



## Dr. Malabika Biswas Roy

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**Self-Introduction:** I, Dr. Malabika Biswas Roy is now currently working as an Assistant Professor of the department of Geography, Women's College Calcutta. I have an expertise in Wetland Studies, Hydrology, Fluvial Geomorphology, Forest Hydrology, Biodiversity, Water Quality Modeling and Impact of Climate Change on Wetland System. I have over 20 years of teaching and research experience and provide doctoral guidance to students. I have attended many conferences and has more than 80 national and international journal papers. I have given a number of lectures in national and international conferences as an invited speaker. Currently I acted as an invited speaker in 2nd World Congress on Climate Change, held in Berlin, Germany. I preferably have field experience in various studies related to environmental studies and currently acting as the Co-Principal Investigator of Central DST, NRDMS funded project on coastal vulnerability. At present I am the member of many learned Societies of national and international level. I was also the convener of the International Conference on Sustainable Water Resources Management under Changed Climate, 2020 organized by School of Water Resources Engineering Jadavpur University in collaboration with Women's College Calcutta and National Institute of Technology, Durgapur.

**Sex:** Female

**Nationality:** Indian

**Education:**

- Bachelor of Science (Geography Hons), 1999.
- Masters of Science (Geography), 2001.
- Bachelor of Education (B.Ed.), 2003.
- Ph.D. (Science) , Entitled- "*Participatory Management of Ecosystem Services : A Case of wetland of West Bengal*" from School of Water Resources Engineering, Jadavpur University, Kolkata ,India (2008)
- Masters of Education (M.Ed.), 2013.
- NET (National Eligibility Test, 2005)

**Professional Experience:**

- **Teaching:** 20 years
- **Research:** 18 years
- **Research Project as Principal Investigator:** 2
- UGC Minor- Completed-(82 thousand) No-43-354/2014 (SR) and UGC Major Research Project-Complete-(14.45 lakhs) No- F. PWS.-181/09-10 (ERO)
- **Research Project as Research Team Member:**7 (project completed)
- **Research project as the Co-Investigator :** 1(project completed)
- **Training Course:** Refresher Course(3-ASC,Jadavpur University),Orientation course(1- ASC, Jadavpur University) and other (8)
- **Journal Publication:** (National/ International):87
- **Book Published:** (International publication): 2
- **Edited Volume:** : (National-22/ International-2)
- **Book Chapter :** ( International/National):34

- **Post-Doctoral research work :2** (completed) Institute- Jadavpur University under the faculty of *Interdisciplinary Studies Law & Management*

### **Teaching Experience**

Designation	Name of Institute	Period of service	
		From	To
Assistant Professor	Women's College, Calcutta	06/06/2017	Till Date
Assistant Professor	Gandhi Centenary B.T. College, Habra	01/10/2008	05/06/2017
Assistant Teacher	Belur Girls High School(H.S.)	02/01/2003	30/09/2008

**Doctoral Guidance as Co-Supervisor: Six** Students (*under the faculty of Interdisciplinary Studies Law & Management, Jadavpur University*)

Name of the students	Title of the thesis	Status
Mihir Pal	Modelling of Wind Induced Circulation in Some Selected Indian Lakes and Reservoirs	<b>Awarded</b>
Debanjana Chatterjee	Role of Hydrological Services with Special Reference to Forest & Water Relationship in a Holistic Participatory Approach	<b>Awarded</b>
Sritama Chatterjee	Risk Assessment of Heavy Metal Toxicity in Agricultural soil and Vegetables due to farming with sewage in EKW area and evolving controlling technique for problem mitigation	<b>Awarded</b>
Arnab Ghosh	Study on river dynamics of floodplain system with special reference to avulsion of Bhagirathi	<b>Awarded</b>
Sudipa Halder	Exchange Process of Surface and Sub-surface Water Assessment for Safe and Sustainable Water Security plan	<b>On-going</b>
Swetasree Nag	Hydrological Studies :An Eco-Environmental Significance of an Important Eastern River Basin in India	<b>On-going</b>

### **Membership:**

- Member in Society of Wetland Scientists (SWS) (297113)
- Member in International Water Association (IWA) (1620916)
- Life Member Indian National Cartographic Association (LM -2471)
- Life Member Indian Science Congress (L28415)
- Life Member National Association of Geographers, India (NAGI) LM 2336
- Member International Association of Hydro geologists (IAH)
- Corresponding member biodiversity division, International Geographical Union (IGU)

**INVITED LECTURES DELIVERED**

<b>Sl. No.</b>	<b>Topic</b>	<b>Date and Duration</b>	<b>Nature of participation</b>	<b>Organizing committee</b>
1	Water Security & Sustainable Development Goals	14 <sup>th</sup> June, 2023	Speaker	Student Teacher Interface on Sustainable Development Goal organize by Department of Geography and Department of Economics in collaboration with IQAC, Women's College, Calcutta
2	Assessment of the Impact of Covid-19 Pandemic on Water, Environment and Related Socio-economic System	3 <sup>rd</sup> July, 2021	Invited speaker	National Webinar on Impact of Covid-19 Pandemic on Our Water Resources, Department of Physics, Kabi Nazrul Mahavidyalaya, Sonamura, Tripura & Department of Physics, Ambedkar College, Fatikroy Unakoti, Tripura
3	Issues Related to Water Crisis, Mitigation and Conservation Techniques	11th January 2020	Invited Speaker	School of Water Resources Engineering, Jadavpur University in collaboration with Department of Geography, Visva- Bharati, Santiniketan
4	2nd World Congress on Climate Change, Berlin , Germany	26-29th September 2019	Invited Speaker	Innovinc ,Berlin, Germany
5	National Awareness seminar on conservation and sustainable use of wetland in arsenic prone area with special reference to Suraha tal ,Ballia district ,Uttar Pradesh	21-22 February 2018	Invited Speaker	Gandhi Mahavidyalaya ,Ballia, UP in collaboration with Jananayak Chandrashekhar University ,Ballia, up
6	International Conference on Environment and Ecology Impact of Anthropogenic Activities on Land use and Estimated Water Volume of a Flood Plain Wetland: A Case Study of BhalukaBeel, West Bengal	March 27-29, 2017	Invited Speaker	Department of Botany, St. Xavier's College, Ranchi
7	World Wetland Day (Wetland for conservation of Biodiversity and Restoration of Climate Change. Venue: Raidighi, South 24 Parganas	2 <sup>nd</sup> February, 2010	Invited Speaker	Regional Centre for National Afforestation and Eco Development Board, Jadavpur University
8	World Forestry Day Importance of Forest and Forest Hydrology (Venue: Dhamakhali, South 24 Parganas	21 <sup>st</sup> March ,2014	Invited Speaker	Regional Centre for National Afforestation and Eco Development Board, Jadavpur University

