

CURRICULUM VITAE

Prof. Arun Kansal, Ph.D.

Department of Regional Water Studies and ICWMR, TERI SAS, N Delhi

Email: akansal@terisas.ac.in ; Ph +91 71800222



CAREER SUMMARY

Prof Kansal is Director of the Centre of Excellence (ICWMR) at TERI School of Advanced Studies (TERI SAS), New Delhi. He has professional experience of over 28 years in interdisciplinary research, consulting, and teaching in the fields of environmental science and climate policy, water resources management, regional studies, air pollution, waste treatment, urban environment, and energy - environment - climate linkages and trade-off analysis.

International experience: Prof Kansal has served as ICCR Chair Professor (sponsored by MoEA, GoI) for Environmental Science and Policy at Freie Universität, Germany (2010–2011). Later, he served as a lead author for IPCC AR5, WGIII. He has been an Honorary Senior Research Fellow at the University of Birmingham, UK (2011–14), Visiting Professor at the University of Derby, UK (2015–2018), Key Technology Partner Visiting Fellow at the University of Technology Sydney (UTS), Australia, and Co-Lead, Thematic Working Group on Water, HUC, ICIMOD, Kathmandu. He has secured several project grants from multilateral organisations, the GoI, corporates, and foundations. He led, designed, and executed an international e-learning program on ‘Sustainable Development Practices in Public Policy’ for mid-career policymakers. The program was under the aegis of UNU-IAS, Japan, in collaboration with Tongji University, China; Universiti Sains Malaysia; the University of the South Pacific, Fiji; and AIT, Thailand. He got opportunities for several international visits wherein he had a chance to interact with scholars from prestigious institutions in the UK, USA, Australia, Japan, South Korea, China, Ireland, Thailand, Malaysia, Spain, Italy, Norway, Germany, etc.

Administrative and leadership experience: In the year 2014, he was instrumental in securing grants from Coca-Cola Foundation, Atlanta to establish the Department of Regional Water Studies at TERI SAS. In the year 2022, he secured grants using crowd funding model from Corporates and NGOs to establish Centre of Excellence for Waste Management and Research at TERI SAS. In both, he led team of faculty members and scientists and secured several other project grants to financially sustain the activities of Department/Centre. He had served as Dean (Research and Relationship), Dean (Academic), and Head of the Department.

Interdisciplinarity: This is evident from his education and research profile. he graduated in Civil Engineering, did M.Tech in Environmental Engineering and Ph.D. research had applications in Econometrics. In his professional career he had worked on projects related to technology, policy, and management aspects of sustainability science. He had taught courses ranging from engineering, geography, human geography, and environmental policy.

EDUCATION

B.E., 1993, **Civil Engineering**, VRCE/VNIT, Nagpur (Secured 73.76%)

M.Tech., 1994, **Environmental Engineering**, VRCE/VNIT, Nagpur (Secured 78.15%)

Ph.D., 2007, in *Valuation of health benefits of World Bank guidelines for air emissions in TPPs* from Department of **Civil Engineering**, IIT Delhi. Date of Defense: July 19, 2007

EMPLOYMENT PRIOR TO PRESENT POST IN CHRONOLOGICAL ORDER

Total work experience: ~28 years

<i>April 1995 - October 1995</i>	Sr. Project Fellow, NEERI, Nagpur.
<i>December 1995 – July 1999</i>	Research Associate, TERI, Delhi.
<i>July 1999 - April 2008</i>	Lecturer, GGS Indraprastha University (Sr Scale in 2005)
<i>May 2008 - June 2009</i>	Assistant Professor, TERI University
<i>June 2009 - October 2013</i>	Associate Professor, TERI University
<i>November 2013 – to date</i>	Professor, TERI University
<i>In between</i>	
<i>March 2016 – December 2016</i>	Professor and Dean (Academics), Gautam Buddha University (On Lien)
<i>October 2010- February 2011</i>	ICCR Chair Professor, Freie University, Germany (on Deputation)

RECOGNITIONS AND POSITIONS

- Visiting Professor in Natural Science, University of Derby, United Kingdom (2015-18)
- Honorary Senior Research Fellow, University of Birmingham, United Kingdom (2011-14).
- Roll of Honor by TERI, New Delhi in 2011-12
- ICCR Chair Professor to Freie University, Berlin, Germany (October 2010 - Feb 2011).
- Key Technology Partner Visiting Fellow, University of Technology, Sydney, Australia, 2013.
- Lead author IPCC AR5, WGIII.
- I S Kenchareddy prize from 'Indian Water Works Association' for publication of best research paper in the year 1996
- Best Teacher Award from GGS Indraprastha University in recognition of dedicated & outstanding services towards promoting the cause of teaching profession during the year 2000-2001.
- Roll of Honor by TERI
- TREE fellowship from Renewables Academy, Germany, for course on Renewable Energy and Energy Efficiency for Decision Makers
- Nominated as Expert by Ministry of Urban Development for training of ULBs on SBM

FUNDED PROJECTS (RESEARCH AND CONSULTANCY)

As Principal investigator: Approx. 27 crores

As Co-PI/Team member: Approx. 11 crores

Funding agencies: The World Bank; USAID; UNU; ADB; APN; Enel Foundation; ICEWARM, Australia; DBT; UKIERI, ICIMOD; Corporates, Gol and Foundations

