guide	Awarded 2015
15.	2010DR0029	Tripti	Study on pesticide tolerant bacteria and their phosphate solubilisation activity: An approach towards biofertilizer preparation	Co-guide	Awarded 2014
16.	2015DR1041	P. B. Prasad	Study on Influence of Fly Ash Properties on the Preparation of High Strength Concrete	Sole Guide	On-going
17.	2015DR1065	Ashish Kumar	Study on biogeochemistry of agricultural and forest soils around Punjipathra Industrial Area, Raigarh (Chhattisgarh), India	Sole Guide	On-going
18.	2017DR00016	Ruchika Jain	Possible implications of bioavailable iron in coal mine dust on coal workers' lung disease	Principal Guide	On-going
19.	18DR0121	Sanchit Kumar	Study on river bank agriculture in riparian zones: Adapting to climate change	Sole Guide	On-going
20.	21DR0149	Roja Eliza	Carbon sequestration in riparian ecosystems	Sole Guide	On-going
21.	22DR0182	R. K. Gupta	Study on river-aquifer interaction in lower ganga river basin	Sole Guide	On-going
22.	22DR0166	Preeti Khanna	Biogeochemical assessment of millet cultivation in Central India	Sole Guide	On-going
23.	22DR0262	Swayam Vid	Geospatial analysis of LULC change in Central	Sole Guide	On-going

			India		
24.	22DR0332	Subhadip Sarkar	Geospatial analysis of carbon sequestration in Damodar River basin	Sole Guide	On-going
25.	23DR0029	Apoorva Singh	Environmental impact assessment of LULC change on surface and subsurface water, Central India	Sole Guide	On-going

### 23 A. International Students/Project Fellows:

Registration No.	Candidate	Title of the Research Thesis	PI/Co-PI	Status
DST(FICCI)/RTF/2018/000041	Phuong Quynh Ngo	Quantification of agricultural biomass in the river bed of Rihand Ecosystem: Understanding the impact of climate change on farming practices in peninsular India	PI	Completed
DST(FICCI)/RTF/2019/000066	Duong Cong Vinh	Biogeochemical Appraisal of the Groundwater Nitrate Pollution due to Agricultural Activities in Son River Basin, India	PI	Completed
DST(FICCI)/RTF/2020/000143	Thanh Van Nguyen	Remote Sensing and GIS based Assessment of Dehgaon Bamori Forest Range: An Implication in Restoration and Conservation of Betwa River Basin, Central India	PI	Completed

### 23 B. Indian Students/Project Fellows:

Registration No.	Candidate	Title of the Research Thesis	PI/Co-PI/Coordinator	Status
No. A-33015/1/2023-P.I/MoEF&CC (04.05.2023) GOUR4782	Gourab Kumar Giri	Geophysical survey of aquifers in coal mining areas – an overview	PI	On-going
IIT(ISM)/2021-2022/826/INSTITUTE (13.12.2021)	Rahul K. Pandey	“Delineation of the Administrative Boundary of the Banki River, Garhwa District, Jharkhand: An Implication in Restoration and Conservation of the Ganga River Basin”	PI	On-going
IIT(ISM)/2021-2022/826/INSTITUTE (17/12/2021)	Rahul K. Gupta	“Delineation of the Administrative Boundary of the Banki River, Garhwa District, Jharkhand: An Implication in Restoration and Conservation of the Ganga River Basin”	PI	On-going
MoEFCC(EIACP-PC)/2022-2023/22/ESE	Bishwajit das	EIACP (PC-RP) IIT(ISM) on Environmental Problems of Mining	Coordinator	On-going
MoEFCC(EIACP-PC)/2022-2023/22/ESE	Durga D. Chandra	EIACP (PC-RP) IIT(ISM) on Environmental Problems of Mining	Coordinator	On-going
MoEFCC(EIACP-PC)/2022-2023/22/ESE	Dr. Parul Maurya	EIACP (PC-RP) IIT(ISM) on Environmental Problems of Mining	Coordinator	On-going
MoEFCC(EIACP-PC)/2022-2023/22/ESE	Supriya Bistu	EIACP (PC-RP) IIT(ISM) on Environmental Problems of Mining	Coordinator	On-going
No. A-33015/2/2022-P.I/MoEF&CC (31.01.2023) GOVI3156	Govind Kumar	A GIS-based approach to delineate the morphometric characteristics of Khudia watershed in Jharia Coalfield Region, Dhanbad District, Jharkhand	PI	Completed
No. A-33015/2/2022-P.I/MoEF&CC (31.01.2023) NARE6387	Narendra Prasad	A GIS based approach to delineate the morphometric characteristics of Katri River watershed in Jharia Coalfield Region of Dhanbad District, Jharkhand	PI	Completed
MoES/P.O. (Geosci)/15/2013 (26/04/2014)	Bijendra Kumar	Phosphorus fractionation in surface and core sediments: An Implication in Restoration and Conservation of Govind Ballabah Pant Sagar, Singrauli, M.P	PI	Completed
EMR/2015/000448 (22/09/2015)	M. Venkatesh	Geochemical Investigation of Heavy Metals and REEs in Water and Surface Sediments: An Implication in Restoration and Conservation of Ken and Betwa Rivers.	PI	Completed