## Achievements/ Awards

Sl.	Mention the name of award/Achievement	Sponsoring agency	Year of award
1	Sir Ganga Ram Memorial Prize	The Institution of Engineers (India)	2021
2	UGC Travel Grant for 2nd World Congress on Climate Change, Berlin , Germany	UGC	October,2019
3	RULA International Innovation and Betterment Award for Young Scientist of the Year	RULA International Society	2018
4	Nawab Zain Yar Jung Bahadur Memorial Prize	The Institute of Engineers, India	December 21,2017
5	Young Scientist of the Year Award	International Foundation for Environment and Ecology	2016
6	Bharat Jyoti Award	India International Friendship Society	2014

## Journal Publications –National/International

1. Halder, S., **Biswas Roy, M.**, Kumar Roy, P., & Sedighi, M. (2023). Groundwater vulnerability assessment for drinking water suitability using Fuzzy Shannon Entropy model in a semi-arid river basin. *Catena*, 229, [107206]. <https://doi.org/10.1016/j.catena.2023.107206>, [Pure](#), [Scopus](#) & [Elsevier Fingerprint Engine™](#) © 2023 [Elsevier B.V](#)
2. Roy, P. K., Ghosh, A., Basak, S. K., Mohinuddin, S., & **Roy, M. B.** (2023). Analysing the Role of AHP Model to Identify Flood Hazard Zonation in a Coastal Island, India. *Journal of the Indian Society of Remote Sensing*, 1-15. <https://doi.org/10.1007/s12524-023-01697-x> , © 2023 **Springer Nature**
3. Halder, S., Maiti, P., Karmakar, S., **Roy, M. B.**, & Roy, P. K. (2023). Enhanced fluoride removal from groundwater using red and white kaolinite lithomarge to develop a low cost eco-friendly defluoridation unit in rural areas of Shilabati river basin, West Bengal. *Journal of Water Process Engineering*, 53, 103698. <https://doi.org/10.1016/j.jwpe.2023.103698>, © 2023 **Elsevier Ltd.**
4. Halder, S., Bhattacharya, S., **Roy, M.B.** *et al.* Application of fuzzy C-means clustering and fuzzy EDAS to assess groundwater irrigation suitability and prioritization for agricultural development in a complex hydrogeological basin. *Environ Sci Pollut Res* **30**, 57529–57557 (2023). <https://doi.org/10.1007/s11356-023-26394-7>, **Springer Nature**
5. Nag, S., Karmakar, S., **Roy, M. B.**, & Roy, P. K. (2023). A Combined use of Hydraulic and Hydrological Model to Characterise Channel Hydro-Geomorphology of a Tropical River Basin of West Bengal, India. <https://doi.org/10.21203/rs.3.rs-2409387/v1> ,Preprint .
6. Ghosh, A., **Roy, M.B.** & Roy, P.K. Evaluating the performance of MIKE NAM model on rainfall–runoff in lower Gangetic floodplain, West Bengal, India. *Model. Earth Syst. Environ.* **8**, 4001–4017 (2022). <https://doi.org/10.1007/s40808-021-01347-6>, **Springer Nature**

