

CURRICULUM-VITAE

UTSAB GHOSAL

Nationality: Indian

Date of birth: 10th November, 1984

Address

Residence

Block 3, Flat 1A, Nautical Apartments
493, Garagacha main road,
Baishnabghata-Patuli Township
Kolkata- 700084
Contact: 7044924348



Work

Department of Geology
Presidency University
86/1, College Street
Kolkata- 700073
E-mail: utsab.geol@presiuniv.ac.in

Key Qualification

Dr. Utsab Ghosal received his education (Graduation and Post-graduation) at Jadavpur University (Applied Geology/Hydrogeology). A teacher by profession and a hydrogeologist by education, he served Govt. of West Bengal as a Geo-Hydrological Assistant, in Purba Medinipur district in Water Resource Investigation and Development Department/ State Water Investigation Directorate (WRIDD/SWID) before joining the Department of Geology, Presidency University in 2018. Currently as an Assistant Professor in the Department of Geology he is actively engaged in research and teaching of Groundwater hydrology, Coal and Nuclear Fuel and Environmental geology. He has carried out extensive research on arsenic contamination in groundwater of the Bengal Basin and his primary interest in arsenic is to explain the spatial distribution of As-pollution in aquifers of the Bengal Basin. He has delivered several lectures in national and international conferences, seminars, workshops, UGC sponsored refresher courses, etc. He has published numerous research papers in international and national journals, conference proceedings and a part of a book chapter about groundwater in India. He has won 1st prize in the Young Scientist Competition in a National Seminar on “Sustainable Ground Water Management through Effective Governance” organized by

NRIEMT in 2016. While being a research fellow, he has also won prizes in poster presentation under in different national and international conferences.

Education

- 2016 – Ph.D. in Geology, University of Calcutta, Topic: “**NUMERICAL MODELLING OF GROUNDWATER FLOW WITH SPECIAL EMPHASIS ON ARSENIC MIGRATION: THE EXAMPLE OF JAMUNA SUB-BASIN, NADIA DISTRICT, WEST BENGAL AND ITS IMPLICATIONS**” under the guidance of **Prof. Pradip K Sikdar**
- 2010 - Master of Science in Applied Geology, First Class, Jadavpur University.
- 2008 - Bachelor of Science (Hons), First Class with Distinction, Jadavpur University.
Honours – Geology.
Pass - Physics and Mathematics.

Work experience (in chronological order).

S. No.	Positions held	Name of the Institute	From	To
1.	ASSISTANT PROFESSOR	PRESIDENCY UNIVERSITY	2018	TILL DATE
2.	Geo-Hydrological Assistant	WRIDD-SWID, Govt of West Bengal	26.02.2016	12.08.2018

Research Experience:

- Worked as Senior Research Fellow in Department of Science and Technology [D.S.T] sponsored project titled “**Numerical Modelling of groundwater flow with special emphasis on arsenic migration: The example of Jamuna sub-basin, Nadia district, West Bengal and its implications**” at Department of Environment Management, IISWBM, Kolkata, from February 2013 to July, 2014 and as Junior Research Fellow in the same project from February 2011.

Research Publications:

Pousali Pathak, Prosenjit Ghosh, Abhijit Mukherjee, **Utsab Ghosal**, Mao-chang Liang, Pradip K Sikdar, Ritika Kaushal. Impact of differential surface water mixing on seasonal arsenic mobilization in shallow aquifers of Nadia district; western Bengal Basin, India. Journal of Hydrology.,2022; 612:Part C: 128270

Pousali Pathak, Prosenjit Ghosh, Sanchita Banerjee, R S Chatterjee, Noor Muzakkira, Pradip K Sikdar, **Utsab Ghosal**, Mao-chang Liang, Kathiravan Meeran. Relic surface water (clay-pore water) input triggers arsenic release into the shallow groundwater of Bengal aquifers. Journal of Earth System Science. 2022;131;80

P K Sikdar, Sudehsna Dey, **U Ghosal** and S. Chakraborty. Base flow and drinking water supply in semi-arid and fluoride affected areas: the example of River Brahmani, Birbhum district, West Bengal, India. e-Journal of Geohydrology. 2020; 1(1);42-55.