## **24. List of Publications [As per the guidelines notified by the IIT(ISM), Dhanbad]:**

### **24.1 Publications in SCI/SCIE Journals (Q ranking based on Web of Science):**

1. Anshumali, Rahul Kumar Pandey, Rahul Kumar Gupta, Sanchit Kumar (2023). Morphometric delineation of administrative boundaries and classification of threatened categories of small watersheds in transboundary rivers. *Scientific Reports*, 13: 1652 (WoS Q1, Nature Portfolio, Impact Factor 4.996) <https://doi.org/10.1038/s41598-023-28913-5>
2. Sanchit Kumar, Anshumali (2023). Biogeochemical appraisal of carbon fractions and carbon stock in riparian soils of the Ganga River basin. *Applied Soil Ecology*, 182: 104687 (WoS Q1, Elsevier, Impact Factor 5.509). <https://doi.org/10.1016/j.apsoil.2022.104687>
3. Tripti, Adarsh Kumar, Vipin Kumar, Anshumali (2022). Synergism of Industrial and Agricultural Waste as a Suitable Carrier Material for Developing Potential Biofertilizer for Sustainable Agricultural Production of Eggplant. *Horticulturae* 2022, 8(5): 444 (WoS Q2, MDPI, Impact Factor 2.923). <https://doi.org/10.3390/horticulturae8050444>
4. Amit Kumar Mishra, Anshumali (2021). Nature and sources of ionic species in rainwater during monsoon periods in and around sixteenth–seventeenth century CE monuments in Yamuna River basin, India. *Environmental Monitoring and Assessment* 193:86 (WoS Q3, Springer, Impact Factor 2.513). <https://doi.org/10.1007/s10661-021-08889-3>
5. Amit Kumar Mishra, Amit Mishra, Anshumali (2021). Geochemical characterization of bricks used in historical monuments of 14 – 18<sup>th</sup> Century CE of Haryana region of the Indian subcontinent: Reference to raw materials and production technique. *Construction and Building Materials* 269 (2021) 121802 (WoS Q1, Elsevier, Impact Factor 6.141). <https://doi.org/10.1016/j.conbuildmat.2020.121802>
6. Madavi Venkatesh, Anshumali (2020). Appraisal of the carbon to nitrogen (C/N) ratio in the bed sediment of the Betwa River, Peninsular India. *International Journal of Sediment Research*, 35(1): 69 -78 (WoS Q2, Elsevier, Impact Factor 2.902). DOI: 10.1016/j.ijsrc.2019.07.003
7. Umesh kumar Singh, Indrani Mukherjee, Rajeev P Singh, Anshumali, Deepa K Kumari, Pawan K Jha, Pankaj Mehta (2020). Characterization of heavy metal pollution in an anthropogenically and geologically influenced semi-arid region of east India and assessment of ecological and human health risks. *Science of the Total Environment*, 705(25): 135801 (WoS Q1, Elsevier, Impact Factor 7.963). DOI:10.1016/j.scitotenv.2019.135801
8. Narendra Singh, Ashish Kumar, Anshumali, Jaydeep Singh, Debashis Nath (2020). Observations on the distribution of precipitation over northern India using joint CloudSat, CALIPSO and TRMM measurements. *Remote Sensing Letters* 11(2): 117–126 (WoS Q2, Taylor and Francis, Impact Factor 2.583). DOI: 10.1080/2150704X.2019.1692388
9. Ashish Kumar, Narendra Singh, Anshumali (2019). Simulation and interactive approach based demonstration of pulse compression technique in atmospheric radar. *SN Applied Sciences* 1:1678 (Springer, Emerging Sources Citation Index). DOI: 10.1007/s42452-019-1737-0
10. Madavi Venkatesh, Anshumali (2019). A GIS-based assessment of recent changes in drainage and morphometry of Betwa River basin and sub-basins, Central India. *Applied Water Science* 9:157 (WoS Q2, Springer, Impact Factor 3.874). DOI: 10.1007/s13201-019-1033-6
11. Ashish Kumar, Narendra Singh, Anshumali Singh (2019). Observations on the distribution of clouds over northern India using joint CloudSat and CALIPSO measurements. *Remote Sensing Letters*, 10(6): 590–597 (WoS Q2, Taylor and Francis, Impact Factor 2.583). DOI: 10.1080/2150704X.2019.1587198
12. Bijendra Kumar, Anshumali (2019). Phosphorus fractionation in surface water and sediments of industrially polluted freshwater reservoir, India. *Chemistry and Ecology*, 35(3): 219-234 (WoS Q3, Taylor and Francis, Impact Factor: 2.239). DOI: 10.1080/02757540.2018.1554058
13. Balakrushna Panda, Madavi Venkatesh, Bijendra Kumar, Anshumali (2019). A GIS-based approach in drainage and morphometric analysis of Ken River basin and sub-basins, Central India. *Journal of the Geological Society of India*, 93(1): 75-84 (WoS Q4, Springer, Impact Factor: 1.459). DOI: 10.1007/s12594-019-1125-9
14. Kumari Priyanka, Anshumali (2018). Quantifying total and labile pools of organic carbon in cultivated and uncultivated soils in eastern India. *Soil Research* 56(4): 413-420 (WoS Q3, CSIRO, Impact Factor: 1.99). DOI: 10.1071/SR17188
15. Kriti Shukla, Anshumali (2018). Soil micronutrient pools and their transfer to paddy-crops in semi-arid agro-ecosystems, Central India. *Soil and Tillage Research*, 180: 164-174 (WoS Q1, Elsevier, Impact Factor: 5.374). DOI: 10.1016/j.still.2018.02.017