7. Halder, S., **Roy, M.B.** & Roy, P.K. Modelling drought vulnerability tracts under changed climate scenario using fuzzy DEMATEL and GIS techniques. *Theor Appl Climatol* **150**, 425–452 (2022). <https://doi.org/10.1007/s00704-022-04165-7>, © **Springer Nature**
8. Ghosh, A., Roy, M.B. & Roy, P.K. Evaluating lateral riverbank erosion with sediment yield through integrated model in lower Gangetic floodplain, India. *Acta Geophys.* **70**, 1769–1795 (2022). <https://doi.org/10.1007/s11600-022-00822-7>, © **Springer Nature**
9. Nag, S., **Roy, M.B.** & Roy, P.K. Study on the functionality of land use land cover over the evaluation of groundwater potential zone: A fuzzy AHP based approach. *J Earth Syst Sci* **131**, 146 (2022). <https://doi.org/10.1007/s12040-022-01872-7> , **Springer Nature**
10. Roy, P.K., Basak, S.K., Mohinuddin, S. and **Roy,MB.** Modelling groundwater potential zone using fuzzy logic and geospatial technology of an deltaic island. *Model. Earth Syst. Environ.* **8**, 5565–5584 (2022). <https://doi.org/10.1007/s40808-022-01392-9>, **Springer Nature**
11. Roy, M.B., Ghosh, A., Mohinuddin, S. *et al.* Analysing the trending nature in land surface temperature on different land use land cover changes in urban lakes, West Bengal, India. *Model. Earth Syst. Environ.* **8**, 4603–4627 (2022). <https://doi.org/10.1007/s40808-022-01367-w> , **Springer Nature**
12. Biswas Roy, M., Nag, S., Halder, S. *et al.* Assessment of wetland potential and bibliometric review: a critical analysis of the Ramsar sites of India. *Bull Natl Res Cent* **46**, 59 (2022). <https://doi.org/10.1186/s42269-022-00740-0>, **Springer Nature**
13. Roy, M.B., Ghosh, A., Mohinuddin, S. *et al.* Analysing the trending nature in land surface temperature on different land use land cover changes in urban lakes, West Bengal, India. *Model. Earth Syst. Environ.* **8**, 4603–4627 (2022). <https://doi.org/10.1007/s40808-022-01367-w>, **Springer Nature**
14. Roy, P.K., Basak, S.K., Mohinuddin, S. *et al.* Modelling groundwater potential zone using fuzzy logic and geospatial technology of an deltaic island. *Model. Earth Syst. Environ.* **8**, 5565–5584 (2022). <https://doi.org/10.1007/s40808-022-01392-9>, **Springer Nature**
15. Ghosh, A., Roy, M.B. & Roy, P.K. Evaluating the performance of MIKE NAM model on rainfall–runoff in lower Gangetic floodplain, West Bengal, India. *Model. Earth Syst. Environ.* **8**, 4001–4017 (2022). <https://doi.org/10.1007/s40808-021-01347-6> , **Springer Nature**
16. Halder, S., Roy, M.B. & Roy, P.K. Tropical plateau basin prioritisation for sustainable groundwater management using classical algorithms. *Arab J Geosci* **14**, 2187 (2021). <https://doi.org/10.1007/s12517-021-08496-z>, **Springer Nature**
17. Roy, M.B., Ghosh, A., Kumar, A. *et al.* Study of water productivity model on wetlands: a case study of Bhagirathi-Hooghly sub-catchment basin, Southern West Bengal, India. *Environ Monit Assess* **193**, 675 (2021). <https://doi.org/10.1007/s10661-021-09469-1>, **Springer Nature**
18. Halder, S., Roy, **M.B.** & **Roy, P.K.** Modelling soil erosion risk of a tropical plateau basin to identify priority areas for conservation. *Environ Earth Sci* **80**, 646 (2021). <https://doi.org/10.1007/s12665-021-09941-8> , **Springer Nature**
19. Biswas, **Roy, M.**, Ghosh, A., Kumar, A., Kumar Roy P.(2021) Study of water productivity model on wetlands: A case study of Bhagirathi-Hooghly sub-catchment basin, southern West Bengal, India, *Environmental Monitoring and Assessment* (Springer) [10.1007/s10661-021-09469-1](https://doi.org/10.1007/s10661-021-09469-1), [10.1007/s10661-021-09469-1](https://doi.org/10.1007/s10661-021-09469-1), **Springer Nature**
20. Roy, M.B., Ghosh, A., Mohinuddin, S. *et al.* Analysing the trending nature in land surface temperature on different land use land cover changes in urban lakes, West Bengal, India. *Model. Earth Syst. Environ.* **8**, 4603–4627 (2022). <https://doi.org/10.1007/s40808-022-01367-w>, **Springer Nature**
21. Ghosh, A., Roy, M.B., Roy, P.K. *et al.* Assessing the nature of sediment transport with bridge scour by 1D sediment transport model in the sub-catchment basin of Bhagirathi–Hooghly river. *Model. Earth Syst. Environ.* **7**, 2823–2845 (2021). <https://doi.org/10.1007/s40808-020-01058-4>, **Springer Nature**
22. Biswas Roy M , Ghosh M , Pankaj Kumar Roy, (2021). Assessment of water quality of River Ganga during COVID-19 lockdown (2021). *Desalination and Water Treatment* **223** (2021) 26–33 May, doi: 10.5004/dwt.2021.27155, **Taylor and Francis**
23. Ghosh,A. **Biswas Roy. M.**, and Kumar Roy. P. (2020). Estimation and prediction of the oscillation pattern of meandering geometry in a sub-catchment basin of Bhagirathi-Hooghly