- 2022
- PI- Appraisal of DPR for development of sewerage system in the left-our areas of Leh Town.** By Office of the Executive Officer Municipal Committee, Leh; The administration of Union Territory of Ladakh. Rs 1,28,620 + GST. Completed
 - PI- Appraisal of DPR for Setting up of Comprehensive sewerage scheme including Sewerage Treatment Plant in Kargil Town.** By Office of the Executive Officer Municipal Committee, Kargil; The Administration of Union Territory of Ladakh. Rs 1,28,620 + GST. Completed.
 - PI- Assessment of activities implemented by IPCA under the CSR project of SBI card.** By Indian Pollution Control Association. Rs 1,20,000 + GST. Completed
- 2021
- PI- Towards sustainable urban water management in HKH Region: a participatory approach to improving water sustainability in mountain cities.** Funded by: Asia Pacific Network (APN) for Global Change Research, Japan. USD 28000. **Ongoing**
 - PI- Consultancy to Vet two DPRs on Solid Waste Management.** By Housing and Urban Development Department, Directorate of Urban Local Bodies, Ladakh. INR 218000 (plus taxes). Completed.
 - PI- Consultancy for comprehensive environmental quality assessment during the manufacturing of Lead Acid batteries at Nunegundla Palle and Karakambadi Location, India.** INR 1440000 (plus taxes). Completed
- 2019
- PI- Consultancy for Sustainable water habitats.** Funded by TERI. 12 months. INR 849600. Completed
 - PI- Consultancy for Scoring of Innovation and Best Practices under Swachh Survekshan 2019.** Funded by Karvy Data Management Service Limited. 1 month. INR 1082650. Completed
- 2018
- PI- Research project "Transboundary water governance & role of institutions to enhance the capacities of marginalised community in Mahakali River Basin.** 1 Year 3 months. Collaborating partner CDES Tribhuvan University, Nepal. Funded by ICIMOD Nepal. USD 20000, Completed.
 - PI- MDP on Gender, Equity and Water Management.** Funded by ICEWARM, Australia. 12 months. AUD 62200. Completed
 - Expert team member- Uzbekistan: Energy efficiency in water utilities. Energy audit and Prefeasibility study for Namangan city Suvokova.** Funded by the World Bank. 6 months. USD 200000. Completed.
 - PI- Preparation of an assessment report of 'Water Study higher Education Institutions in India'.** 3 months. Funded by ICIMOD. USD 5000. Completed.
- 2016
- Expert team member- Energy Efficiency Review of Dar Es Salaam City Water and Sewerage Services.** Funded by the World Bank and the Government of Tanzania. 9 months. USD 120000. Completed.

- 2015 **PI-** *Socio-ecological metabolism study for urban water planning: A case study of Delhi.* Funded by Enel Foundation through University of Toronto. 1 year. USD 21000. Completed
- 2014 **PI-** *Strengthening Water and Sanitation in Urban Settings.* Funded by USAID, 3 year, INR 4,25,00,000. Completed
PI- Institutionalising Department of Regional Water Studies at TERI University. Coca-Cola Foundation, Atlanta. USD 1.2 Million.
Advisor- *Understanding decentralised energy interventions and their success conditions in select countries of Asia-Pacific.* Funded by ProSPER.Net, Japan. 1 year. USD 12000
Advisor- Improving access to safe water using River Bed Filtration Technology.
- 2013 **PI-** India section, *Urban metabolism surveying of Delhi, Mumbai and Kolkata metropolitan areas.* Funded by University of Toronto. 6 months. USD 4500. Completed
PI- India section, *Understanding and quantifying the water-energy-carbon nexus for low carbon development in Asian Cities.* Funded by Asia Pacific Network. 2 years USD 70000. Completed
PI- South Asia Regional workshop on Integrated Water Resource Management. Funded by the World Bank. 3 months. USD 50000. Completed.
PI- Asia regional workshop for programme on LCA and LCCA of infrastructure projects. Funded by UNU Flores, 2013. USD 30000. Completed
- 2012 **Co-PI,** *Preparation of Medium Term Investment Plan (MTIP) and Pre-Feasibility Studies (PFS) for an Integrated Water Supply Distribution System in Greater Visakhapatnam, India.* Funded by CDIA. 1 year. INR 45,00,000
Co-PI, *Solar accelerated design for small-scale biogas digester.* Funded by UKEIRI. 2 year, GBP 40000
- 2011 **PI-** *Development of education benchmarking for revitalizing higher education for sustainable development.* Funded by Hokkaido University, Japan in collaboration with RMIT, Australia. 2 year USD 12000
PI- *Greening of Delhi Ridge.* Funded by ONGC under CSIR activity. 5 year. INR 8000000
- 2010 **PI-** *Bioenergy from Waste: Hydrogen and methane production.* Funded by DBT, GoI. 3 year. INR 950000 (BT/PR-11517/BCE/08/709/2008)
- 2009 **PI-** Online Pilot program on Sustainable development practices in public policy- leading to a Diploma Program. An activity of ProSPER.Net, Funded by Ministry of Environment, Japan. 3 year. USD 56000
Core Team member, Content generation for Postgraduate programs in Environmental Science, New Delhi: TERI University, Sponsored by MHRD, New Delhi.
PI- ITEC programme for mid-career professionals from developing countries, Funded by Ministry of External Affairs, GoI. INR 10 Lakhs. Completed
- 2007 **PI-** *Performance evaluation of rotating biological contactors for sewage treatment in tropical climatic conditions.* Funded by Federal Ministry for Education and Research, Germany and in collaboration with the University of Karlsruhe, Germany and IIT Delhi.

2002-2007 Coordinated numerous consultancy projects for adequacy assessment of effluent treatment plants in small-scale industries, Delhi. The projects were routed through Delhi Pollution Control Committee, Delhi. The total projects completed amounts to more than INR 10 Million.