16. Manu Mehta, Narendra Singh; Anshumali (2018). Global trends of columnar and vertically distributed properties of aerosols - inferences from 10-Year long Caliop observations (September 2006-August 2016). *Remote Sensing of Environment*, 208:120-132 (WoS Q1, Elsevier, Impact Factor: 10.164). DOI: [10.1016/j.rse.2018.02.017](https://doi.org/10.1016/j.rse.2018.02.017)
17. Anshumali, Manish Kumar, Nikki Chanda, Abhay Kumar, Bijendra Kumar, Madavi Venkatesh (2018). Geochemical Assessment of Fluoride Pollution in Groundwater of Tribal Region in India. *Bulletin of Environmental Contamination and Toxicology*, 100(3): 421–429 (WoS Q3, Springer, Impact Factor 2.129). DOI: 10.1007/s00128-017-2267-3
18. Ashish Kumar, Narendra Singh, Anshumali, Raman Solanki (2018). Evaluation and utilization of MODIS and CALIPSO aerosol retrievals over a complex terrain in Himalaya. *Remote Sensing of Environment* 206: 139–155 (WoS Q1, Elsevier, Impact Factor: 10.164). DOI: 10.1016/j.rse.2017.12.019
19. Bhupendra Singh, Ruey-An Doong, Dheeraj Singh Chauhan, Ashutosh K. Dubey, Anshumali (2018). Synthesis and characterization of Fe<sub>3</sub>O<sub>4</sub>/Polythiophene hybrid nanocomposites for electroanalytical application. *Materials Chemistry and Physics* 205; 462-469 (WoS Q2, Elsevier Impact Factor 4.094). DOI: 10.1016/j.matchemphys.2017.11.040
20. Arindam Barman, Anshumali Singh, Prakash Chandra Gupta (2017). Antilithiatic and diuretic activity of *Cucurbita moschata* on ethylene glycol induced lithiasis in male albino Wistar rats. *Indian Journal of Animal Sciences* 88 (4): 407–411 (WoS Q4, ICAR, Impact factor: 0.440).
21. Arindam Barman, Anshumali (2017). Genetic diversity estimates in landraces of Pumpkin (*Cucurbita moschata* Duch.) from North Eastern Himalayan region of India using agro-morphological and molecular traits. *Indian Journal of Agricultural Sciences* 88 (1): 79–85 (WoS Q4, ICAR, Impact factor: 0.208).
22. Kriti Shukla, Bijendra Kumar, Rahul Agrawal, Kumari Priyanka, Madavi Venkatesh, Anshumali 2017. Assessment of Cr, Ni and Pb pollution in rural agricultural soils of Tonalite-Trondjemite Series in Central India. *Bulletin of Environmental Contamination and Toxicology*, 98(6): 856–866 (WoS Q3, Springer, Impact Factor 2.129). DOI: 10.1007/s00128-017-2085-7
23. Bijendra Kumar, Madavi Venkatesh, Anshuman Tripathi, Anshumali 2017. A GIS-based approach in drainage morphometric analysis of Rihand River Basin, Central India. *Sustainable Water Resource Management* 4(1); 45–54 (Springer, Emerging Sources Citation Index). DOI: 10.1007/s40899-017-0118-3
24. Arti Hansda, Vipin Kumar, Anshumali (2017). Cu resistant *Kocuria* sp. CRB15: a potential PGPR isolated from the dry tailing of Rakha copper mine. *3 Biotech*, 7:132 (WoS Q3, Springer, Impact Factor 2.406). DOI: 10.1007/s13205-017-0757-y
25. Arti Hansda, Vipin Kumar, Anshumali (2017). Influence of Cu fractions on soil microbial activities and risk assessment along Cu contamination gradient. *Catena* 151: 26–33 (WoS Q1, Elsevier, Impact Factor 5.198). DOI: 10.1007/s13205-017-0757-y
26. Tripti, Adarsh Kumar, Zeba Usmani, Vipin Kumar, Anshumali (2016). Biochar and flyash inoculated with plant growth promoting rhizobacteria act as potential biofertilizer for luxuriant growth and yield of tomato plant. *Journal of Environmental Management*, 190: 20-27 (WoS Q1, Elsevier, Impact Factor 6.789). DOI: 10.1016/j.jenvman.2016.11.060
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28. Manu Mehta, Ritu Singh, Ankit Singh, Narendra Singh, Anshumali (2016). Recent global aerosol optical depth variations and trends — A comparative study using MODIS and MISR level 3 datasets. *Remote Sensing of Environment* 181: 137–150 (WoS Q1, Elsevier, Impact Factor: 10.164). DOI: 10.1016/j.rse.2016.04.004
29. Chandravir Narayan, Anshumali (2016). Elemental composition of Sal forest soils around Chhotanagpur Plateau, India. *Chemistry and Ecology* 32(6): 533-549 (WoS Q3, Taylor and Francis, Impact Factor 2.239). DOI: 10.1080/02757540.2016.1162296
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32. Arindam Barman, Rituparna Mitra<sup>1</sup>, D.K. Singh and Anshumali (2015). Diversity among indigenous germplasms of melon (*Cucumis melo* L.) through seed protein profiling pattern. *VEGETOS* 28 (3): 01-07 (WoS listed without Q ranking, SOC Plant Research, Impact Factor: 0.042) DOI:10.5958/2229-4473.2015.00060.9
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37. A.T. Surendra, Anshumali, Gurdeep Singh, (2009). Prediction of plant species diversity by log-linear and power function models along the east coast region of India. *Tropical Ecology*, 50(1): 103 - 109 (WoS Q4, ISTE, Impact Factor: 0.850). [www.tropecol.com](http://www.tropecol.com)
38. Anshumali, A. L. Ramanathan, Gurdeep Singh, Gurmeet Singh, Rajesh Ranjan, Parijat Tripathi (2009). Chemodynamics of trace metal fractions in surface sediments of the Pandoh Lake, Lesser Himalaya, India. *Environmental Geology*, 57: 1865-1879 (WoS Q2, Springer, Impact Factor: 2.784). DOI: 10.1007/s00254-008-1476-9
39. Anshumali, Ramanathan AL (2007). Phosphorus fractionation in surficial sediments of Pandoh Lake, Mandi district, Himachal Pradesh, India. *Applied Geochemistry*, 22: 1860-1871 (WoS Q2, Elsevier, Impact Factor: 3.524). DOI: 10.1016/j.apgeochem.2007.03.050
40. Anshumali, Ramanathan AL (2007). Seasonal variation in the major ion chemistry of Pandoh Lake, Mandi District, Himachal Pradesh, India. *Applied Geochemistry*, 22:1736-1747 (WoS Q2, Elsevier, Impact Factor: 3.524). DOI: 10.1016/j.apgeochem.2007.03.045
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## **24.2 Publications in Web of Science Master Journal List/Scopus:**

