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UNIVERSITY OF DELHI

Name: Dr. Anindita Sarkar

Department: Geography

Current Designation: Professor

Email id: anindita.sarkar@mirandahouse.ac.in, aninditasarkar28@gmail.com

ORCID: <https://orcid.org/0000-0002-6626-2455>

Research gate: <https://www.researchgate.net/profile/Anindita-Sarkar-11>

LinkedIn: <https://www.linkedin.com/in/anindita-sarkar-4a101548/>

Academic Qualifications:

- Doctor of Philosophy (PhD) in Geography; Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi (India), 2010.
Thesis: 'Structural Changes in Irrigation Systems and Issues Related to Accessibility of Groundwater: A Case Study of Punjab'
- Master of Philosophy (MPhil) in Geography, Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi (India), 2004-06
Dissertation: 'Natural Resource Management and Agricultural Development: A Case Study of Punjab'
- Master of Arts (MA) in Geography (Specialization: Agricultural Geography); Centre for the Study of Regional Development, Jawaharlal Nehru University, 2002 - 2004
- Bachelor of Arts (BA. Hons) in Geography; Miranda House, University of Delhi, New Delhi (India), 1999 – 2002.

Field of Specialization under the Subject/Discipline: Economic Geography, Agricultural Geography

List of Publications:

Sarkar, A. (Submitted) “**Implementing Sustainable Development Goals in Rural India: Mapping through government welfare schemes in a village in Telangana, India**”.

Sarkar, A. et al. (forthcoming) edited book "**Addressing Risk, Uncertainty and Maladaptation to Climate change: Policy, Practice, and Case Studies**" book series Disaster Risk Reduction Methods, Approaches and Practices, Springer Nature Switzerland AG.



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- Sarkar, A. & Bandyopadhyay, N (2023) “**Climate Risk Management with Indigenous Perception and Knowledge - Evidence from drought prone regions of India**”, In: Panda, G. K. et al. ‘Indigenous Knowledge and Disaster Risk Reduction- Insight Towards Perception, Response, Adaptation and Sustainability’ Springer Nature Switzerland AG, pp 301-320. <https://link.springer.com/book/10.1007/978-3-031-26143-5?sap-outbound-id=3049F58AA4FAD0ABC32D2B0798B10373C8E44E0C>
- Sarkar, A. (2023) “**Women, Water and Technology: Changing Nature of Water Transactions in Western Rajasthan**”. *Journal of Water, Sanitation and Hygiene for Development*, 13(1): 30–38. <https://doi.org/10.2166/washdev.2022.306>
- Sarkar, A. (2022), “**How ‘smart’ are we with smart technology: Comparative cases of Water ATMs in Nairobi and Delhi**”. *Water Practice and technology*, 17(10): 2160–2170. <https://doi.org/10.2166/wpt.2022.117>
- Sarkar, A. (2022), ‘**Water Insecurity and Water Governance in Urban Kenya: Policy and Practice**’. Palgrave Macmillan, Springer Nature Switzerland AG, ISBN 978-3-031-15538-3.
- Reddy A., Sarkar, A. & Onishi, Y. (2022), ‘**Assessing the Outreach of Targeted Development Programmes - A Case Study from a South Indian Village**’. *Land*. 11(7), 1030; <https://doi.org/10.3390/land11071030>.
- Sarkar A. (2021), ‘**Everyday Practices of Urban Poor to Access Water: Evidence from Delhi Slums**’ In: Jaglan M.S., Rajeshwari (eds) *Reflections on 21st Century Human Habitats in India*. Springer, Singapore, pp 371-392. https://doi.org/10.1007/978-981-16-3100-9_15
- Sarkar, Anindita (2020) ‘**Everyday practices of urban poor women to access water: Lived realities from a Nairobi slum**’, *African Studies*, 79(2): 212-231. DOI - <https://doi.org/10.1080/00020184.2020.1781594> Available at: <https://www.tandfonline.com/doi/pdf/10.1080/00020184.2020.1781594?needAccess=true>
- Sarkar, Anindita (2020), ‘**Informal water vendors and the urban poor: Evidence from a Nairobi slum**’, *Water International*, 45(5): 443-457. DOI - <https://doi.org/10.1080/02508060.2020.1768022> Available at: <https://www.researchgate.net/publication/340528033> Informal water vendors and the urban poor Evidence from a Nairobi slum
- Sarkar, Anindita (2020), ‘**Groundwater Irrigation and Farm Power Policies in Punjab and West Bengal: Challenges and Opportunities**’, *Energy Policy*, 140(2020), pp. 111437. DOI - <https://doi.org/10.1016/j.enpol.2020.111437>.