1995 – 2000 **PI /Core team member in the following projects:**

- *Investigation on respirable particulates and trace elements with source identification in air environment of Korba.* Funded by Ministry of Coal, Government of India
- *Environmental Improvement and Sustainable Development of the Agra-Mathura-Ferozabad Trapezium in Uttar Pradesh.* Funded by Asian Development Bank, Manila. The aim of the project was to identify feasible intervention projects in thirteen components that will help in improving the overall environmental quality of the region. I was involved in conceptualizing the components related to solid waste management and industrial wastewater and sewage treatment.
- *Preparation of a dossier on environmental and safety impacts of Orimulsion.* Funded by MC BITOR, Venezuela. The project assessed the environmental and safety impacts of various fuels to be used for power generation in India.
- *Water quality transformations in distribution systems.* Funded by UNDP-World Bank Regional Water & Sanitation Group-South Asia.
- *Recent developments in anaerobic digestion technologies for energy recovery from industrial effluent and their applicability in Indian context.* Funded by New Energy and Industrial Technology Development Organization (NEDO), Japan.
- *Assessment of alternative environmentally sustainable sources of energy generation – A river basin study for India.* Funded by NEDO, Japan.
- *India Sustaining Development,* funded by *Ministry of Environment and Forests.*
- *An innovative bio-process for stabilization of and energy recovery from solid waste,* funded by *New Energy and Industrial Technology Development Organization (NEDO), Japan.* Two phase anaerobic treatment technology for digestion of municipal solid waste will be developed and tested on a pilot scale.
- *Area wide environmental quality management (AEQM) plan for Goa Iron ore mining belt,* funded by *Government of Goa, India.* The plan covered a period of 15 years (1997-2012).
- *Performance evaluation of sewage treatment plant and sludge bio-methanation,* funded by *National Thermal Power Corporation Ltd. Vidyut Nagar STPP.*
- *Inter-fuel substitution,* funded by *Environmental Resources Management, UK.*
- *Managing Solid waste at Mauraya Sheraton Hotel and Towers, New Delhi,* funded by *Welcome Group Mauraya Sheraton Hotel and Towers, New Delhi.*
- *Anaerobic treatment of multi-process effluents from Nirula's hotel, NOIDA,* funded by *Nirula's Corner House, New Delhi.*
- *Air pollution study of an office building,* funded by *Pharpur Business Center, New Delhi.* Indoor air quality and pollution sources were studied and correlated with ambient air quality. Performance of air handling units were studied to explore the possibility to improve indoor air quality.

- *Waste Management at Asha Kiran Hospital*, funded by Asha Kiran Hospital, Orissa. A detailed management and engineering plan were suggested for wastewater and solid waste for the entire hospital campus.
- *Common Effluent Treatment Plant (CETP) for textile industries at Pali (Rajasthan)* funded by *Ministry of Environment and Forests*, India.

PUBLICATIONS

Total publications: 86 (including monographs, policy briefs, book chapters and conference proceeding)

Google Scholar: Citations ~ 4550, h-index 26; i10-index 33; Scopus H-Index ~ 18

(* means corresponding author)

A. International

1. Chaudhary, S., Chua, L.H.C., and **Kansal, A.** (2022). *The uncertainty in stormwater quality modelling for temperate and tropical catchments*. *Jr Hydrology* 617, 128941.11 pg. doi.org/10.1016/j.jhydrol.2022.128941. **Elsevier. (IF: 6.708).**
2. Bedi, C., **Kansal, A.***, Mukheibir, P., (2022). *A conceptual framework for the assessment of and transition to liveable, sustainable, and equitable cities*. *Jr. Environmental Science and Policy*. 140, 134-145p. **Elsevier. (IF: 6.424).**
3. Chaudhary S. Chua L.H.C. and **Kansal A.** (2022). *Event mean concentration and first flush from residential catchments in different climate zones*. *Jr. Water Research*. 118594. doi.org/10.1016/j.watres.2022.118594. **Elsevier. (IF: 13.4).**
4. Goel, S., **Kansal, A.***, Stephan, P. (2021). *Sourcing Phosphorous for agriculture: Lifecycle assessment of three options for India*. *Jr. Resources Conservation and Recycling*.174, 105750. doi.org/10.1016/j.resconrec.2021.105750. **Elsevier. (IF: 13.716).**
5. Chaudhary, S., Chua, L.H.C., and **Kansal, A.** (2021). *Modelling washoff in temperate and tropical urban catchments*. *Jr Hydrology* 603, 26951.11 pg. doi.org/10.1016/j.jhydrol. 2021.126951. **Elsevier. (IF: 6.708).**
6. Nanda, M., **Kansal, A.***. (2021). *Pathways of sustainable Phosphorus loop in Germany: Key lessons from Stakeholders' perspectives*. *Jr. Current Research in Environmental Sustainability*. 3, 100062. doi.org/10.1016/j.crsust.2021.100062. **Elsevier.**
7. Neha and **Kansal, A.*** (2022). *Acceptability of reclaimed municipal wastewater in Cities: evidence from India's National Capital Region*. 24 (1), 212-218. Doi:10.2166/wp.2021.197Jr *Water Policy*.