1. Chandravir Narayan, Anshumali, Bijendra Kumar (2019). Species-area Curves of Native Species in Sal Forest of Chota Nagpur Plateau, India. *Indian Journal of Science and Technology*, Vol 12(35): 1-9 (ISSN: 0974-6846). DOI: [10.17485/ijst/2019/v12i35/138770](https://doi.org/10.17485/ijst/2019/v12i35/138770)
2. Kumari Priyanka, Anshumali 2016. Soil Carbon: An Overview on Soil Carbon Function and its Fractionation. *Current World Environment* 11(1): 178-185 (ISSN: 0973-4929). DOI: [10.12944/CWE.11.1.22](https://doi.org/10.12944/CWE.11.1.22)
3. Chandravir Narayan and Anshumali (2016). Dispersion pattern of native species in Sal forests of Chhotanagpur Plateau, India. *Current World Environment* 10(2), 482-488 (ISSN: 0973-4929). DOI: 10.12944/CWE.10.2.12
4. Hansda A., Kumar V. Anshumali (2015). Biosorption of Copper by Bacterial Adsorbents: A Review. *Research Journal of Environmental Toxicology*, 9:45-58 (ISSN: 1819-3420). DOI: [10.3923/rjet.2015.45.58](https://doi.org/10.3923/rjet.2015.45.58)
5. Shruti Mishra, Anshumali (2015). Species-area relationships in the tropical deciduous forests of Jharia Coalfield, India. *Indian Forester*, 141 (9): 974-980 (ISSN: 0019-4816). DOI: 10.36808/if/2015/v141i9/79862
6. Shruti Mishra, Sanjay Yadav, Manisha Rani, Anshumali (2015). Floristic Composition, Diversity and Regeneration of Plant Species in Tropical Deciduous Forests, India. *Ecology, Environment and Conservation* 21(3): 1379-1387 (ISSN: 0971-765X).

7. Bijendra Kumar, Anshumali, Aasma Naaz, Kriti Shukla, Chandravir Narayan (2014). Physico-chemical characterization of irrigated and rainfed agricultural soil Sidhi district, M.P. *Current World Environment*. Vol. 9(3): 983-989 (ISSN: 0973-4929). DOI: <http://dx.doi.org/10.12944/CWE.9.3.52>

8. Shruti Mishra, Anshumali, (2014). Phytosociological analysis of native species in the Tropical Deciduous Forests around Jharia Coalfield, Eastern India. *International Journal of Applied Environmental Sciences* 9(4): 2243-2253 (ISSN: 0973-6077). DOI:10.37622/000000

### **24.3 Publications in Indexed Journals (Thomson Reuter):**

1. Tripti, Vipin Kumar, Anshumali, (2012). Phosphate solubilising activity of some bacterial strains isolated from chemical pesticide exposed agricultural soils. *International Journal of Engineering Research and Development*, 3(9): 1-16 (ISSN: 2278-800X)

2. Hansda A., Kumar V. Anshumali and Usmani Z. (2014). Phytoremediation of heavy metals contaminated soil using plant growth promoting rhizobacteria (PGPR): A current perspective. *Recent Research in Science and Technology* 6(1): 131-134 (ISSN: 2076-5061).

3. Kumari Priyanka, Anshumali, Bijendra Kumar, Kriti Shukla (2016). Spatial Variation in Soil Organic Carbon and Moisture Content in Forest Soil around Jharia Coalfield, Dhanbad. *Journal of Biodiversity and Environmental Sciences* 9(1): 76-81 (ISSN: 2220-6663).