- river, West Bengal, India. *SN Appl. Sci.* 2, 1497 (2020). <https://doi.org/10.1007/s42452-020-03275-z>, **Springer Nature**
24. Halder, S., Roy, M.B. & Roy, P.K. Fuzzy logic algorithm based analytic hierarchy process for delineation of groundwater potential zones in complex topography. *Arab J Geosci* **13**, 574 (2020). <https://doi.org/10.1007/s12517-020-05525-1>, **Springer Nature**
  25. Ray, C., Roy, P.K., Majumder, A. *et al.* Performance Analysis of Some Low-Cost and Locally Available Adsorbents that Remove Excess Fluoride Ion from Raw Water to Develop a Filter for the Rural Population. *J. Inst. Eng. India Ser. E* **101**, 149–160 (2020). <https://doi.org/10.1007/s40034-020-00168-z>, **Springer Nature**
  26. Nag, S., Roy, M.B. & Roy, P.K. Optimum prioritisation of sub-watersheds based on erosion-susceptible zones through modeling and GIS techniques. *Model. Earth Syst. Environ.* **6**, 1529–1544 (2020). <https://doi.org/10.1007/s40808-020-00768-z>, **Springer Nature**
  27. **Biswas, Roy. M.**, Kumar, A., Ghosh, A. and Kumar, Roy, P.(2020) Study to Develop A Co-Relationship between Water Quality and Landuse Pattern as Index of Riverine Wetland with Statistical Approach. *Quaestiones Geographicae*. Vol-39 (1) 33-43 doi:10.2478/quageo-2020-0003 (**Scopus**), DOI: <https://doi.org/10.2478/quageo-2020-0003>
  28. Halder, S., Roy, M.B. & Roy, P.K. Analysis of groundwater level trend and groundwater drought using Standard Groundwater Level Index: a case study of an eastern river basin of West Bengal, India. *SN Appl. Sci.* **2**, 507 (2020). <https://doi.org/10.1007/s42452-020-2302-6>, **Springer Nature**
  29. Pal, M., **Biswas, Roy, M** and Kumar Roy, P.(2019).Use of HEC-HMS Software for Qualitative Assessment of Water of Dumboor Reservoir , Tripura, India. *International Journal for Research In Applied Science & Engineering Technology*.Vol-7,pp-495-500. DOI: [10.13140/RG.2.2.22940.44164](https://doi.org/10.13140/RG.2.2.22940.44164)
  30. **Biswas, Roy, M.**, Pal,S., Pal. M., Kumar, Roy, P., and Kumar. A., (2019). Study of Conservation and Wise Use of Two Important Indian Wetlands Using Contingent Valuation Technique. *Environment Asia*.12(2)(2019)172-178 ISSN 1906-1714;Online ISSN :2586-8861, UGC Journal No 19858 (**Scopus**), DOI [10.14456/ea.2019.39](https://doi.org/10.14456/ea.2019.39)
  31. Halder.S., **Biswas, Roy, M.**,& Kumar, Roy, P.(2019).A Comprehensive Assessment of Land Use and Land Cover In Lateritic Terrain Through Remote Sensing and GIS in West Bengal. *European Geographical Studies*.Vol-6(1), Pg-21-28. DOI: [10.13187/egs.2019.1.21](https://doi.org/10.13187/egs.2019.1.21)(**Scopus**)
  32. Kumar, A., **Biswas, Roy, M.**, Singh,A.N. and Mohan, D. (2019) Ground water analysis with special emphasis on arsenic by using multivariate statistical technique: A case Study of Ballia District. *Indian Journal of Environmental Protection*. 39(4):369-374(2019) UGC Journal No 20768 (**Scopus**)
  33. Kumar, A., Roy, M.B., Roy, P.K. *et al.* Assessment of Arsenic Removal Units in Arsenic-Prone Rural Area in Uttar Pradesh, India. *J. Inst. Eng. India Ser. A* **100**, 253–259 (2019). DOI: <https://doi.org/10.1007/s40030-018-0349-9>, **Springer Nature**
  34. Kumar, Roy,P.,Halder,S., Nag,S.,Majumder,A. and **Biswas ,Roy,M.** (2018) Study of Ganga River Health Condition Based on Water Quality Indicator with Environmental Aspect and Adaptation Study Thereoff. *Indian Journal of Environmental Protection*. 38(8):659-670 UGC Journal No 20768 (**Scopus**)
  35. Kumar,Roy,P.,M.,Ghosh, and **Biswas, Roy,M.** (2018). *Desalination and Water Treatment*. (2018) 1–6 UGC Journal No 12911 (**Taylor and Francis**)
  36. **Biswas, Roy. M.**, Ghosh,A. Chatterjee.D and Kumar Roy.P.(2018) An Overview on River Morphology Research: A Bibliometric Analysis. *Journal for Advanced Research In Applied Sciences*. Volume5, ISSUE 2, FEB /2018 , Page-498-509 ISSN NO: 2394-8442 UGC Journal No 63188 DOI:[16.10089.JARAS.2018.V5I2.453459.2356](https://doi.org/10.160089.JARAS.2018.V5I2.453459.2356)
  37. Ghosh,A. **Biswas Roy. M.**, and Kumar Roy.P. (2017). A Bibliometric Analysis of Highly Cited papers on Flood plain Research in Science Citation Index Expanded. *International Journal of Scientific Research and Reviews*. 2017, 6(4), 112 - 127, December 2017ISSN:2279-0543 UGC Journal No 63179
  38. Debbarma.J., Das, S.,Debbarma,S. **Biswas Roy. M.**, and Kumar Roy.P. (2017) Critical Study of Sub-Surface Aquifer Layer for GroundwaterAvailability Based on Electrical Resistivity Survey: A Part of Dhalai Tripura, India. *ARNP Journal of Engineering and Applied Sciences*. VOL. 12, NO. 21, NOVEMBER 2017 pp 5851-5860 ISSN 1819-6608 UGC Journal No 8551 (**Scopus**)

39. Ghosh,A. **Biswas Roy. M.**,Kumar.A, and Kumar,Roy,P.(2017).Assessment of cropping region against yieldfactor with reference to temperature andrainfall variability.*International Journal of Advanced Scientific Research and Management*. Vol. 2 Issue 11, pp 11-16, Nov 2017ISSN 2455-6378 UGC Journal No 63502
40. Kumar.A, **Biswas Roy. M.**, K.N.Prudhvi.Raju. (2017). Analysis of Women’s Social Status in Arsenic Prone Area: A Case Study of Ballia district, Uttar Pradesh, India. *International Research Journal of Environmental Science*. Vol. 6(10), 1-6, October (2017).ISSN 2319–1414 UGC Journal No 45402
41. Kumar.A, **Biswas, Roy,M.**,and K.N.P. Raju.(2017).Arsenic in Groundwater and its Health Impacts: A Case of Ballia District, Uttar Pradesh, India. *Asian Journal of Science and Technology*. Vol. 08, Issue, 08, pp.5329-5332, August, 2017ISSN : 0976-3376 UGC Journal No
42. Kumar.A, **Biswas, Roy,M.**, Kumar, Roy,P.andRaju..K.N.P. (2017).Flooding Hazard Assessment of Ballia District Uttar Pradesh India: Causes and Impact Analysis with Environmental Management Plan.*ZENITH International Journal Of Multidisciplinary Research*. Vol.7 (8), AUGUST (2017), pp, 69-81ISSN 2231-5780UGC Journal No 46665
43. Kumar.A, **Biswas, Roy,M.**, Kumar, Roy,P.andRaju..K.N.P. (2017) Study of Extent and Magnitude of Arsenic in Groundwater in Uttar Pradesh, India. *Environment Asia*. Vol. 10 No.2 (July 2017) ISSN 2586-8861UGC Journal No 19858 (**Scopus**) **DOI: [10.14456/ea.2017.16](https://doi.org/10.14456/ea.2017.16)**
44. Pal,M.,**Biswas, Roy,M.**, and Kumar, Roy,P.(2017).Wind Induced Lake Circulation Model Application in the Lake Rudrasagar, Tripura (India).*European Journal of Advances in Engineering and Technology*.2017, 4 (5): 404-409.ISSN: 2394 - 658XUGC Journal No 47799 (**Scopus**)
45. Chatterjee, D.,Kumar, A., Kumar,A, **Biswas, Roy,M.**, Kumar, Roy,P (2016).Participation and Dependency of Forest Dwellers in Forest Management- A Comparative Study of Bankadaha and Neora Valley Forest. *Indian Journal of Environmental Protection*. VOL. 36, NO. 12, DECEMBER, 2016ISSN : 0253 – 7141 UGC Journal No 20768, (**Scopus**)
46. Pal,M.,**Biswas, Roy,M.**, and Kumar, Roy,P.(2016)Modelling of diurnal profile of surface air temperature and surface dissolved oxygen of lake water. *Current Science*. Vol.111, No.5, 10 September 2016ISSN 0011-3891 UGC Journal No 14405 (**Scopus**) **DOI: [10.18520/cs/v111/i5/882-885](https://doi.org/10.18520/cs/v111/i5/882-885)**
47. **Biswas, Roy,M.**, Chatterjee, D., Mukherjee.T., and Kumar, Roy,P.Environmental Threat to Wetland Bio-Diversity on Migratory Bird: A Case Study of Peri-Urban Area of West Bengal. *Asian Journal of Current Research*. VOL. 1(1): 30-38, ISSN: 2456-804X UGC Journal No
48. **Biswas, Roy,M.**, Kumar, Roy,P., and Samal.N.,R., A comparative Study of Labour Participation in Three Wetland Regions of West Bengal, India. *Journal of the Institution of Engineers (India): Kumar, Roy,P., SeriesSpringer UGC Journal No 11114 (**Springer**). DOI: [10.1007/s40030-016-0150-6](https://doi.org/10.1007/s40030-016-0150-6)*
49. **Biswas, Roy,M.**,Kumar, Roy,P., and Mazumder.A., (2016). Impact of Forest Intervention on Water and Soil Quality- Case Studies. *International Journal of Environmental Engineering*.Volume3: Issue 118 April, 2016 ISSN online: 1756-8471. ISSN print:1756-8463 4 UGC Journal No
50. Pal,M.,Samal.N.,R., **Biswas, Roy,M.**,&Kumar, Roy,P., K. Roy.(2016). Fresh Water Lake Water Model Application For Seasonal Variation Of Latent And Sensible Heat Fluxes From The Water Surface Of Rudrasagar, Lake, Tripura. *Imperial Journal of Interdisciplinary Research*. Vol-2, Issue-5, 2016ISSN 2454-1362 UGC Journal No
51. Pal,M.,Samal.N.,R., **Biswas, Roy,M.**,&Kumar, Roy,P.,(2015). Water Quality Index as a Reliable Indicator of Water Pollution Level-A Case Study of Rudrasagar Lake, Tripura.*International Journal of Innovative Research in Science, Engineering andTechnology*.Vol.4,Issue8,August2015.**DOI: [10.15680/IJRSET.2015.0408138](https://doi.org/10.15680/IJRSET.2015.0408138)**ISSN(Online):2319-8753ISSN (Print):2347-6710UGC Journal No
52. **Biswas, Roy,M.**,R. Talukdar, R., Kumar, Roy,P., Majumdar.A.,(2015).Man-Wetland Dependency Ratio with respect to Socio-economic Scenario of Khalsi Wetland, Haringhata, Nadia.*Indian Journal of Environmental Protection*. 4(1), 18-24, 2015, ISSN- 3297:2007 UGC Journal No 20768 (**Scopus**)