IWA. (IF: 1.733)

8. Nanda, M., **Kansal, A.***, Dana, C. (2020). *Managing vulnerability to phosphorus scarcity in agriculture through bottom-up assessments of regional-scale opportunities*. *Jr. Agricultural Systems*. 184. **Elsevier. (IF: 6.767)**.
9. **Kansal A***, Govindarajan, V. (2020). *Role of higher education in sustainability of water resources- an assessment of Institutions in India*. *Water Policy* 22. 276-292p. doi.org/10.2166/wp.2020.160. **(IF: 1.733)**.
10. Goel, S., **Kansal, A.*** (2020). *Phosphorous recovery from septic tank liquor: optimal conditions and effect of tapered velocity gradient*. *Journal of Cleaner Production*. 275. **Elsevier. (IF: 11.072)**
11. Sen, S. M., **Kansal, A.*** (2019). *Achieving Water Security in Rural Himalayas: a participatory account of challenges and potential solutions*. *Journal of Environmental Management*. 245. 398-408p. DOI: 10.1016/j.jenvman.2019.05.132 **Elsevier. (IF: 8.91)**
12. Sen, S. M., **Kansal, A.*** (2019). *Integrating value-chain approach with participatory multi-criteria analysis for sustainable planning of a niche crop in Indian Himalayas*. *Journal of Mountain Science*. 16(10). 2417-2434p. doi.org/10.1007/s11629-019-5437-4. **Springer. (IF: 2.071)**
13. Nanda, M., Dana, C., **Kansal, A.*** (2019). *Assessing national vulnerability to scarcity of phosphorus to build food system resilience: The case of India*. *Journal of Environmental Management* 240. 511-517p. doi.org/10.1016/j.jenvman.2019.03.115 **Elsevier. (IF: 8.91)**
14. Ghosh, R., **Kansal, A.** (2019). *Anthropology of changing paradigms of urban water systems*. *Journal Water History*. 11(1-2), 59-73pp. doi.org/10.1007/s12685-019-00229-0. **Springer.**
15. Ghosh, R., **Kansal, A*.,** Govindarajan, V*. (2019). *Urban water security assessment using an integrated metabolism approach- a case study of the National Capital Territory of Delhi in India*. *Jr Resources* 62 (8). Doi:10.3390/resources8020062. **(Scopus Cite Score 6.4)**
16. Sen, S. M., Singh, A., Varma, N., Sharma, D., and **Kansal, A.*** (2019). *Analysing Social Networks to Examine the Changing Governance Structure of Spring sheds: A Case Study of Sikkim in the Indian Himalayas*. *Journal of Environmental Management*, 63 (2); 233-248p.DOI:10.1007/s00267-018-1128-0. **Springer. (IF: 3.266)**
17. Singh, P., and **Kansal A*.,** (2018). *Energy and GHG accounting for wastewater infrastructure*. *Jr Resources, Conservation and Recycling*. 128:499-507p. **Elsevier. (IF: 13.716)**
18. Deshmukh, C., et al., (2018). *Carbon dioxide emissions from the flat bottom and shallow Nam Theun 2 Reservoir: drawdown area as a neglected pathway to the atmosphere*. *Jr Biogeosciences* 15(6):1775-1794p. DOI 10.5194/bg-15-1775-2018 **(IF: 5.092)**

19. Tarannum, F., **Kansal, A.**, Sharma, P., (2018). *Understanding public perception, knowledge and behaviour for water quality management of the river Yamuna in India*. Jr. **Water Policy** (20). 266-281p. IWA. Doi 10.2166/wp.2018.134. **(IF: 1.733)**
20. Venkatesh, G., and **Kansal, A.**, (2018). *Industrial ecology tools as decision making aids for sustainable phosphorus recovery- a methodology paper*. Vatten- Journal of Water Management and Research 74:3, 107-121p.
21. Tarannum, F., **Kansal, A.**, & Sharma, P., (2018). *ICT for Public Participation in River Water Quality Management*. *The Journal of Development Communication*, 29(2). 76-89pp. <http://jdc.journals.unisel.edu.my/ojs/index.php/jdc/article/view/82>
22. Jasrotia, S., **Kansal, A.***, Mehra, A., (2017). *Performance of aquatic Plant species for phytoremediation of arsenic-contaminated water*. *Applied Water Science*; 7; 889-896p. DOI 10.1007/s13201-015-0300-4. **Springer (IF: 3.874)**
23. Sharma, D., **Kansal, A.**, and Pelletier, G., (2015). *Water quality modeling for urban reach of Yamuna River, India (1999-2009), using QUAL2Kw*. *Applied Water Science*. 7: 1535-1559p. DOI 10.1007/s13201-015-0311-1. **Springer (IF: 3.874)**
24. Srivastava, L., and **Kansal, A.**, (2017). *The need to ratchet*. In *International cooperation D+C, Germany*. 26-27p.
25. Ghosh, R., **Kansal, A.***, Aghi, S., (2016). *Implications of end-use behavior in response to deficiencies in water supply and electricity consumption – A case study of Delhi*. *Journal of Hydrology*. 536:400-408p. **Elsevier. (IF: 5.708)**.
26. Singh, P., **Kansal, A.***, Marque, C.C., (2016). *Energy and carbon footprints of sewage treatment methods*. Jr of Environmental Management. 165:22-30p. **Elsevier. (IF: 8.91)**
27. Kennedy, C.A., et al. (2015). *Energy and Material flows of megacities*. PNAS. 112(19), 5985-5990p. National Academy of Sciences (USA). **(IF: 11.205)**
28. Jasrotia, S., **Kansal, A.*** and Kishore, V. V. N., (2014). *Arsenic phyco-remediation by Cladophora algae and measurement of organic speciation and location of active absorption site using electron microscopy*. *Microchemical Journal*. 114:197-202p. DOI 10.1016/j.microc.2014.01.005. **Elsevier. (IF: 5.304)**
29. Kumar, P., Pant, D., Mehariya, S., Sharma, R., **Kansal, A.**, Kalia, V.C., (2014). *Ecobiotechnological*

strategy to enhance efficiency of bioconversion of waste into hydrogen and methane. *Indian Journal of Microbiology*. 54(3): **Springer (IF: 2.461)**