P K Sikdar, Sudehsna Dey, **U Ghosal** and S. Chakraborty. Development and management of baseflow of a sand-dominated alluvial aquifer of a large ephemeral river for drinking water supply in semi-arid and fluoride affected areas: example of the river Mayurakshi, Birbhum district, West Bengal India. *Journal Of Geological Society of India*. 2019;94:249-259.

Pradip k Sikdar, **Utsab Ghosal** and Surajit Chakraborty. Groundwater modeling to understand the impact of pumping in the deep Late Pleistocene aquifers of the western Bengal Basin on arsenic migration. *Arabian Journal of GeoSciences*. 2018;11:795.

McArthur, J.M., Sikdar, P.K., Leng, M. J., **Ghosal, U.**, and Sen, I. Groundwater Quality beneath an Asian Megacity on a Delta: Kolkata's (Calcutta's) Disappearing Arsenic and Present Manganese. *Environ. Sci. Technol.*, 2018, 52 (9), pp 5161–5172.

McArthur, J.M., **Ghosal, U.**, Sikdar, P.K., and Ball, J. Arsenic in groundwater: the late Pleistocene aquifers of the Bengal Basin. *Environ. Sci. Technol.*, 2016, 50 (7), pp 3469–3476.

Ghosal, U., Sikdar, P.K. and McArthur, J.M. 2014. Palaeosol control of arsenic pollution: the Bengal Basin in West Bengal, India. *Groundwater*;53(4):588–599 doi: 10.1111/gwat.12251. DOI: 10.1111/gwat.12251, Wiley, Impact Factor – 1.953

McArthur, J.M., Sikdar, P.K., Hoque, M.A. and **Ghosal, U.** 2012. Waste-water impacts on groundwater: Cl/Br ratios and implications for arsenic pollution of groundwater in the Bengal Basin and Red River Basin, Vietnam. *Science of the Total Environment*; 437: 390-402 (DOI: 10.1016/j.scitotenv.2012.07.068), Elsevier Science Ltd., Impact Factor – 3.258. Citation - 15

Conference Proceedings

Ghosal, U., Sikdar, P. K., 2019. Geologic and anthropogenic sources of low-arsenic groundwater on the western bank of river Bhagirathi in Bengal basin, West Bengal, India. *International Groundwater Resilience to Climate Change and High-Pressure*, 8-10th May, 2019. Muğla Sıtkı Koçman University, Muğla, Turkey.

Utsab Ghosal and Pradip K Sikdar. Exploring the sources of low-As groundwater in the western Bengal basin along a 12km traverse in Hooghly district, West Bengal. *Water future Conference, Towards a Sustainable Water Future*, 24 - 27th September 2019, IISC, Bangalore.

Pradip Paul, Ankit Biswas, Aditya Sarkar and **Utsab Ghosal**. Exploring groundwater security based on the control of Last Glacial Maximum Palaeosol on arsenic pollution in western Bengal basin. *The National Conference on “Groundwater Management in Mining and Social Sectors”* organized by Indian Chapter of International Association of Hydrogeologists (INC - IAH) and Society of Geoscientists, Jharkhand (SGSJ) at, CMPDIL Campus, Ranchi on 21st September 2019.

Anushna Pal., Torsa Rahman., Aratrika Khajanchi., Aditya Sarkar., **Utsab Ghosal**. Evaluation of groundwater quality for irrigation in eastern parts of the Indo-Gangetic basin in Central

Bengal region. UEM GREEN 19 25-27th September, 2019. University of Engineering and Management, Kolkata.