53. **Biswas, Roy,M.,R,** Chatterjee,D.,Kumar, Roy,P., and Majumdar, A.,(2015). Wetland Conservation, Management and Community Education- A Review of Published. *The Journal of Ecology, Environment And Conservation*. VOL. 21 (4): 2015ISSN No.- 0971-765X UGC Journal No 12449 (**Scopus**)
54. Pal,M.,Samal.N.,R., **Biswas, Roy,M.,&**Kumar, Roy,P.,(2015). Sinusoidal Model Development for the Study of Diurnal Variation of Surface Dissolved Oxygen for the Lake SubhasSaroobar, Kolkata. *The Journal of Global Ecology and Environment*. 4(1), 18-24, 2015, ISSN- 3297:2007 UGC Journal No
55. Kumar, Roy,P. Samal.N.,R., **Biswas, Roy,M.,&** Majumdar, A.,(2015)Integrated assessment of impact of water resources of important river basins in Eastern India under projected climate conditions.*The Global Nest*. 17(3), 594-606, 2015, ISSN- 1790-763 UGC Journal No 27993 (**Scopus**) DOI: <https://doi.org/10.30955/gnj.001658>
56. Pal,M.,Kumar, Roy,P. &**Biswas, Roy,M.,** (2015).Sinusoidal Model Development for the Study of Diurnal Variation of Surface Air Temperature and Surface Dissolved Oxygen for the Lake Rudrasagar in Pre-Monsoon Period.*International Journal of Engineering Science Invention*. 4(1), 2015, 10-18, ISSN-2319 – 6734 UGC Journal No 43302
57. Pal,M.,Samal.N.,R., Kumar, Roy,P. **Biswas, Roy,M.,**(2015).Electrical Conductivity of Lake Water as Environmental Monitoring – A Case Study of Rudrasagar Lake. *IOSR Journal of Environmental Science, Toxicology and Food Technology (IOSR-JESTFT)*. 9(3), 2015, 66-71, ISSN - 2319-2402 UGC Journal No
58. Kumar, Roy,P. Majumdar, A., Banerjee,G., **Biswas, Roy,M.,**Pal,Somnath.,& Majumdar, A.,(2015).Removal of arsenic from drinking water using dual treatment.*Clean Technologies and Environmental Policy Springer*. 17 (4), 2015, 1065-1076 , ISSN- 1618-9658 UGC Journal No (**Springer**). DOI: <https://doi.org/10.1007/s10098-014-0862-0>
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### *Papers Presented In Conference / Seminars*

Sl. No .	Topic of Seminar	National/International	Organizer	Paper Title
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2	Integrated water and waste water management	National Seminar 20th to 22nd November ,2008	SWRE, Jadavpur University, Kolkata	Wetland, a valuable Resource of Indian Subcontinent: Some study of Wetland in West Bengal
3	Women Empowerment and Role of Teachers	National Seminar 13 April, 2014	Sundarban Ashutosh B.Ed. College for Women	Conservation of wetland through women education and empowerment
4	Water: A Threatened Social Resource of Country	UGC Sponsors National Seminar 9th October,2015	Dept. Geography, Women's Christian College, Kolkata	Conservation and Management of Wetland in Holistic Approach: A Case Study Bhomra Beel of West Bengal
5	Environment, Ethics and Evaluation	UGC Sponsors National Seminar 23-24 November,2015	Bijoy Krishna Girl's College, Howrah	Impact of Climate Change on Wetland Biodiversity of 6Rural West Bengal
6	3rd International Conference on Advances In Applied Science and Environmental Technology	International Conference 28-29 December ,2015	Institute of Research Engineers and Doctors ,Bangkok ,Thailand	Impact of Forest Inter-vention on Water and Soil Quality-Case Studies
7	International Conference on Aquatic Resources and Sustainable Management	International Conference 17/18/19 February,2016	Central Calcutta science and cultural organization for youth. in collaboration with University of Calcutta	Study of Water Quality Scenario for Wetland fishery in West Bengal; Case Studies
8	9th international Geographical union (IGU) conference on Land Use	International Conference 18/19/20 March, 2016	9th international Geographical union(IGU) conference ,University of Delhi	Wetland, valuable-Natural Resource Management through PRA Technique: A Case Study of West Bengal