30. Ghosh, R., and **Kansal, A.***, (2014). *Urban challenges in Indian and mission for sustainable habitat*. *Interdisciplina* 2(2): 281-304p. DOI: 10.22201/ccich.24485705e.2014.2.46530.
31. Venkatesh G., Kurian, M., and **Kansal, A.** (2014). *Urgent need for lifecycle thinking in Infrastructure*. **Asian Water**, 30-32p.
32. Sharma, D., **Kansal, A.**, (2013). *Assessment of river quality models: a review*. *Reviews in Environmental Science and Biotechnology* Vol 12 (3): 285-311p. DOI: 10.1007/s11157-012-9285-8. **Springer. (IF: 8.044)**
33. Jasrotia, S., **Kansal, A.***, Kishore, V.V.N., (2012). *Application of Solar Energy for water supply and sanitation in Arsenic affected rural areas: a study for Kaudikasa village, India*. *Jr of Cleaner Production*. Vol 37: 389-393p. **Elsevier. (IF: 11.072)**
34. Singh, P., Marque, C.C., **Kansal, A.***, (2012). *Energy pattern analysis of a wastewater treatment plant*. *Jr Applied Water Science*, Vol 2(3): 221-226p. **Springer. (IF: 3.874)**
35. Sharma, D., Gupta, R., Singh, R.K., and **Kansal, A.**, (2012). *Characteristics of the event mean concentration (EMCs) from rainfall runoff on mixed agricultural land use in the shoreline zone of the Yamuna River in Delhi, India*. *Applied Water Science*, 2(1):55-62p. **Springer. (IF: 3.874)**
36. **Kansal, A.**, Mishra, A., and Seth, R., (2012). *Capacity building for policy makers: The design and delivery of an e-learning program on sustainable development practices*. Rio +20 booklet of case studies published by ProSPER.Net, Japan. pp 24-27
37. **Kansal, A.**, Lah, T.J., Haraya, T., Senaha, E., (2012). *Alternative University Appraisal*. Rio +20 booklet of case studies published by ProSPER.Net, Japan. pp 36-39.
38. **Kansal, A.***, Khare, M., and Sharma, C S., (2011). *Air quality modeling study to analyze the impact of the World Bank emission guidelines for thermal power plants in Delhi*. *Atmospheric Pollution Research* (2): 99-105. DOI:10.5094/APR.2011.012. **Elsevier. (IF: 4.831)**
39. Bateman, A., Horst, D.V., Boardman, D., **Kansal, A.**, Marque, C.C., (2011). *Closing the phosphorus loop in England: The spatio-temporal balance of phosphorus capture from manure versus crop demand for fertilizer*. *Jr. Resources, Conservation and Recycling* 55: 1146-1153p. **Elsevier. (IF: 13.716)**
40. Sharma, D., **Kansal, A.**, (2011). *Water quality analysis of river Yamuna using Water Quality Index in National Capital Territory India (2000-2009)*. *Jr. Applied Water Science*, 1(3-4):147-157.

Springer. (IF: 3.874)

41. **Kansal, A***, Khare, M., and Sharma, C.S., (2009). *Health benefits valuation of the World Bank emission guidelines for thermal power plants in Delhi, India*. Journal of Environment Planning and Management, Vol 52, No.7, October 2009, 881-899p. DOI: 10.1080/09640560903180933. Routledge, **Taylor and Francis.(IF 2.735)**
42. Paliwal, R., Sharma, P., and **Kansal, A.**, (2007). *Water quality modeling of the river Yamuna (India) using QUAL2E-UNCAS*. Journal of Environmental Management, 83(2):131 – 144. DOI: 10.1016/j.jenvman.2006.02.003. **Elsevier. (IF: 8.91)**
43. Kusum, L., **Kansal, A.**, Balakrishnan, M., Kishore, V. V. N., (2002). *Assessment of biomethanation potential of selected industrial organic effluents in India*. Journal of Resources, Conservation and Recycling, 35:147-161p. DOI: 10.1016/S0921-3449(01)00112-4. **Elsevier. (IF: 13.716)**
44. Prasad, R.K., Uma, R., **Kansal, A.**, Gupta, S., Kumar, P., Saksena, S., (2002). *Indoor air quality in an air-conditioned building in New Delhi & its relationship to ambient air quality*. Jr. Indoor and Built Environment 11(6): 334-339p. DOI: 10.1177/1420326X0201100605. **SAGEPub. (IF: 3.067)**
45. Rajeshwari, K.V., Balakrishnan, M., **Kansal, A.**, Lata, K., Kishore, V. V. N., (2000). *State of the art of anaerobic digestion technology for industrial wastewater treatment*. Journal of Renewable and Sustainable Energy Reviews. 4(2):135 – 156p. DOI: 10.1016/S1364-0321(99)00014-3. **Elsevier. (IF: 16.799)**
46. Gupta, S., **Kansal, A.**, (1998). *Solid waste management in Indian cities: an analysis of success stories*. Warner Bulletin No.60. Journal of the World Resource Foundation. 4-6.
47. Gupta, S., Mohan, K., Prasad, R., **Kansal, A.**, (1998). *Solid waste management in India: Options and opportunities*. Journal Resources, Conservation and Recycling, 24:137-154p. **Elsevier. (IF:13.716)**

B. Indian Journals

48. Neha and **Kansal A***, (2023). *What adolescents know and believe about reclaimed water and water security: A survey of school children in National Capital Region*. Jr. Indian Journal of Environment Protection. IJEP 43(3): 270-276. ISSN: 0253-7141.
49. Schults, M., **Kansal, A.**, (2015). *North-South perspectives on stakeholder structure governing ambient air quality- a case of Germany and India*. Jr Environmental Science and Engineering. NEERI, Vol 57 (2); 160-171.