4. Chandravir Narayan and Anshumali (2015). Diversity indices and importance values of a tropical deciduous forest of Chhotanagpur plateau, India. *Journal of Biodiversity and Environmental Sciences*, 7(1): 358-367 (ISSN: 2220-6663).

5. Shukla Kriti Anshumali (2017). Micronutrient Distribution in Arid and Semi-arid agricultural Soils of Central India. *Journal of Agroecology and Natural Resource Management* 4(4): 258-263 (ISSN: 2394-0786).

6. Mishra AK, Anshumali (2019). Appraisal of rainwater characteristics in and around historical monuments of 16-18<sup>th</sup> century, Haryana, India. *International Journal of Global Science Research* Vol. 6(1): 879-889 (ISSN: 2348-8344). DOI: 10.26540/ijgsr.v6.i1.2019.115

### **24.4 Publications in Indian/International Society Journals:**

1. Ashish Kumar, Narendra Singh, and Anshumali Singh (2019). Signal analysis for ground based LiDAR. *Research Journal of Engineering Sciences*, 8(2): 17-22 [International Science Community Association].

2. Manu Mehta, Narendra Singh, Anshumali, M Mittal, M Gumber (2018). On vertical distribution of major aerosol types over different parts of Asia. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences* 42: 553-555 [International Society of Photogrammetry and Remote Sensing (ISPRS), Germany].

3. Shukla Kriti, Kumar Bijendra, Naaz Asmaa, Narayan Chandravir, Singh Govind, Kumar Alok, AL. Ramanathan, Anshumali (2016). Phosphorus Fractions in Irrigated and Rainfed Agricultural Soils of Central India. *Journal of the Indian Society of Soil Science* 64(2), 148-156 [Indian Society of Soil Science (ISSS), New Delhi].

4. Mishra Shruti, Anshumali, (2014). Forest structure and diversity in the tropical deciduous forests of Jharia Coalfield, Jharkhand. *The Indian Mining & Engineering Journal*, 53(03), 14-18. (The IM & E Journal, Bhubaneswar).

5. Mishra Shruti, Anshumali, (2014). Identification of plant community structure in Tropical Deciduous forests around, Eastern India. *The Indian Mining & Engineering Journal*, 53(08), 14-18. (The IM & E Journal, Bhubaneswar).

6. Mishra Shruti, Anshumali, (2014). Dispersion pattern of legumes and non-legumes in the Tropical Deciduous Forests around Jharia Coalfield, Eastern India. *Indian Journal of Tropical Biodiversity* 22(1): 45-50. (Society for Promotion of Tropical Biodiversity: Tropical Forest Research Institute, Jabalpur).

7. Sengupta C., Anshumali, (2013). The height:diameter ratio dependent eecis of native plant seedlings: Implication in restoration of OB dumps. *The Ecoscan*, 3: 281-287 (National Environmentalists Association, Ranchi).

8. Anshumali, Rani M., Yadav S., Kumar A., (2012). Impact of Mining activities and Allied Industries on Geochemistry of Govind Ballabh Pant Sagar, Northern Coalfield, India. *Journal Indian Geological Congress* 4(1): 1-7 [Indian Geological Congress (IGC), Roorkee].

9. Tripathi P., Anshumali, (2011). Arsenic enrichment in groundwater of the Middle Gangetic plain, India. *Minenvis*, 69-70: 7-18 [Envis Center, Department of Environmental Science and Engineering, IIT(ISM) Dhanbad].

10. Dora, S. L. Maiti S.K., Tiwary, R.K., Anshumali, (2010). Algae as an indicator of river water pollution: A review. *The Bioscan*, 2: 413-422 (National Environmentalists Association, Ranchi).

### **24.5 Publications in International Conference:**

1. Nguyen Thanh Van, Sanchit Kumar, Rahul Kumar Pandey, Roja Eliza, Rahul Kumar Gupta, Anshumali (2023). Remote sensing and GIS-based assessment of the Dehgaon-Bamori forest range: An implication in restoration and conservation of Betwa River Basin, Central India (Abstract reference no.: O4.1).