	Change, Climate Extremes and Disaster Risk Reduction.		,Delhi ,India	
9	Contemporary Research in Geography	UGC Sponsors National Seminar 5-6 March,2016	Dep't. of Geography, Bhairab Ganguly College in collaboration with National Atlas and Thematic Mapping Organization	Study on Wetland in Rural West Bengal against Environmental Health Impact through Participation
10	Teacher Responsibilities in Student Teacher Relationship : The Changing Scenario	UGC Sponsors National Seminar 12-13 May,2016	Gobardanga Hindu College in collaboration with Gandhi Centenary B.T. College ,Habra	A Conceptual Study on the Change in Teacher –Student Relationship and THE Present Scenario.
11	Climate change: Issue and challenges to society ,environment and development	National Seminar 23-24 September, 2016	Dept. of Geography Haringhata Mahavidyalaya Subarnapur, Nadia	Study of Optimum Utilization of Wetland with Social and Economic Value: A Case Study of AmdaBeel
12	Geospatial Solution to Urban and Regional	International Conference 27-29 September, 2016	Osmania University ,Hydrabad ,India	Study of Optimum Uses of Available Water Resource with Particular
13	Cartography for Analysis and Management of Climate Change	International Conference 9-11 November, 2016	Dep't. Of Geography VisvaBharati University	Role of Participatory Management in Maintaining the Wetland through GIS Mapping: A Case of BhomraBeel, West Bengal
14	Environment and Sustainability : A Geographic Perspective	National Seminar 18-19, November, 2016	Dep't. Of Geography, Prasanta Chandra Mahalanobis Mahavidyalaya	Study of Major Threats and People Attitude towards Conservation of AmdaBeel, West Bengal
15	Changing Dimension of water resources : A Challenge before mankind	International Conference November 2016	6th NAGI Conference Dept. of Geography Nalanda Open University, Patna	Assessment of Wetland Water Quality Index: A Case Study of Mathura Beel, West Bengal, India
16	Gender and Empowerment	International Conference	Bijoy Krishna Girls College ,Howrah ,West Bengal	Wetland could be an Alternative Resources for

		December 2016		Economic Empowerment of Women : A Case Study
17	International Conference on Environment and Ecology	International Conference March 27-29, 2017	Department of Botany, St. Xavier's College, Ranchi	Value and importance of a wetland : BhalukaBeel a case study
18	Environmental Changes in South and South-East Asia: Challenges and Prospects	International Conference September 24-26, 2017	School of Studies in Geography Pt. Ravishankar Shukla University, Raipur	Assessment of Man-Wetland Dependency Ratio of Flood Plain Area in Indian Sub-Continent Using PRA Technique: Some Case Studies
19	Population ,Urbanization and Environment: Contemporary Issue and Challenges	International Conference 21-22 march, 2018	Department of Geography, University of Gourbanga	Conservation and management of flood plain wetland through people participation :Suraha Tal UP ,A case Study
20	Population ,Urbanization and Environment: Contemporary Issue and Challenges	International Conference 21-22 march, 2018	Department of Geography, University of Gourbanga	A Critical analysis of the Outcome of an arsenic mitigation project in a rural area in Uttar Pradesh ,India
21	Environmental Issue	National Seminar 6th and 7th April	Vivekananda College for Women, Kolkata ,West Bengal	Land use and land cover reconfiguration: A case study of Mayurakshi River Basin ,West Bengal
22	Environmental Issue	National Seminar 6th and 7th April	Vivekananda College for Women, Kolkata ,West Bengal	Ecotourism A New Paradigm of man and environment relationship :comparison between Murti and Bankadaha Forest ,West Bengal
23	Indian Social Science and Humanities Congress 2018, 4th Annual International Congress	International Conference 14th and 15th july 2018	PaschimbangaAnchalikItihas o LoksanskritiCharcha Kendra in collaboration with Asutosh College, Kolkata	Environment Impact Assessment of Riverine Wetlands through PRA Technique
24	Global Water crisis: Agriculture and Food Security in the Era of Climate Change	International Conference 1-3rd december,2018	Department of Geography Aligarh Muslim University, Aligarh (India)	Assessment of Minimal uses in available water resources under the light of agriculture and fishery: A case study of reverine wetland



25	Emerging Technologies in Cartography	International Conference 29-31 October,2018	38th Inca International Congress	Water Quality Assessment through GIS :A Case study of Suraha Tal ,UP,India
26	Society and Sustainability: An Interdisciplinary Approach	International Conference January 12-13 ,2019	Department of Geography, Vivekananda College ,Kolkata and the Eastern Geographical Society	Assessment of Neo Refugee Problem through river metamorphosis in lower Genetic floodplain
27	Climate change natural disasters and sustainable development	International Conference February 22-24,2019	XII International Geographical Union, Govt. Post Graduate College ,Sector-1 ,Panchkula ,India	Application of water quality index to asses water environment of a flood plain wetland and sustainable management plan thereof.
28	Digital Mapping Innovations in make India Initiative	International Conference ,10 <sup>th</sup> -12 <sup>th</sup> February, 2021	40 <sup>th</sup> INCA International Congress organized by National Atlas and Thematic Mapping Organization, Department of Science and Technology ,Govt. of India ,Hyatt Regency, Kolkata	Assessment of Trending Nature of Water Surface Temperature with Increasing LST in Wetlands