50. Goyal, R.R., Mohan, K.M., **Kansal, A.**, (2003). *Treatment of dyeing and printing effluent using photo assisted Fenton reaction*. *Nature Environment and Pollution Tech*, 2(2):179-182.
51. **Kansal A.** (2002). *Solid Waste management Strategies for India*. *Indian Journal of Environmental Protection*, 22(4): 444-448.
52. **Kansal A.** (2001). *Critical appraisal of solid waste disposal technologies*. *Indian Journal of Environmental Protection*, 19(3):83-96.
53. **Kansal A**, Prasad R K, Gupta S. (1998). *Delhi municipal solid waste management and environment – an appraisal*. *Indian Journal of Environmental Protection* 18(2): 123-128.
54. **Kansal A**, Sridharan P V. (1998). *Environmental Impacts along fuel cycle*. *Journal of Indian Association for Environmental Management (IAEM)*, 25(2), 66-73.
55. **Kansal A**, Rajeshwari, K V, Balakrishnan M, Lata K, Kishore V. V. N. (1998). *Anaerobic digestion technologies for energy recovery from Industrial wastewater – a study in Indian context*. *Jr. TERI Information Monitor on Environment Science (TIMES)*. 3(2):67-75.
56. Kapur A, **Kansal A**, Prasad R K, Gupta S. (1998). Performance evaluation of sewage treatment plant and sludge bio methanation. *Indian Journal of Environment Protection* 19 (2): 96-100.
57. **Kansal A**, Gupta R, Bhave P R. (1996). *Optimization algorithms for design of branched water distribution networks*. *Journal of Indian Water Works Association (IWWA)*, 18(3):135-140.

C. Policy Brief

58. Sarangi G. K., Seth R., **Kansal A.** et al. (2017). Working Paper Decentralized Renewable Energy Systems in China, India and Thailand: Assessing the role of Policies and Incentive Structures. ProsPER.Net., Japan. 20p.
59. Dhakal S, Shretha S, Shrestha A, **Kansal A** and Kaneo S (2015). Towards a better Water-Energy-Carbon nexus in cities. APN: Global perspectives on Low Carbon Development: LCD-01, October 2015. 1-4p.

D. Book chapters

60. Chaudhuri R. R, Sharma P and **Kansal A** (2021). Reducing the water footprint of mega cities in Asia: Addressing water reuse and groundwater recharge (case study of Delhi, India). In Ed. Sridhar K S and Mavrotas G. – Urbanisation in Global South: Perspectives and Challenges. Routledge. Taylor and Francis Group 167-183pp. DOI:10.4324/9781003093282. ISBN9: 781003093282.
61. Ghosh R and **Kansal A** (2017). Implications of Municipal Solid Waste Management in developing countries on greenhouse gas emissions. In Ed. Singh S, Goyal R and Jain A- The Urban Environment crisis in India: New initiatives in safe water and waste management. Published by Cambridge Scholar Publishing, U.K. 190-202pp.
62. Mahapatra I, Ghosh R and **Kansal A** (2014). Predicament of planning for a sustainable and low carbon city in 21st Century. In Ed Singh S. Cities- The 21st Century India. Published by Bookwell. PP 409-428.
63. Seto et al., (2014). Human Settlements, Infrastructure and Spatial Planning. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.
64. Sharma D, and **Kansal A**. (2013). *Sustainable City: A case study of storm water management in economically developed urban catchments*. In: Zongwei Luo., Mechanism design for sustainability: techniques and cases, pp 243-264. Springers.
65. Beime S, **Kansal A**. (2008). *Primary Aluminium production: environmental impact and issues for a small island developing state*. In: Khare M, Sankat C S, Venkobachar C and Shrivastava G., Aluminium Smelting: Environment and Engineering Perspective, Published by Ian Rendle Publishers Ltd., West Indies. 53-74pp.
66. Khare M, **Kansal A**. (2004). *Sectoral analysis of air pollution control in Delhi*. In: Elsom, D. M., and Longhurst, J. W. S., Regional and local aspects of air quality management. WIT Press, UK, 193-222.
67. **Kansal A**. (2003). *Strategies for achieving environmental goals*. In: Aggarwal N., Social Auditing of environmental laws in India. New Century Publications, xiv, 222p.
68. **Kansal, A.**, Narula, K. K., Ravishankar, R., Sreekesh, S. (1997). *Water Pollution*. In: Pachauri, R. K. and Sridharan, P. V. (ed.) Looking back to think ahead GREEN India-2047. TERI, New Delhi, India 207-244 pp.

69. Gupta S, **Kansal A**, Mohan, M. K., Prasad R K., (1997). *Solid wastes*. In: Pachauri, R. K. and Sridharan, P. V. (ed.) Looking back to think ahead GREEN India-2047. TERI, New Delhi, India 245-266 pp.