Utsab Ghosal, Soumyajit Basu., Utsha Dasgupta., Pradip k Sikdar. Impacts of waste-water on arsenic pollution of groundwater in the area west of River Hugli in Bengal basin, West Bengal, India. 9th International conference on “Sustainable Waste Management towards Circular Economy” on 27-30th November, 2019. Kalinga Institute of Industrial Technology, Bhubaneswar.

Ghosal, U., Sikdar, P. K., 2016. Understanding the sedimentological control of arsenic pollution along a 12 km traverse in Hooghly district, West Bengal. Seminar on Sustainable Ground Water Management through Effective Governance organised by NRIEMT, Science City, Kolkata, 21st – 22nd May, 2016.

Sikdar, P. K., **Ghosal, U.**, Chakraborty, S. and Sinha Ray, S. P., 2015. Impacts of heavy pumping on arsenic migration in the aquifers of central West Bengal. Proc. Workshop on ‘Incidence of high arsenic in ground water of West Bengal and its remedial measures’ organized by Central Ground Water Authority & Central Ground Water Board, Eastern Region, Ministry of Water Resources, River Development & Ganga Rejuvenation, Government of India, 24 March 2015, p.71-82.

Sikdar, P. K., **Ghosal, U.**, Chakraborty, S. and Sinha Ray, S. P., 2015. Pumping induced Impacts on Groundwater Flow of Central West Bengal: Analysis of Arsenic Contamination of Deep Aquifer. 47th Annual Convention of IWWA on ‘Sustainable Technology Solutions for Water Management’ organized by IWWA Kolkata Chapter on 30 January - 1 February 2015. Proceedings Volume, p. 164-173.

Ghosal, U., Sikdar, P. K. and McArthur, J.M., 2015, Capacity Building to Mitigate Arsenic Pollution in Groundwater of Western Bengal Basin. 5th Annual International Conference on ‘Innovations and Best Practices in Business, Human and Other Earth Resources Management’ organized by IISWBM on 15-16 January 2015. Abstract Volume, p. 34-35.

Ghosal, U., Chakraborty, S. and Sikdar, P. K. 2014. Hydrogeology and preliminary results of groundwater flow modeling to understand arsenic migration in the aquifer of Jamuna sub-basin, West Bengal. National Conference on ‘Water and its Sustainability in Mining and Other Environment: Vision 2050’. Organized by Department of Civil Engineering, Indian School of Mines, Dhanbad. 28-29 March, 2014. Proceedings Volume, Editors: B.C. Sarkar, Srinivas Pasupuleti and Srivalsa Kolathayar, p. 267-278.

Sikdar, P.K., **Ghosal, U.**, Chakraborty, S. and Sahu, P. 2013. Paleosol control of As pollution in groundwater of south-central West Bengal. Workshop on ‘Sustainable Development and Management of Ground Water in West Bengal and future of irrigation vis-à-vis arsenic contamination in ground water’. Organized by Central Ground Water Authority & Central Ground Water Board, Eastern Region, Kolkata. 19 February 2013, Proceedings Volume, p. 54-57.

McArthur, J.M., Sikdar, P.K., Hoque, M.A. and **Ghosal, U.** 2012. Waste-water impacts on groundwater: Cl/Br ratios and implication for arsenic pollution of groundwater for 200

million consumers in the Bengal Basin. 2012 GSA Annual Meeting in Charlotte, USA. 4-7 November 2012, Paper No. 136-11 (Abstract)

Poster Presentation

Ghosal, U., Sikdar, P. K., McArthur, J.M., Basu, S., DasGupta, U. 2016. Exploring the control of Last Glacial Maximum Palaeosol on arsenic pollution: Security of groundwater based drinking water supply in western Bengal Basin. National symposium on Geogenic Contamination of Groundwater: Its Impact and Mitigation Strategies. 22nd April, 2016, TERI University, New Delhi.