2. Varsha B, Rahul Kumar Pandey, Sanchit Kumar, Roja Eliza, Rahul Kumar Gupta, Nguyen Thanh Van, Anshumali (2023). Carbon sequestration modelling of the coal mining industries in NCL region using InVEST (Abstract reference no: O63.6).
3. Ashish Kumar, Narendra Singh, Anshumali (2019). Study on cloud types distribution over northern India using raDAR-liDAR (DARDAR). URSI AP-RASC 2019, New Delhi, India, 09 - 15 March 2019. doi: 10.23919/URSIAP-RASC.2019.8738690.
4. Narendra Singh, Ashish Kumar, Anshumali, Chandra Prakash, Chhavi P. Pandey (2019). Study on the satellite and ground based aerosol measurements over Himalayan region. URSI AP-RASC 2019, New Delhi, India, 09 - 15 March 2019. doi: 10.23919/URSIAP-RASC.2019.8738218.
5. Ashish Kumar, Madavi Venkatesh, Anshumali 2018. The study on geochemistry of surface water in Singrauli region, India. Indo-US bilateral workshop on Water-Food-Energy-Climate nexus: A perspective towards a sustainable future 2018, WFEC-2018, IESD, BHU, Varanasi.
6. Shukla K., Anshumali, (2014). Review on biogeochemistry of some micronutrients in agricultural soils, India. In: Tropical Ecosystems in Changing World, Tropical Ecology Congress, 10-12<sup>th</sup> December 2014, Jawaharlal Nehru University New Delhi-110067.
7. Narayan C., Kumar A., Ghritlahre M.K., Anshumali, (2014). Structure and floristic composition of tropical deciduous forests around Bokaro district, Jharkhand, India. In: Tropical Ecosystems in Changing World, Tropical Ecology Congress, 10-12<sup>th</sup> December 2014, Jawaharlal Nehru University New Delhi-110067.
8. Tripti, Vipin Kumar, Anshumali, (2012). Bio-formulation and Shelf-life Studies of Phosphate Solubilizing Inoculants in Different Carriers In: International conference on Anthropogenic Impact on Environment and Conservation Strategy, November 2 – 4, 2012, Organised by Department of Biosciences, St. Xavier's College, Ranchi In collaboration with National Environmentalists Association, India, Ranchi, Jharkhand.
9. Shruti Mishra, Chandravir Narayan, Anshumali, Vipin Kumar, (2012). The study on phytosociology of plant species in tropical dry deciduous forests of Jharia Coalfield, Jharkhand, India. In: International conference on Anthropogenic Impact on Environment and Conservation Strategy November 2 – 4, 2012, Organised by Department of Biosciences, St. Xavier's College, Ranchi In collaboration with National Environmentalists Association, India, Ranchi, Jharkhand.
10. Anshumali, P. Tripathi, (2012). Arsenic enrichment in groundwater of the Middle Gangetic Plain, India. In: The Fifth International Scientific Conference BALWOIS 2012, Ohrid, Republic of Macedonia, 28th May to 2nd June 2012.
11. S.K. Yadav, M. Rani, Anshumali, (2011). Geochemistry of Arsenic in Indo-Gangetic Plain: A Review. In: 14th International Conference of International Academy of Physical Sciences (CONIAPS-XIV), Sardar Vallabhbhai National Institute of Technology, Surat, December 22-24, 2011.
12. Anshumali, (2011). Ecological amplitude of five tropical deciduous species in restoration of mined out areas in Jharia Coalfield, India. In: Golden Jubilee International Conference on Technological Challenges and Management Issues for Sustainability of Mining Industries (TMSMI 2011), 4<sup>th</sup> to 6<sup>th</sup> August, 2011 at N. I. T. Rourkela.
13. Anshumali et al., (2011). Microbial enzyme assay as a surrogate measure of soil microbial activity in Jharia Coal Field, India". In: 26<sup>th</sup> International Conference on Solid Waste Technology and Management during March 27 – 30, 2011 at Philadelphia, PA U.S.A.
14. Anshumali, AL. Ramanathan, G. Singh, R. Ramesh, V. Kannan; R. Elumalai, (2009). Estimation of sedimentation rate by radiometric techniques in the oligotrophic lake, Lesser Himalaya, India. In: International Symposium on Mineralogy, Environment and Health, UMLV, Paris, 17-18 September, 2009.
15. Anshumali, AL. Ramanathan, Gurdeep Singh, (2009). Geochemical fractionation of trace metals in the surface sediments of Achankovil River, Kerala, India. In: International Symposium on Environmental Pollution, Ecology and Human Health, July 25-27, 2009, S. V. University, Tirupati, India.
16. Kumari N, Anshumali, Singh G, (2007). Impact of coal mining on ponds of Jharia Town, Dhanbad, Jharkhand. In: Singh G, Laurence D, Dutt KL, (Editors), Proceeding of First International Conference on MSECCMI, New Delhi, India, 121-127.

## **24.6 Publications in National Conference:**

1. Phuong Quynh Ngo, Sanchit Kumar, Madavi Venkatesh, Anshumali (2020). Appraisal of livelihood vulnerability index in the industrial and non-industrial regions of Ganga River basin, Northern India, Page No 7-29: In Proceedings of National Conference on "Recent Trends in Environmental Pollution and Disaster Risk Reduction", 6-7, February, 2020, FICCI Federation House, New Delhi.