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Sarkar, Anindita & Snigdha Singh (ed.) (2020) **“Waters” of Western Rajasthan: Myths, Traditions, Life and Livelihoods**, R. K. Books, New Delhi. ISBN – 978-93-82847-98-4.

Sarkar, Anindita (2020) **‘Climate Variability and Water Insecurity in Western Rajasthan’** in Sarkar, Anindita & Snigdha Singh (ed.) **“Waters” of Western Rajasthan: Myths, Traditions, Life and Livelihoods**, R. K. Books, New Delhi. ISBN – 978-93-82847-98-4.

Sarkar, Anindita (2020) **‘Challenges and Strategies for Livelihood Resilience in Water Insecure Rajasthan’** in Sarkar, Anindita & Snigdha Singh (ed.) **“Waters” of Western Rajasthan: Myths, Traditions, Life and Livelihoods**, R. K. Books, New Delhi. ISBN – 978-93-82847-98-4.

Sarkar, Anindita (2019), **‘Smart technology to serve urban poor: A case study of water ATMs in a Nairobi slum’**, *Water Utility Journal*, 22, pp. 1-12, Available at: http://www.ewra.net/wuj/pdf/WUJ_2019_22_01.pdf.

Sarkar, Anindita (2019), **‘Can shared standpipes fulfill the Sustainable Development Goal of universal access to safe water for urban poor in Kenya?’**, *Water Policy*, (21), pp. 1034–1049. DOI – <https://doi.org/10.2166/WP.2019.047>. Available at <https://iwaponline.com/wp/article/doi/10.2166/wp.2019.047/69738/Can-shared-standpipes-fulfil-the-Sustainable>

Sarkar, Anindita (2019), **‘The role of new ‘Smart technology’ to provide water to the urban poor: A case study of water ATMs in Delhi, India’**, *Energy, Ecology and Environment*, 4(4), pp. 166-174. <https://link.springer.com/article/10.1007/s40974-019-00119-4> .

Sarkar, Anindita (2019) **‘Water Insecurity among Urban Poor’**, Adroit Publishers, New Delhi. ISBN - 978-81-87393-67-2.

Sarkar, Anindita (2017) **‘Ways to Increase Utility of Major Irrigation Projects in Command Areas’**, Partridge India, New Delhi. ISBN – 978-1-4828-8900-0.

Sarkar, Anindita (2016) **‘Structural Changes in Irrigation Systems and Accessibility of Groundwater Resources in Punjab’**, Manak Publications Pvt Ltd, New Delhi. ISBN – 978-93-7831-426-1.

Sarkar, Anindita (2016) **‘Socio-Economic Implications of Depleting Groundwater Resource in Punjab’** in **‘Water Growing Understanding, Emerging perspectives: Readings on Economy, Polity and Society’** in M. Shah & P. S. Vijayshankar (ed), Orient Black Swan, New Delhi, pp. 314 – 330. ISBN – 978 81 250 6292 9.

Sarkar, Anindita (2016) **‘Watershed Development and Water Marketing’** in Volume 1, **‘Land, Water, and Agriculture’** in H .S. Sharma &M. H. Qureshi (ed), Oxford University Press, New Delhi, pp. 128 – 169. ISBN-13: 978-0-19-945841-7.