### *Training courses and workshop*

Sl. No.	Title of the Course	Nature of the course/workshop	Sponsoring/ Funding Agency	Duration of the Course	Host /Organizing Institute
1	IDRC on Disaster Management : Water and environmental sanitation	Refresher course	UGC,HRDC Academic Staff College, Jadavpur University	07.01.2019-30.01.2019	SWRE, Jadavpur University
2	One week workshop on Research methods in social science using SPSS and AMOS	One week workshop on Research methods	Bharatiya Vidya Bhavan Institute of Management Science	12.7.18 to 18.7.18	Bharatiya Vidya Bhavan Institute of Management Science
3	Short Term Course in Remote Sensing and GIS	Short term Course	Govt. of West Bengal Department of Science and Technology ,West Bengal State Council of Science and Technology	10.12.2015 to 23.12.2015	Govt. of West Bengal Department of Science and Technology ,West Bengal State Council of Science and Technology
4	UGC Sponsored Refresher course	Refresher course	UGC Academic Staff College,	25th August	Jadavpur University

			Jadavpur University	2014-13th September 2014	
5	UGC Sponsored Orientation Course	Orientation Course	UGC Academic Staff College, Jadavpur University	28 days 11.11.2013 to 9.12.2013	Jadavpur University
6	One week workshop on Research methods in social science using SPSS and AMOS	One week workshop on Research methods	Bharatiya Vidya Bhavan Institute of Management Science	12.7.18 to 18.7.18	Bharatiya Vidya Bhavan Institute of Management Science
7	Training Programme on-Aquifer Management and Local Ground water Issue.	Five days Training Programme	Ministry of Water Resource, Govt. of India	5 days 20.1.2014 to 24.4.2014	Central Groundwater Board, Eastern region Govt. of India
8	International Workshop on SME Bridging And Entrepreneurship Development	Five days Training Programme	DST, Govt. of India and European Commission	5 days 8.5.2014 to 11.5.2014 and 13.5.2014	Jadavpur University
9	Workshop Programme for – Water safety plan for Rural Area	Two days Workshop Programme	Ministry of Drinking Water & Sanitation	2 days 9.3.2015 and 10.3.2015	Jadavpur University
10	Advances in Water Resources Technology & Management	Refresher course	UGC Academic Staff College, Jadavpur University	21 Days 1.12.2009 to 21.12.2009	SWRE, Jadavpur University
11	Workshop on B.Ed. Syllabus and Practicum on Two Years B.Ed. Course (2015-17)	One Day Workshop	Organised by West Bengal State University and Adamas Institute of Teacher Education	1 Day 14.10.2015	Adamas Institute of Teacher Education
12	Orientation Programme on Newly Framed B.Ed Syllabus	Two Days Workshop	Organized by West Bengal State University, Barasat	2 Days 26.03.2012 and 27.03.2012	At Govt. College of Education, Banipur
13	National Level Workshop cum Seminar on <i>B.Ed Syllabus Modification</i>	Two Days Workshop	Organized by West Bengal State University, Barasat	Two Days 18.11.2011 and 19.11.2011	At Govt. College of Education, Banipur
14	Hands on training cum workshop on	One day Workshop	Department of Geography,	9th June 2018	Department of Geography,

	instrument incorporated in UG CBCS Curriculam		Vivekananda College for Women, Kolkata		Vivekananda College for Women, Kolkata
15	IMPLEMENTATION OF CBCS SYSTEM IN UG STUDIES IN GEOGRAPHY(SEM-1,SEM-2)	One day Workshop	SHRI SHIKSHAYATAN COLLEGE with collaboration UG BOS, University of , Calcutta	8/5/18	SHRI SHIKSHAYATAN COLLEGE with collaboration UG BOS, University of , Calcutta
16	IMPLEMENTATION OF CBCS SYSTEM IN UG STUDIES IN GEOGRAPHY(SEM-3,SEM-4)	Two Days Workshop	SHRI SHIKSHAYATAN COLLEGE with collaboration UG BOS, University of , Calcutta	26/4/19-27/4/19	SHRI SHIKSHAYATAN COLLEGE with collaboration UG BOS, University of , Calcutta
17	Geography (Hons) Practical CBCS SYLLABUS SEMESTER -II	ONE DAYS	Department of geography ,Raidighi College ,Faculty Council for PG Studies in Geography, University of Calcutta and under graduate BOS IN Geography ,University of Calcutta	11/05/2019	Department of geography, University of Calcutta

### *Sponsored Research Projects: As a Principal Investigator*

- (i) Title of the Project:** A holistic approach of participatory management (woman participation) of ecosystem Services: Case of wetland in West Bengal

**(ii) Duration:** 18<sup>th</sup> Months

**(iii) Own Designation:** Principal Investigator

**(iv) Funding authority:** UGC Sponsored

**(V) Project Type:** UGC Minor Research Project
- (i) Title of the Project:** Study on Improving Benefits Transfer for Wetland Valuation: Water Environment and Economic Value of Ecosystem Services through People Participation in Bhagirathi-Hooghly Basin

**(ii) Duration:** 36<sup>th</sup> Months

- (iii)**Own Designation:** Principal Investigator
- (iv)**Funding authority:** UGC Sponsored
- (V)**Project Type:** UGC Major Research Project

3. **i)Title of the Project:** Scientific Assessment of Coastal Vulnerability and Sustainable Ecosystem Management under Changed Climate Scenario
- (ii)**Duration:** 24 Months
  - (iii)**Own Designation:** Co-Principal Investigator
  - (iv)**Name of other Investigators:** Dr. Pankaj Kr. Roy and Dr. Tuhin Ghosh
  - (v) **Funding authority:** DST funded
  - (VI)**Project Type:** Central DST

### *Sponsored Research Projects: As a Research Team Member*

- Revival of Mirik Lake, Darjeeling sponsored by *National Environmental Engineering Research Institute (NEERI)*, mainly for Hydrological aspects only-completed in 2007-*Research Team Member*
- *IEE for discharge of Dry Weather Flow (DWF) to East Kolkata Wetlands (EKW) funded by Kolkata Environmental Improvement Project (KEIP)-Research Team Member*
- Comprehensive Rejuvenation Plan (CRJP) for Rabindra Sarobar-- Worked as a Research Team Member
- Component Technical Assistance (CTA): Capacity Building for the Protection of East Kolkata Wetlands, Asian Development Bank (ADB)-*Research Team Member*
- Carbon Sequestration Project in an Urban Area-Kolkata Metro City sponsored by Department of Environment, Govt. of West Bengal-*Research Team Member*
  