2. Balakrushna Panda, Madavi Venkatesh, Bijendra Kumar, Sanchit Kumar, Umesh Kumar Singh, Anshumali (2020). Water quality assessment of Ken River for irrigation purpose in the marginal plain of Bundelkhand region and Ganga River Basin, Page No 40-48: In Proceedings of National Conference on “Recent Trends in Environmental Pollution and Disaster Risk Reduction”, 6-7, February, 2020, FICCI Federation House, New Delhi.
3. Bijendra Kumar, Anshumali (2020). Geochemistry of surface-water: An implication in restoration and conservation of Govind Ballabh Pant Sagar Reservoir, India, Page No 65-78: In Proceedings of National Conference on “Recent Trends in Environmental Pollution and Disaster Risk Reduction”, 6-7, February, 2020, FICCI Federation House, New Delhi.
4. Duong Cong Vinh, Sanchit Kumar, Sonali Maithili, Anshumali (2020). Assessment groundwater quality in the Son River Basin, India, Page No 87 – 92: In Proceedings of National Conference on “Recent Trends in Environmental Pollution and Disaster Risk Reduction”, 6-7, February, 2020, FICCI Federation House, New Delhi.
5. Kriti Shukla, Anshumali (2020). Micronutrient distribution in arid and semi-arid agricultural soils under rainfed and irrigated agro-ecosystems of Central India, Page No 116 – 135: In Proceedings of National Conference on “Recent Trends in Environmental Pollution and Disaster Risk Reduction”, 6-7, February, 2020, FICCI Federation House, New Delhi.
6. Barman, A., Anshumali (2018). Divergence analysis among the landraces of pumpkin (*Cucurbita moschata* Duch.) from Meghalaya, India. National conference on “Biogeochemical Cycles and Climate Change” 10-11 August 2018, IIT(ISM) Dhanbad” pp: 1-8. (ISBN 978-93-5321-509-5).
7. Kumar, B., Anshumali (2018). Assessment of major and trace metals in the surface sediments of Govind Ballabh Pant Sagar Reservoir, India: In Proceedings of National Conference on “Biogeochemical Cycles and Climate Change” 10-11 August 2018, IIT(ISM) Dhanbad” pp: 38-42. (ISBN 978-93-5321-509-5).
8. Venkatesh, M., Panda, B., Kumar, B., Narayan, C., Anshumali (2018). Morphometric comparison of Ken-Betwa River Basins, Bundelkhand region, Central India: In Proceedings of National Conference on “Biogeochemical cycles and climate change” 10-11 August 2018, IIT(ISM) Dhanbad” pp: 62-68. (ISBN 978-93-5321-509-5).
9. Panda, B., Venkatesh, M., Anshumali (2018). Simulation of contribution of water yield from Bearma sub-basin to Ken River Basin, Central India, using SWAT hydrological model: In Proceedings of National Conference on “Biogeochemical Cycles and Climate Change” 10-11 August 2018, IIT(ISM) Dhanbad” pp: 230-238. (ISBN 978-93-5321-509-5).
10. Priyanka, K., Anshumali (2018). Identifying Soil Carbon Fractions in Uncultivated Soils in Damodar River Basin: In Proceedings of National Conference on “Biogeochemical Cycles and Climate Change” 10-11 August 2018, IIT(ISM) Dhanbad” pp: 332-339. (ISBN 978-93-5321-509-5).
11. Yadav, S., Anshumali (2018). Population structure of tree species in Dongargarh Reserve Forest, Rajnandgaon District, Chhattisgarh: In Proceedings of National Conference on “Biogeochemical Cycles and Climate Change” 10-11 August 2018, IIT(ISM) Dhanbad” pp: 386-389. (ISBN 978-93-5321-509-5).
12. Anshumali, A. Kumar, M. Rani, S. Yadav, S. P. Singh (2012). Impact of coal mining and allied industries on geochemistry of Govind Ballabh Pant Sagar, Northern Coalfield, India. In: National Conference on Green Earth, October 18-19, 2012, organized by Indian geological Congress and Wadia Institute of Himalayan Geology, Dehradun.
13. Tripti, Vipin Kumar, Anshumali, (2012). Evaluation of pesticide tolerance capability of phosphate solubilising bacterial (PSB) strain. In: 2<sup>nd</sup> National Conference on Antimicrobial Resistance: A Cause for Global Concern, 6-8 February, 2012, Sam Higginbottom Institute of agriculture Technology & Sciences, Allahabad, Uttar Pradesh.
14. Sanjay Kumar Yadav, Manisha Rani, Anshumali (2012). Impact of Industries on Groundwater Hardness: A Review. In: National Conference on Sustainable Development of Groundwater Resources in Industrial Regions (SDGRIR 2012), March 22 -23, 2012 Department of Environmental Science & Engineering, ISM, Dhanbad, Jharkhand.
15. Tripti, Vipin Kumar & Anshumali (2012). Contamination of Groundwater By Pesticide And Its Bioremediation-A Short Review. In: National Conference on Sustainable Development of Groundwater Resources in Industrial Regions (SDGRIR 2012), March 22 -23, 2012 Department of Environmental Science & Engineering, ISM, Dhanbad, Jharkhand.
16. Manisha Rani, Sanjay Kumar Yadav, Anshumali (2012). Stalinization as Ground Water Pollution in India: A Review. In: National Conference on Sustainable Development of Groundwater Resources in Industrial Regions (SDGRIR 2012), March 22 -23, 2012 Department of Environmental Science & Engineering, ISM, Dhanbad, Jharkhand.
17. Sanjay Kumar Yadav, Manisha Rani, Anshumali (2012). Impact of mining on plant diversity of Northern Coalfield, Singrauli (M.P.), India. In: National Seminar on Biodiversity: Its Conservation & Sustainable Development for Human Welfare, 7-9 April, 2012 Department of Zoology, Vinoba Bhave University, Hazaribag, Jharkhand.
18. Anshumali (2011). Ecological Blueprint of Plantation in Mining Sectors: an Implication in Biodiversity Conservation and Climate Change. In: National Conference on Landscape Restoration Processes Challenges and Opportunities, 22-23 February, 2011, FRI, Dehradun.

19. Anshumali, Ramanathan, AL. (2008). Physical fractionation of trace metals in surface sediments of the Pandoh Lake, Lesser Himalaya, India. In: Choubey V.K., Singh R.D., Singh O., Sharma M.K., (Editors), Proceeding of National Seminar on “Conservation and Restoration of Lakes (CAROL, 2008), Nagpur, India, 257-266.