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- Sarkar, Anindita & Arijit, Das (2014), '**Groundwater Irrigation – Electricity – Crop Diversification Nexus in Punjab: Trends, Turning Points and Policy Initiatives**', *Economic and Political Weekly*, Volume 49, No. 52, Pp. 64 – 73. ISSN (Online) - 2349-8846
- Sarkar, Anindita & Bashabi. Gupta (2014) '**Revisiting Perceptions of Land: Spaces of Power, Violence and Desire**' in the International Conference Proceedings on 'Reorienting Gender: Geographies of Resistance, Agency, Violence and Desire', in Anindita Dutta (ed), R. K. Books, New Delhi, Pp. 4 – 16. ISBN – 978-93-82847-41-0.
- Sarkar, Anindita (2012). '**Equity in Access to Irrigation Water - A Comparative Analysis of Tube-Well Irrigation System and Conjunctive Irrigation System**', in Kumar, Manish (ed), '*Problems, Perspectives and Challenges of Agricultural Water Management* (Working title: Irrigation: Types, Sources and Problems/ Book 3) ', INTECH International open Access Publisher, (ISBN 978-953-51-0117-8), Available at <http://www.intechopen.com/articles/show/title/equity-in-access-to-irrigation-water-a-comparative-analysis-of-tube-well-irrigation-system-and-conju>
- Sarkar, Anindita (2011), '**Sustaining Livelihoods in Face of Groundwater Depletion: A case Study of Punjab, India**', *Environment, Development & Sustainability*, Volume-14, No. 2, August, Pp. 183 -195, ISSN: 1387-585X (Print) 1573-2975 (Online), DOI: 10.1007/s10668-011-9315-7, Available at: <http://www.springerlink.com/content/b2672w04810gwn92/>
- Sarkar, Anindita (2011), '**Socio-Economic Implications of Depleting Groundwater Resource in Punjab: A Comparative Analysis of Different Irrigation Systems**', *Economic and Political Weekly*, Volume 46, No. 7, Pp. 59 – 66. ISSN (Online) - 2349-8846
- Sarkar, Anindita (2010), '**Groundwater Depletion in Punjab: Turning Common Property Resource into Commodities**', *Annals of the Indian Association of Geographers*, Volume 30, Number 1, June 2010, Pp. 80 – 89. ISSN: 0970-972X.
- Sarkar, Anindita, S. Sen & A. Kumar (2008), '**Rice–wheat cropping cycle in Punjab: a comparative analysis of sustainability status in different irrigation systems**' *Environment, Development & Sustainability*, 28 February, Volume 11, No. 4, Pp. 751 – 763. DOI - 10.1007/s10668-008-9141-8
- Sarkar Anindita (2007). '**Our Environment**', National Council of Education Research and Training (NCERT) Geography Textbook for Class VII. ISBN - 8174507140 (Chapter in a book)
- Sarkar, Anindita (2006), '**Diffusion of Modern Technology and Sustainability of Agricultural Land Use Efficiency: A Case Study of Punjab**' *Conference Preceding*, in



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Sinha, B.K.P, Saran, S. and Husain, H.J (ed), “Sustainable Rural Employment through Appropriate Land Use Policy: Challenges and Opportunities”, Amity School of Natural Resources and Sustainable development, Amity University, Noida, UP.

Book Review

Sarkar, Anindita (2010), Book Review as a chapter “**Chandigarh Slums: Issues of Poverty and Human Rights**. By Bindu Duggal. Center for Research in Rural and Industrial Development, Chandigarh, 2010.Pp.Xv+265. ISBN 81 -85835-59-4”, *ICSSR Newsletter*, Volume XLII, No. 3, October to December, Pp. 71 -72.

Technical Reports

Sarkar, A.; Chakraborty, S.; Mukherji, A. (2022). **Agrifood systems policy research: historical evolution of agrifood systems in Odisha, India**. New Delhi, India: International Water Management Institute (IWMI). CGIAR Initiative on Transforming Agrifood Systems in South Asia (TAFSSA). 14p. Available at https://www.iwmi.cgiar.org/Publications/Other/PDF/agrifood_systems_policy_research-historical_evolution_of_agrifood_systems_in_odisha_india.pdf

Mukherji, A.; Buisson, M.C.; Mitra, A.; Sarkar, A. & Yashodha, (2021) ‘**Sonar Bangla Revisited: Groundwater development and agrarian change in Bangladesh and West Bengal since the 1970s**’, Australian Center for International Agricultural Research & International Water Management Institute, Technical report number, FR2021-072, ACIAR GPO Box 1571, Canberra ACT 2601, Australia, ISBN978-1-922635-84-6. Available at <https://www.aciar.gov.au/publication/WAC-2020-182-final-report>

Educational Resource Material Developed

Sarkar Anindita, (2022), “**SDG 5: Gender Equality-Goals, Targets, and Indicators**” for the module Global Strategies to Sustainable Development, Post Graduate Diploma Programme on ‘Sustainability Sciences’ Indira Gandhi Open University (IGONU):