- Role of Rural Watershed Development and Management through Rainwater Harvesting and Artificial Recharge of Ground Water and Agroforestry at the Micro Level Concept and Elements in Dhengam Village, Potka Block of East Singbhum Districts, Jharkhand sponsored by the Ministry of Environment & Forests, GoI to the Regional Centre, National Afforestation & Eco-development Board, Jadavpur University- *Research Team Member*
- Understanding and documentation of indigenous watershed/forest management technique practiced by tribes in the Tropical Rain Forest of A & N Island sponsored by the Ministry of Environment & Forests, GoI to the Regional Centre, National Afforestation & Eco-development Board, Jadavpur University- *Research Team Member.*

*Conference responsibility/Seminar /Workshop*

<b>Nature of participation (Convener/ chaired session/Co-Ordinator/Organizing Secretary)</b>	<b>Name of the Seminar/Conference/ workshop</b>	<b>Organizer</b>	<b>Name of the Session/Theme</b>	<b>Place</b>	<b>Duration/ Date</b>
Convener	International Conference on Sustainable Water Resources Management under Changed Climate	School of Water Resources Engineering, Jadavpur University in joint collaboration with Department of Geography, Women's College, Calcutta and National Institute of Technology, Durgapur	.....	Jadavpur University	13 <sup>th</sup> -15 <sup>th</sup> March 2020
Co-chair	International Conference on Sustainable Water Resources Management under Changed Climate	School of Water Resources Engineering, Jadavpur University in joint collaboration with Department of Geography, Women's College, Calcutta and National Institute of Technology, Durgapur	Technical Session: VIII A: Theme: Environment, Sustainability and Development	Jadavpur University	13 <sup>th</sup> -15 <sup>th</sup> March 2020
Co-chair	Climate Change Natural Disasters and Sustainable Development	XII International Geographical Union (IGU)	Water Resources Management	Govt. Post Graduate College, Panchkula, India	22nd -24th February, 2019
Co-chair	Global Water Crisis: Agriculture and Food Security in the Era of Climate Change	Department of Geography, Aligarh Muslim University, India	Water Stress and Food security - Energy and Ecosystem	Aligarh Muslim University, India	1-3 December, 2018
Organizing Secretary	Post Celebration of "World Water Day-2022" Arranging Special Lecture	Department of Geography with IQAC, Women's College, Calcutta	"Groundwater: making the invisible visible"		11 <sup>th</sup> May 2022
Program Coordinator	World Environment Day Celebration	Department of Geography in collaboration with IQAC, Women's College, Calcutta	Beat Plastic	Women's College, Calcutta	5 <sup>th</sup> June, 2023
Program Coordinator	Arranging Special Lecture	Department of Geography in	Energy and sustainability in	Women's	13 <sup>th</sup> June, 2023

	by Prof. Dr. Ratan Mondal, Director, School of Energy Studies, Jadavpur University	collaboration with IQAC, Women's College, Calcutta	India's Context An Overview of 'Renewable Energy' Challenge and Possibilities	College, Calcutta	
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### *Outreach Activities*

- Training Program on rainwater harvesting and conservation technologies to combat land degradation in forest areas specially in plantation areas in Bihar state during 16-17<sup>th</sup> August, 2009 organized by the Regional Centre, National Afforestation & Eco-development Board, Jadavpur University in collaboration with Department of Forest, Bihar, India .
- Training Program on rainwater harvesting and conservation technologies to combat land degradation in forest areas specially in plantation areas in South Sikkim during 22-27<sup>th</sup> January, 2010 organized by the Regional Centre, National Afforestation & Eco-development Board, Jadavpur University in collaboration with Department of Forest, Sikkim, India .
- Training Program for Capacity Building on Social Auditing of National Afforestation Project Programme in Bisnupur, Bankura District, West Bengal, India during 17-18<sup>th</sup> February, 2010 organized by the Regional Centre, National Afforestation & Eco-development Board, Jadavpur University in collaboration with Department of Forest, West Bengal, India

### *Campus Publication (Magazine, ASHONA)*

- "Wetland a Major Feature of Landscape in almost all parts of the World" published in the year of 2008-09, pp. 39-44.
- "Rural Watershed Development and Management through Rainwater Harvesting and Artificial Recharge of Groundwater in Dhengam Village, East Singbhum Districts, Jharkhand" published in the year of 2009-10, pp. 46-51.
- Innovative and best practices on combating land desertification and deforestation including water management practices in West Bengal" published in the year of 2010-11, pp. 72-77.
- Indigenous Watershed Management after Post-Tsunami in South Anadaman Island" published in the year of 2011-12, pp. 40-45.
- "People Responses and their Views on revival of river Ichhamoti through Socioeconomic survey" published in the year of 2012-13, pp. 35-41.
- "Rainwater Harvesting, a sustainable solution to mitigate water stress condition under changed climate" published in the year of 2013-14, pp. 57-60.
- "Value and Importance of Sahebbandh Lake in Purulia, West Bengal" published in the year of 2014-15, pp. 98-101.
- 'Hydrogeomorphic classifications of Wetlands" under study of Major Research Project published in the year of 2015-16, pp. 98-101.

## *Reviewer*

<b>Name of the journal</b>	<b>Publisher</b>
Wetland	Springer
Environment, Development and Sustainability	Springer
Spatial Information Research	Springer
The International Journal of River Basin Management	Taylor and Francis

### *Extra-Curricular Activities*

- 3yrs diploma in Rabindra Sangeet

*Software Knowledge*: MS Office (2010), GIS (ArcGIS, QGIS, Map Info), SPSS, MOS

### **Declaration:**

I hereby declare that all the statements made in this Resume are true, complete and correct to the best of my knowledge and belief

Date:

Place: Kolkata

Malabika Biswas Roy

**Signature**