Ghosal, U., Sikdar, P.K. and McArthur, J.M. 2013. Palaeosol control and waste water impact on Arsenic pollution: Security of groundwater based drinking water supply in West Bengal, India. National Workshop on “Modern Geological and Geophysical Methods and their applications”. Organised by Department of Geological Sciences, Jadavpur University. 28 and 29 November, 2013. Abstracts Volume, p. 110.

Ghosal, Utsab, Sikdar, P.K. and McArthur, J. M. 2013. Palaeosol control of arsenic pollution: Security of groundwater based drinking water supply in mid-western Bengal Basin, Workshop on “Security of Groundwater Based water Supply- Perspectives, Challenges and Beyond”. Organized by Centre for Ground Water Studies and Indian Institute of Social Welfare and Business Management, at IISWBM, 31 July 2013, Proceedings Volume, p. 125-4.

Ghosal, U., Sikdar, P.K., Sinha Ray, S.P. and Chakraborty, S. 2013, Numerical modelling of groundwater flow of south Bengal Basin with special emphasis on As transport in parts of Jamuna Sub-basin, Nadia and North 24-Parganas Districts, West Bengal. 24th Group Monitoring Meeting of the Earth Science Projects, Supported under Science and Engineering Research Board. Organised by Department of Studies in Earth Sciences, University of Mysore. 22 and 23 March, 2013

Book Chapter:

Groundwater Development and Management: Issue and Challenges in South Asia. Capital Publishing Company, 2018, Hydrological Assessment for Development and Management of BaseFlow for Public Water Supply In Semi-Arid and Fluoride affected Hard Rock Areas. Pradip K Sikdar, Shouri Dutta, Saheb Das, Surajit Chakraborty and **Utsab Ghosal**.

Workshops/Trainings/Development Programmes

- UGC-sponsored 2-week Online Interdisciplinary Refresher Course in Disaster management organised by Kurukshetra University from 28th July – 10th August, 2022.
- UGC-sponsored Faculty Induction Programme/UGC-HRDC- Jadavpur University. 7th February-15th March, 2022.
- Successfully completed the training course on “Sustainable Development and Management of Groundwater Resources” by Central Ground Water Board, Eastern Region, Ministry of Water Resources, River Development & Ganga Rejuvenation, Government of India. 2018.

Academic Qualification and Scholastic Achievements

- Won 1st Prize in Young Scientist Competition in a National Seminar on “Sustainable Ground Water Management through Effective Governance” organized by NRIEMT in 2016.
- Won 3rd Prize in poster presentation under the theme “Source- Distribution and Mechanism” in National Symposium on Geogenic Contamination of Groundwater (GCG 2016) organized by Department of Regional Water Studies, TERI University, New Delhi.
- Won 3rd Prize in Poster Competition in the 24th Group Monitoring Meeting (DST), University of Mysore, 23rd March, 2013.
- Qualified Research Eligibility Test (RET) conducted by Department of Geology, University of Calcutta in April, 2011.
- Ranked All India 93 in GATE examination in 2010.
- M. Sc. (Master of Science) in Applied Geology from Jadavpur University in 2010 with 75%.
- B. Sc. (Bachelor of Science) degree in Geology (Hons.) from Jadavpur University in 2008 with 67% marks.

Extra-Curricular Activities

- Placed 3rd and won Bronze Medal in ALL INDIA INTER UNIVERSITY ROWING COMPETITION representing Jadavpur University.
- Represented West Bengal in Open Nationals Rowing Championship.
- Several times GOLD Medal winner in State Rowing Championship in different events.
- Won SILVER medal in Eastern Asian Club Championship representing club.

Computer Proficiency Skills

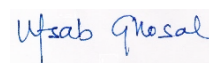
- Certificate in Desktop Publishing
- Certificate in Computer Fundamentals, DOS, WINDOWS, MS OFFICE, PAGEMAKER, CORELDRAW.
- Advanced Software: Rockworks 15, Arc GIS 10, Surfer

Declaration

I hereby declare that all the information furnished above is true and best of my knowledge and belief.

Date: 10.08.23

Place: Kolkata



Signature