Sarkar Anindita, (2022), “**SDG 6: Clean Water and Sanitation- Goals, Targets and Indicators**” for the module Global Strategies to Sustainable Development, Post Graduate Diploma Programme on ‘Sustainability Sciences’ Indira Gandhi Open University (IGONU):



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Sarkar Anindita, (2022), “**Trends in Demographic Transition**” for the module Population, Health and Sustainability, Post Graduate Diploma Programme on ‘Sustainability Sciences’ Indira Gandhi Open University (IGONU):

Sarkar Anindita, (2019), “**Urban Planning**”, in M.Sc. Environmental Science Programme, Urban Environment, Indira Gandhi National Open University (IGNOU).

Sarkar Anindita, (2019), “**Urban Economics**”, in M.Sc. Environmental Science Programme, Urban Environment, Indira Gandhi National Open University (IGNOU).

Sarkar Anindita, (2014), “**Trends in demographic Transition**”, in “Appreciation course on Population and sustainable Development’, Population Foundation of India (PFI) & Indira Gandhi Open University (IGONU) July 2013 to August 2014.

Media articles

Sarkar, Anindita (2022), ‘**Time and trauma: what fetching water costs women and girls in Nairobi’s informal settlements**’, The Conversation, January 12, 2022,, Available at: <https://theconversation.com/time-and-trauma-what-fetching-water-costs-women-and-girls-in-nairobis-informal-settlements-172425>

Sarkar, Anindita (2020), ‘**Why Kenya’s Urban Poor are Exploited by Informal Water Markets**, The Conversation, August 30, 2020, Available at: <https://theconversation.com/why-kenyas-urban-poor-are-exploited-by-informal-water-markets-144582>

Podcast

Sarkar, Anindita (2020), ‘A closer look at the informal water market in Kenya, The Conversation, September 23, 2020, Available at: <https://cdn.theconversation.com/audio/2051/informal-water-final-edited.mp3>

Research Projects as PI:

University Grants Commission (UGC): *Water Insecurity among the Urban Poor*, July 2016 to January 2019.

University of Delhi: Multidisciplinary innovation project on *Climate Change, Water Security and Livelihood Resilience: Role of Traditional Knowledge and Modern Technologies in Rajasthan*, India, Delhi; 2015 to 2016.



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University of Delhi: Multidisciplinary innovation project on *Inheriting Land, Endangering the Girl Child: Interrogating Land Productivity, Property Rights and Family Planning in Western Uttar Pradesh and Punjab*, Delhi; 2012 to 2013

Consultancies and Research projects:

International Water Management Institute (IWMI): Consultant for Research Project “**Transforming Agri-food Systems in South Asia: Historical evolution of agrifood systems in Bangladesh**”, May 10 to November 1, 2023, CGIAR Project. <https://www.cgiar.org/initiative/20-transforming-agrifood-systems-in-south-asia-tafssa/>

International Water Management Institute (IWMI): Consultant for Research Project “**Transforming Agri-food Systems in South Asia: Historical evolution of agrifood systems in Odisha, India**”, August 1 to December 15, 2022, CGIAR Project. <https://www.cgiar.org/initiative/20-transforming-agrifood-systems-in-south-asia-tafssa/>

Indira Gandhi Open University (IGONU): Consultant for developing of the course material for Post Graduate Programme on ‘**Sustainability Science**’. Developing content and authoring of two Chapters for the module Global Strategies to Sustainable Development 1) **Sustainable Development Goal 5** and 2) **Sustainable Development Goal 6** and for the module Population, Health, and Sustainability for one chapter “**Trends in Demographic Transition**” January 2022 to December 2022.

International Water Management Institute (IWMI): Consultant for Project “*Role of groundwater in agrarian change in West Bengal and Bangladesh: A comparative analysis*”, December 2020 to March 2021 funded by the Australian Centre for International Agricultural Research.

Indira Gandhi Open University (IGONU): Consultant for developing of the course ‘**Urban Environment**’ for the M.Sc. Environmental Science Programme. Developing content and authoring of two Chapters in the course 1) Urban Economics and 2) Urban Planning, May 2017 - July 2018.