E. Book/Monographs

70. **Kansal A** (2017). State of Urban water and sanitation in India. TERI University. 148p.
71. Sharma D, **Kansal A**, and Singh R K. (2011) *Wastewater management in National Capital Territory of India*. LAMBERT Academic Publishing (2011-05-18), ISBN-13:978-3-8443-9752-9; 83p.
72. **Kansal, A.**, and Khare M. (2010). *Environmental policy evaluation- efficacy and viability of pollution control using environmental modeling and econometrics*. VDM Publishing, Germany. ISBN-978-3-639-21624-0; 222p
73. Noromha M L, Sridhran P V, Sinha S, Sharma N, Sreekesh S, **Kansal A**, etal. (1998). Area wide Environmental Quality Management (AEQM) plan for the mining belt of Goa. Directorate of planning, Statistics and Evaluation. Government of Goa. 300p.

F. Conference proceedings

74. Goel, A. and **Kansal, A.**, (2020). *Evaluation of Phosphorous recovery from decentralized sewage treatment systems*. Full paper presented in conference proceedings in International conference on Science, Engineering and Technological innovation (ICSETI 2020) 24-25 October, 2020, organized by ACST Department Kryvyi Rih National University, Ukraine and Research culture Society. ISSN: 2455-0620 Issue 19, pg 23-27.
75. Sen, S.M. and **Kansal, A.**, (2018). *Using problem and solution tree (PAST) to identify options for water security in Indian Himalayas*. Full paper presented and abstract publication in conference proceeding at 2018 International Workshop for Young Scientists of the Hindu Kush Himalaya co-organized by the University of Chinese Academy of Sciences (UCAS), The Institute of Mountain Hazards and Environments Chinese Academy of Sciences (IMHE), the Himalayan University Consortium (HUC), and International Centre for Integrated Mountain Development (ICIMOD), as a session of the Belt and Road Forum, CAS, Beijing, China, 5-6 November 2018.
76. Sen, S.M. and **Kansal, A.**, (2017). *Understanding the challenges of local water security and its impact on agricultural livelihoods in the Indian Himalayan Region – A case study of Sikkim, India*. Full paper presented and abstract publication in conference proceeding at HUC International Conference & Annual Meet 2017-Chengdu, China, 29 Oct – 1 Nov, 2017.

77. **Kansal, A.**, (2017). *Water metabolism and hydrological indicators for Sustainability assessment*. In International conference on Mountain Resources and Livelihoods in the Hindu Kush Himalayan region: Higher education Research and Regional Collaboration for Sustainable Mountain Development, Oct 29-31, Chengdu, China.
78. Ghosh, R., **Kansal, A.**, (2016). Water Energy Nexus in water supply and end-use water infrastructure: a case of Delhi. Proceedings of national Seminar on Innovative Green technologies for sustainable Sanitation, health and Environment, April 22, 2016. Poornima College of Engineering, Jaipur.
79. Mondol J D, Pant D C, Kishore V V N, Smyth M, Zacharopoulos A, **Kansal A.**, and Andersom M. (2013). *Solar accelerator anaerobic digester design for small-scale biogas production*. 21st European biomass conference and exhibition, 3-7 June 2013, Copenhagen, Denmark: pp 1233-1238.
80. Rao G R N, Gopal E N, **Kansal A.**, Sharma K V. (2013). *Study of optimization algorithms for energy efficiency in municipal water supply: developing countries*. Proceedings of 4th International conference on advances in energy research. Department of energy science and engineering IIT Bombay, 10-12 Dec 2013, Mumbai, India.
81. Jasrotia S., **Kansal A.**, Kishore VVN (2012). *Renewable energy application for sustainable water supply and sanitation in rural areas*. In Conference proceeding ed. Mishra J. and Subramaniam N. Deakin University and Amrita Vishwa Vidyapeetham University, December 2012, pp: 2-11.
82. Tarannum F and **Kansal A.** (2012). *Role of community perception analysis for sustainable water quality management- A review*. In Conference proceeding ed. Mishra J. and Subramaniam N. Deakin University and Amrita Vishwa Vidyapeetham University, December 2012, pp: 12-30.
83. Sharma D, and **Kansal A.** (2010) *Assessment of diffused water pollution load from an urban catchment in India*. 7th International conference on sustainable techniques & strategies in Urban Water Management. Novatech 2010, Lyon France, June 27-July 1, 2010.
84. Sharma D, and **Kansal A.** (2009). *Heavy metal pollution in groundwater near a landfill site: a case study of National Capital Territory, India*. Conference- Biovision, Lyon France, March 8-11, 2009.
85. Kanhe N M, **Kansal A.**, Gupta R, Bhole A G. (2000). *Biogas generation potential in India through anaerobic digestion of agro-based industrial wastewater- a step towards Environmental reclamation*. International Symposium on environmental reclamation 14th organized by Shri R K N Engineering College. Nagpur in November 20-22, 99-104.
86. Noronha M L, Sridharan P V, Sinha S, Sreekesh S, Sharma N, **Kansal A.**, Banerjee S P, and Kaul O N. (1998). *Area-wide environmental quality management (AEQM): A Case Study of iron Ore*

Mining in Goa. In Mega Event on 'Indian Mineral Industry a Perspective'. 6-8 August 1998. Organized by Ministry of Steel and Mines, Department of Mines, Nagpur.