### **24.7 Book Chapters Contributed:**

1. Sanchit Kumar, Anshumali (2022). Recent Trends in Fate, Transport, and Transformation of Inorganic and Organic Carbon in Freshwater Reservoirs. In: Hydrogeochemistry of Aquatic Ecosystems (Editors: Sughosh Madhav, Virendra Bahadur Singh, Manoj Kumar, Sandeep Singh), John Wiley & Sons Ltd.
2. Bijendra Kumar, Anshumali (2019). Phosphorus Sorption Characteristics of the Surface Sediments from Industrially Polluted GBPS Reservoir, India. In: Contemporary Environmental Issues and Challenges in Era of Climate Change (Editors: P. Singh, R.P. Singh, V. Srivastava), Springer Nature Singapore Pvt Ltd.
3. Bijendra Kumar, Anshumali (2014). Fluoride in Agricultural soil: A Review on its sources and toxicity to plants. P. 29-37 in Global Sustainability Transitions: Impacts and Innovations (ed. G.C. Mishra ) at 3<sup>rd</sup> International conference on “Sustainable Innovative Techniques in Architecture, Civil and Environmental Engineering” organized by Krishi Sanskriti at JNU, New Delhi, 26<sup>th</sup> and 27<sup>th</sup> April, 2014. (ISBN – 978-93-83083-77-0).
4. Bijendra Kumar, Anshumali, Aasma Naaz, Kriti Shukla, Subhash Chandra, Binay Prakash Panigraphy, Ashwani Kumar Tiwari (2014). Fluoride in Groundwater and its Health Hazards: A Review in Indian Scenario. P. 38-45 in Global Sustainability Transitions: Impacts and Innovations (ed. G.C. Mishra ) at 3<sup>rd</sup> International conference on “Sustainable Innovative Techniques in Architecture, Civil and Environmental Engineering” organized by Krishi Sanskriti at JNU, New Delhi, 26<sup>th</sup> and 27<sup>th</sup> April, 2014. (ISBN – 978-93-83083-77-0).
5. Anshumali, 2012. Chapter 1: Ecological Blueprint of Plantation in Mining Sectors: an Implication in Biodiversity Conservation and Climate Change. In: Landscape Fragmentation and Restoration Researches in India (Editor: Prafulla Soni & Lal Singh), LAP LAMBERT Academic Publishing, AV Akademikerverlag GmbH & Co. KG, Heinrich-Bocking-Str. 6-8, 66121 Saarbrücken, Deutschland / Germany, pp 5-19. ISBN: 978-3-659-15849-0.
6. Chitralekha, Anshumali, Singh G., (2009) Biogeochemistry of Arsenic in Environmental Samples. In: Singh L, (Editor), New Dimensions in Environmental Geography, Tara Prakashan, Bodh Gaya.
7. Parijat Tripathi, AL. Ramanathan, Pankaj Kumar, Anshumali, P. Bhattacharya, R. Thunvik & J. Bundschuh, (2009). Chapter 20: Arsenic distribution in the groundwater of the Central Gangetic plains of Uttar Pradesh, India. In: Natural Arsenic in Groundwaters of Latin America. (Editors: J. Bundschuh, M.A. Armienta, P. Birkle, P. Bhattacharya, J. Matschullat, A.B. Mukherjee), CRC Press/Balkema, Taylor & Francis Group, pp 215-224. ISBN: 978-0-415-40771-0

### **24.8 Books/Monograph/Conference Proceedings/News Letter Published:**

1. Anshumali (2023). Sustainable Lifestyle approaches towards Environment and Climate Change. EIACP (PC-RP) Special Issue, pp: 257 (ISSN 0972-4656 MINENVIS Monograph).
2. Anshumali, Gurdeep Singh, BK Panda, Sanjeev Kumar, Sanchit Kumar (2020). Proceedings of National Conference on “Recent Trends in Environmental Pollution and Disaster Risk Reduction (RTEPDRR 2020)”, 6-7 February, 2020, FICCI, New Delhi.
3. Anshumali, M. Venkatesh (2018). Proceedings of National Conference on “Biogeochemical Cycles and Climate Change (BCCC 2018)”, 10-11 August 2018, IIT(ISM) Dhanbad” (ISBN 978-93-5321-509-5).
4. Arindam Barman, Anshumali, CS Sangma, RM Barman (2018). “Recent Trends in Agricultural Biotechnology”; New Delhi Publishers, New Delhi-110059.
5. Anshumali (2016). Methods of Plant diversity Assessment for Mining Sector. Envis Monograph No. 17, ENVIS Centre on Environmental Problems on Mining (MoEF&CC, Govt. of India), Centre of Mining, Environment, Dept. of Environmental Science and Engineering, Indian School of Mines, Dhanbad.
6. Anshumali, Sheeja Jagadevan, Ashwani Kumar, Biswajit Das, Durga Das Chandra (2021). Stabilization of Coalmine Overburden using Microbial Induced Calcite Precipitation for Dust Control, MINENVIS Newsletter (June 2021 No. 109).
7. Anshumali, Sheeja Jagadevan, Ashwani Kumar, Biswajit Das, Durga Das Chandra (2021). Use of Electronic Detonators for Reducing the Social and Economic Impacts of Blasting in Large Opencast Mine: Case Study, MINENVIS Newsletter (September 2021 No. 110).
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