Population Foundation of India (PFI) & Indira Gandhi Open University (IGONU): Consultant at for writing course material, ‘*Trends in demographic Transition*’, for “*Appreciation course on Population and sustainable Development*’ Delhi India; July 2013 to August 2014

International Water Management Institute (IWMI): Consultant for *Energy Sector Management Assessment Programme (ESMAP)*; Project - “**Direct Delivery of Power Subsidy to Rural Consumers**”. Funded by World Bank, March 2011 to January 2012



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Addis Ababa University: External evaluator for Post-Graduate Theses and viva voce examination, Department of Geography, College of Development Studies; 2012

Indian Council of Social Science Research: Member of Committee to prepare the *Trend Report of the Sixth Round of Research Surveys in Geography*; 2011.

Indian Council of Social Science Research: Theme Editor of *Watershed and Water Conservation Techniques and Water Marketing under Land and Water Resources* Theme in the *Trend Report of Research Survey in Geography*; 2010

National Council of Education Research and Training: Joint Author for *Our Environment*, Geography Textbook for Class VII; 2007

Invited talks/Session chair/Resource person:

Invited lecture, **The trajectory of groundwater development in Bangladesh**, International Conference, “Energizing Agriculture and Enabling Just Energy Transitions in South Asia” co-organized by IWMI, SDC, IIT Gandhinagar, WRI, IRENA, ISA, GGGI, Ahmedabad University and GIZ, Gandhinagar, Gujarat, February 6 – 8, 2023.

Co-chair in technical session, **Water Security, Conflicts and Sustainability Challenges**, International Conference on Water, Food and Nutrition Security for Health and Wellbeing, University of Delhi, Delhi, India, December 13, 2021.

Invited lecture, **Smart urban water infrastructure beyond the network: Comparative cases of Water ATMs in Nairobi and Delhi**, International Colloquium, Department of Political and Cultural Change, Centre for Development Research (ZEF), Bonn, Germany, September 22, 2021.

Invited Panelist in webinar, **Agrarian change in eastern Indo-Gangetic Plain and the role of groundwater: A comparative analysis of Bangladesh and West Bengal from the 1990s onwards**. The International Water Management Institute, May 12, 2021, at 10.00 IST Available at: <https://youtu.be/5m5-TjiN8L0>

Co-chair in technical session, **Waterscapes across geographies**. International Conference on “Water, Sustainability, Livelihood and Climate Change”, Centre for the Study of Regional Development, School of Social Sciences, Jawaharlal Nehru University, New Delhi, March 14 - 16, 2019.

Resource person Multistakeholder Workshops on **Periurban Water Security**, Bordeaux Urban Community, France And Arghyam India and South Asia Consortium For Interdisciplinary Water Resources Studies (Saci Waters), Secunderabad, Andhra Pradesh. 14 – 15 May 2015



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- ‘Smart Urban Water Infrastructure Beyond the Network: Comparative Cases of Water ATMs in Nairobi and Delhi’**, 6th International Conference on Urban E-Planning, Institute of Geography and Spatial Planning, University of Lisbon, Portugal & International Journal of E-Planning Research, Lisbon, Portugal, April 7 – 12, 2022.
- ‘Water Technology and Water Commercialization: Creating New Waterscapes and Contesting Cultural Norms’**, in the 21st Science Council of Asia Conference on “Science, Technology & Social Science Research: Together for a Better World”, Indian Council of Social Science Research (ICSSR), Ministry of Education, Government of India, Delhi, India, 15-17th March 2022.
- ‘Policy and Planning Strategies for Climate Change Adaptation: Integrating Indigenous Knowledge and Risk Perceptions of Community Stakeholders’** in the international conference on “Climate Change, Natural Hazards and Sustainable Livelihoods”, University of Delhi, Delhi, India, March 12-13, 2022.
- ‘Smart urban water infrastructure beyond the network: Comparative cases of Water ATMs in Nairobi and Delhi’**, ZEFa Colloquium, Centre for Development Research, University of Bonn, Bonn, Germany, September 22, 2022.
- ‘Access to Safe and Affordable Water for All: Evidence from Delhi Slums’**, in the International Conference on “Future Challenges and Sustainable Development Goals: Science to Policy Framework”, University of Delhi, Delhi, India, April 16 - 18, 2021.
- ‘Commercialization of Water and Shift from Traditional to Modern Technologies: Evidence from Water Insecure Western Rajasthan’**, in the International Conference on “Exploring the Application of Solidarity Approach in Geography”, University of Delhi, April 05-06, 2021.
- ‘Pro-poor policy intervention in urban water management in Kenya: Towards universal access to affordable and safe water coverage’**, in the 11th World Congress on Water Resources and Environment (EWRA 2019) & International Conference on “Managing Water Resources for a Sustainable Future”, European Water Resources Associations, Madrid, Spain, 25-29 June 2019.
- ‘Statistics versus Reality: Everyday Struggle to Access Water in the Slums of Delhi’**, in the 40th Indian Geographers meet 2019 & International Conference on “Water, Sustainability, Livelihood and Climate Change”, Centre for the Study of Regional Development, School of Social Sciences, Jawaharlal Nehru University, New Delhi, March 14 - 16, 2019.
- ‘Challenges and Strategies for Livelihood Resilience: Linking Traditional Knowledge and Modern Technologies in Water Insecure Rajasthan, India’**, in the 9th International Geographical Union (IGU) Conference on “Land Use Change, Climate