PHD. SUPERVISION

Supervised and Awarded- 12

As main Supervisor- 11

1. Neha 2022. Assessment of reclaimed municipal wastewater use acceptance by urban residents for water sustainability: evidence from NCR, India.
2. Snigdha Goel, 2021. Assessment of decentralized sewage treatment systems as a Phosphorus supply option for agriculture.
3. Sudeshna Mayasen, 2019. Sustainable planning of a niche crop system in Indian Himalayas using value chain approach – A study of the large cardamom spice from Sikkim Himalayas.
4. Madhuri Nanda, 2019. Analyzing India's vulnerability to global phosphorus scarcity. Co-supervision by Dr Dana Cordell, UTS, Australia.
5. Fawzia Tarannum, 2018. Analysis of public perception of water quality and role of ICT in supporting participative management – A study along River Yamuna in Northern India.
6. Dinesh Chander Pant, 2018. Bacterial and thermal pre-treatment of organic waste to maximise biogas yield and estimation of air emission from digestate. Co-Supervision by Prof V V N Kishore
7. Ruchira Ghosh, 2017. Reinvigorating urban water planning using metabolism approach: Delhi a case study.
8. Pratima Singh, 2016. Energy use and GHG emission analysis of urban wastewater infrastructure and scoping for use of renewable energy resources.
9. Shivakshi Jasrotia, 2015. Studies on a decentralized, solar energy-based water supply and sanitation system for Arsenic affected rural areas. Co-Supervision by Prof V V N Kishore
10. Deepshikha Sharma, 2013. Evaluation of river water quality restoration plan and intervention analysis using water quality modelling with focus on the river Yamuna, Delhi (India). Co-Supervision by Dr R K Singh.
11. Chandra Shekhar Deshmukh, 2013. Greenhouse gas emissions (CH₄, CO₂, N₂O) from a newly flooded hydroelectric reservoir in subtropical South Asia: The case of Nam Theun 2 Reservoir, Lao PDR. Co-Supervisors: Dr Dominique Serca, Dr Frederic Guerin, and Dr Pradeep Dadhich.

As Co-Supervisor- 1

12. Arun Rana, 2013. Climate change effects on rainfall and management of urban flooding.

Student registered with Lund University, Sweden.

INVITED LECTURES (SELECTED FEW)

1. **Kansal A, 2022.** Invited speaker- Human water relationship along temporal gradient. International Conference SuJalam, organized by Deendayal Research institute Dec 27-29, Ujjain, India.
2. **Kansal A, 2021.** Invited panel speaker- Synergies and trade-offs of SDGs and climate actions in the light of Covid-19 October 22, International Webinar on Sustainability in Higher Education, organized by UNU-IAS, Japan.
3. **Kansal A, 2021.** Invited speaker- *Water sustainability assessment tools for urban areas*. Dated Feb 17, 2021 in DST sponsored Advance Training Programme on Water Resources Management and Climate Change Studies; hosted by Sikkim University.
4. **Kansal A. (2019).** Invited speaker- *Metabolism approach for sustainable cities*. Fourth International Conference on Sustainable Energy and Environmental Challenges. 27-29 November 2019. NEERI Nagpur.
5. **Kansal A. (2019).** Panel Speaker- Education and Learning in and through Environment Assessment: Experiences from Higher Education Institutions in Asia. In 10th World Environmental Education Congress, Nov 3-7, 2019, Bangkok, Thailand. Organized by UNESCO.
6. **Kansal A. (2019).** Panel speaker Energy, Water, and Sanitation at National conference on Transforming Rural India 2030: Strategies for Sustainable Development Goals. January 18. Symbiosis International, Pune
7. **Kansal A. (2018).** Key note speaker in conference on Water-Energy nexus at Italy November 14-17. *Metabolism approach for food water-energy nexus and problem of shift*.
8. **Kansal A. (2018).** Panel speaker in *Water and Science for sustainable future*. 19 June, Dushambe, Tajikistan.
9. **Kansal A. (2017).** Key note speaker in various workshops organized by IIT Delhi, IIPA, HIPA SPA.
10. **Kansal A. (2015).** E-learning programme for mid-career bureaucrats. Asian Development Bank, Manila.
11. **Kansal A. (2014).** Urbanization and Climate change. Tongji University, China.
12. **Kansal A. (2015).** Safe water and sustainable sanitation for underserved communities in urban India. IIT Delhi.
13. **Kansal A. (2015).** Energy considerations in water infrastructure planning. AWWA.
14. **Kansal A. (2012).** Water-Energy-Carbon Nexus in Delhi: Key indicators, drivers and implications. International Workshop on Water-Energy-Carbon nexus, March 1-2, 2012, Tokyo, Japan.
15. **Kansal A. (2012).** "Advances in biomethanation of solid waste and its potential for developing countries. Organized by Environment Research Institute, Center for Management Development 27-28 April 2012, University of petroleum and Energy Studies, Dehradun, India.
16. **Kansal A. (2011)** Key note lecture in the 8th International energy conference, 24-25 May 2011, IRIB International conference center, Tehran, Iran.
17. **Kansal A, (2009)** Evaluating efficacy and viability of environmental policy intervention – a study for

thermal power plant. International conference on Green management in warming World. Organised by The Climate Conclave and Eco Group- SCMS- Cochin.

COMMITTEES SERVED

- As member of the core group by National Disaster Management Authority (NDMA) for technical report on provision of safe drinking water during emergencies
- As member of the project review committee constituted by MoEFCC for the project entitled “Environmentally friendly technology in the highly polluting small-scale glass industry at Firozabad”
- As member of the expert committee for evaluation of Ford Foundation Fellowship applications.
- As member of expert committee constituted by MoEFCC, for review of ‘Common effluent treatment scheme’
- As member of NAAC peer team
- Member of the Working Group by UGC on ‘Eco-friendly and sustainable campus development’.