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Extremes and Disaster Risk Reduction”, University of Delhi, Delhi, India, March 18-20, 2016.

‘Revisiting Perceptions of Land: Spaces of Power, Violence and Desire’ in the International Conference on ‘Reorienting Gender: Geographies of Resistance, Agency, Violence and Desire’, Department of Geography, University of Delhi, Delhi, India, November 19 to 21, 2014. (Proceedings published)

‘Water-Energy-Food Nexus in Punjab, India: Trends, Turning points and Alternative Solutions’, in the International Conference on ‘Sustainability in the Water – Energy – Food Nexus’, Global Water System Project, Bonn, Germany, May 19 – 20, 2014.

‘Turning Commons into Commodities: Socio Economic Cost of Privatization of Groundwater Aquifers in North-Western India’ in the International Conference On “International Perspectives on Water Resources and Environment”, Environmental and Water Resources Institute, American Society of Civil Engineers and National University of Singapore, Singapore, January 4 - 6, 2011.

‘Groundwater Mining in Punjab, India: Issues of Intra and Inter-Generational Equity in Groundwater Irrigation’ in the *International Symposium* on “Environmental Degradation and Sustainable Development”, Bangladesh Institute of Technology, Dhaka, Bangladesh, April 10 – 11, 2010.

‘Groundwater Irrigation and the Issues of Equity to Water Access: A Case Study of Punjab’ in the International Conference on “Environment, Resource and Regional Development”, Burdwan University, Burdwan, India, March 8 – 9, 2010

‘Sustaining Livelihoods in Face of Groundwater Depletion: A Case Study of Punjab’, in the International Conference on “Agriculture, Environment and Food Security”, Institute of Indian Geographers and Bangalore University, Bengaluru, India, February 19 – 21, 2010.

‘Socio-Economic Implications of Depleting Groundwater Resource in Punjab: A Comparative Analysis of Different Irrigation Systems’ in the International Conference on “International Perspective on Current and Future State of Water Resources and the Environment’, Environment Water Resource Institute of American Society of Civil Engineers and IIT Madras, Chennai, India, January 5 – 7, 2010.

Papers presented in national conferences and seminars

‘Experiments in Curriculum and Pedagogy in Geography: Four-year Undergraduate Programme in Delhi University’, in the National Conference on ‘Rethinking Geography Education and Research in India’, Centre for the Study of Regional



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Development, School of Social Sciences, Jawaharlal Nehru University, New Delhi, March 29 - 30, 2014.

‘Groundwater Irrigation in Punjab: Commons or Commodities’, National Seminar on “Revisiting Geography as a Sustainable Discipline” A. M. Kkwaja Chair, Department of Geography, Jamia Millia Islamia, New Delhi, February 20 – 21st, 2013.

‘Groundwater Irrigation and Rice-Wheat Cropping Pattern in Different Socio-Economic Groups: A District Level Analysis in Punjab’, in the National Conference of 34th Indian Geography Congress on “Hazards, Vulnerability and Sustainable Development”, National Association of Geographers India and Department of Geography, Patna University, Patna, Bihar, November 2 – 4, 2012.

‘Development and Composition of Irrigation in Punjab: Trends, Patterns and Implications’, in the National Conference of 33rd Indian Geography Congress on “Resources and Development”, National Association of Geographers India and Department of Geography, Burdwan University, Burdwan, November 11 – 13, 2011.

‘Groundwater Irrigation in Punjab: Issues of Proportionate Equity and Prior Appropriation’, in the National Conference of 32nd Indian Geography Congress on “Globalization, Population and Regional Development”, National Association of Geographers India and Department of Geography, Punjab University, Chandigarh, November 19 – 21, 2010.

‘Groundwater Depletion in Punjab: Turning Common Property Resource into Commodities’, in the National Conference of 31st Indian Geography Congress on “Environment Culture and Development”, National Association of Geographers India and Department of Geography, Rani Durgawati University, Jabalpur, November 19 – 21, 2009. Received Commendation certificate for being one of the best presenters in the seminar.

‘Sustainability Status of Rice-Wheat Cropping Pattern in Punjab: A Comparative Analysis of Different Irrigation Systems’, The National Seminar on “Contemporary Issues in Regional Development”, Centre for the Study of Regional Development, School of Social Sciences, Jawaharlal Nehru University, March 30 - 31, 2006 - New Delhi.

‘Diffusion of Modern Technology and Sustainability of Agricultural Land Use Efficiency: A Case Study of Punjab’, in the National Seminar on “Sustainable Rural Employment through Appropriate Land Use Policy – Challenges and Opportunities”, Amity School of Natural Resource and Sustainable Development, Noida, U.P., February 24 - 25, 2006.

‘Agricultural Productivity and Its Determinants: A Case Study of Punjab’, The National Seminar on “Development and Spatio-Stratal Deprivations”, Department of Geography, UCSSH, Mohanlal Sukhadia University, Udaipur, Rajasthan January 27 – 28, 2006.



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Training and Certificate Courses

Course on, *Qualitative Methods*, University of Amsterdam, October 2020 – November 2020, (8 weeks).

Course on, *Quantitative Methods*, University of Amsterdam, September - October 2020. (8 weeks).

Faculty Development Programme on, *Research Methodology*, Teaching Learning Centre, Ramanujan College, University of Delhi, under the aegis of Ministry of Human Resource Development, Pandit Madan Mohan Malviya National Mission on Teachers and Teaching, 1st to 15th September 2020. (2 weeks)

Faculty Development Programme on, *ICT Based New Paradigms of E-Teaching and E-Learning*, Mata Sundri College for Woman, University of Delhi and Ministry of Human Resource Development, Pandit Madan Mohan Malviya National Mission on Teachers and Teaching, Teaching Learning Centre, Ramanujan College, University of Delhi, 15th to 30th September 2020. (2 weeks)

Course on, *Water Resources Management and Policy*, University of Geneva, June – July 2016 (5 weeks).

Course on, *Climate Change*, the University of Melbourne, August - November 2015 (13 weeks).

Course on *Fundamentals of Project Planning and Management*, Darden School Foundation, University of Virginia, April - May 2015 (4 weeks).

Course on *Social Entrepreneurship*, University of Pennsylvania, December 2014 (6 weeks).

Course on *International Organizations Management*, Université de Genève, Genève, December 2014 (5 weeks).

University Grants Commission Certified Refresher Course in “**Global Studies**” in Academic Staff College, Jawaharlal Nehru University, New Delhi, 7th April - 2nd May 2014.

University Grants Commission Certified Refresher Course in “**Geography and Environmental Studies**” in Academic Staff College, Jamia Milia Islamia University, New Delhi, 19th November – 9th December 2013.

University Grants Commission Certified Refresher Course in “**Geography and Environmental Studies**” in Academic Staff College, Jamia Milia Islamia University, New Delhi.



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South Asia Training Programme on *Gender, Water and Equity*, November 2009, Tata Institute of Social Sciences, SasiWATERs & SOPPECOM, Pune.

University Grants Commission Certified Orientation Course in Academic Staff College, Jawaharlal Nehru University, New Delhi, 27th August to 21st September 2007.

Other Academic Credentials

- Teacher's Excellence Award, University of Delhi, Delhi, 2023
- UGC Research Award, July 2016 -2018 on Urban Water Insecurities
- Young Geographers Award by Institute of Indian Geographers, at the 31st Indian Geography Congress, 2010, Bengaluru.
- Research Fellowship (Geography) of University Grants Commission, 2003.
- Research Fellowship (Earth Sciences) of Council for Scientific and Industrial Research, 2003.